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A WEEKLY REVIEW OF MEDICINE

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A Weekly Review of Medicine

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SATURDAY, JANUARY 7, 1905

WHOLE NO. 1362.

Lectures and Addresses.

THE PROPER SCOPE OF SCIENTIFIC (SO CALLED EXPERT) TESTIMONY IN TRIALS INVOLVING PHARMACOLOGICAL QUESTIONS.*

By SOLOMON SOLIS COHEN, M. D.,

PHILADELPHIA,

PROFESSOR OF CLINICAL MEDICINE IN JEFFERSON MEDICAL COLLEGE.

Mr. President and Gentlemen:

It is by request of your committee of invitation that I shall devote the address I have the honor to make to you to-day to the consideration of the subject of "expert testimony" in certain of its relations having a common interest for physicians and pharmacists. My criticisms will be addressed principally to our own faults, not those of others. Doubtless there are many motes in the eyes of the lawyers; but before we begin to discuss the best method of extracting them, let us try to discover how we can get rid of the beams that tend to make our own vision oblique.

It is not to be denied that the "medical expert" or "chemical expert" witness is often an object of suspicion to courts and juries; that lawyers out of court find no impropriety in ridiculing him, while in court, if he is on the other side, their attitude toward him is not invariably one of the highest respect for his knowledge or his devotion to the truth. Moreover this unflattering estimate of the sincerity of the expert witness is not confined to courts and lawyers; it is reflected in the press and in the comments of the man in the street. It would be soothing to wounded vanity to attribute the distrust of expert testimony entirely to the obscurity of the difficult scientific questions so often involved and the inadequacy of the legal methods of the day for the development and presentation of such questions. Undoubtedly these impersonal elements are important factors; but it must be admitted that there are also personal factors, and that for the latter physicians and chemists are not without blame. When

* An address delivered before the Philadelphia College of Pharmacy.

men of equal reputation and competence can be found, apparently in any desired number, to form either of two opposite opinions upon the same apparently simple set of facts; can be induced to express positive and conflicting views upon questions concerning which the evidence is insufficient for the formation of a positive view of any kind; and are willing, moreover, to suggest to an attorney questions that seem to have no other purpose than to confuse scientific colleagues who may appear as witnesses on the other side, or unfairly to impugn and belittle the evidence given by such colleagues—is the assumption wholly without plausibility that the nature of the testimony given by any expert witness is in effect determined by the necessities of that side of the case upon which he is employed? We know and many attorneys know that, despite its plausibility, the assumption is far from being correct. But that is because we and the attorneys know what the newspapers and the public do not know and cannot know; namely, how often physicians and chemists refuse to testify in behalf of interests that have consulted them, because on examination of the facts they find that they cannot truthfully give the testimony desired. That incompetent, inaccurate, overzealous, or even untruthful persons sometimes appear in the rôle of expert witnesses, playing it very much to the satisfaction not only of their employers, but also of the jury and the spectators—may be admitted. With this phase of the subject, however, I do not purpose to deal at this time. I shall consider only the difficulties besetting competent men, desirous to tell the truth and nothing but the truth, when they enter the witness box to instruct courts and juries upon pharmacological and toxicological questions.

In the first place, it is often requisite to state technical facts in untechnical language. There is much difference between lack of technicality and simplicity. The simplest statement is always the best; but the untechnical statement is not always the simplest; frequently it is the most complex. Consider for a moment only the physical and chemical questions of osmosis, of atomic weight, of valency, of crystallization, of stereochemistry, of ionization, or

the pharmacological questions of the effects of drugs upon metabolism or upon cell structure. How can such matters be expressed in other than technical terms, and yet be expressed both clearly and adequately? The only way out of the difficulty is not to try to get out of it. Let us state our technical position for the record, as simply as possible; that is, in technical terms. We may then explain in untechnical language for the jury. One common result of the effort to avoid technical statements is a multiplication of words from which juries, even more intelligent than the average, can gather no clear idea. Another is an impossible simplification of a difficult problem, which is consequently, even though a correct conclusion is reached, open to just criticism—a *fortiori* to captious criticism. Just here comes to light one grave fault of medical and chemical experts. We are too prone to make and to suggest that very kind of captious criticism of the testimony of an opposing witness, not for the purpose of eliciting truth, but in order to score a point in the game. Such tactics may be perfectly proper on the part of an advocate, but not on the part of one who professes to be impartially devoted to science.

And this brings into view a second difficulty. Theoretically, the expert witness is an adviser of the court. He is called in, because of his supposedly superior knowledge, to help the judge and jury to understand the significance of certain facts testified to by himself or others, which cannot be understood without such assistance. He should have no interest in the bearing of these facts upon the verdict to be rendered. Was or was not arsenic present in a certain liver or stomach examined by him? Do or do not certain post mortem appearances or certain symptoms observed during life indicate death from poisoning? Is or is not the continuous and unsuspected administration of unknown quantities of boric acid or salicylic acid or sodium sulphite injurious to health? These and like matters are the subjects upon which he is called to state judgments of fact or to express opinions, and in consequence to detail the observations and explain the reasoning upon which such judgments or opinions are based. But his interest in the matter should be entirely scientific. It should be no concern of his, as a witness, whether the presence or absence of arsenic in the tissues or other materials that he has examined, or the significance of the symptoms described, or the harmfulness or harmlessness of chemicals used as food preservatives, may lead to the conviction or acquittal of any individual or the gain or loss of any commercial interest. His function in court is quite clear. It is (a) to describe the methods and the results of his examinations; (b) to state the conclusions that his study and observation in gen-

eral enable him to draw from a given set of facts observed and described by him or testified to by others; (c) to enlighten the court as to matters of scientific knowledge relevant to the issues presented, but not dependent upon any testimony as to fact given in the special cause at trial. Beyond that his testimony, his advice, his interest, should not go.

Under present methods, however, the expert witness is not summoned in his theoretical capacity of impartial teacher and adviser. He is called apparently, and often in reality, as a partizan and an advocate. Indeed, whatever his own view may be as to his relation to the case, he is usually regarded and treated as a partizan and advocate by judge, jury, lawyers, spectators, and newspapers. How often do we read in great headlines of the "Battle of the Experts!" How often is the speculation heard, privately or publicly, as to whether the prosecution or the defense will "get Dr. A," with the implication that the other side will then necessarily "get Dr. B," and that Dr. A and Dr. B will, of equal necessity, express in court opposite opinions on the same facts.

There is unquestionably a legitimate field of work for the scientific or "expert" advocate; but it is by the side of counsel, not in the witness box. As witness one is bound by his oath and by his duty to the court and to the State to endeavor to assist judge and jury to reach correct conclusions, without reference to the effect of those conclusions upon the verdict to be rendered. He is to distort nothing, magnify nothing, minimize nothing; assert as positive nothing doubtful, throw doubt upon nothing certain; introduce nothing irrelevant, suppress nothing material; give utterance to no statement of fact, advance no theory, that he would shrink from defending before a learned society. But as advocate, one may properly consider the bearing of testimony upon the verdict and endeavor to have judge and jury impressed with the especial importance of those facts and theories making for his side of the case, and with the doubtfulness and unimportance of those making for the opposing side. The functions of the witness and of the advocate should therefore never be united in the same person. Human nature being what it is, however, our present methods tend to imbue expert witnesses with somewhat of the advocate's spirit. Some do not realize this tendency; others despite their effort to avoid partizan advocacy are badgered into it by the unfair efforts of cross-examiners to throw doubt and obscurity upon their direct testimony. Unfortunately these efforts are sometimes instigated and directed by the expert witnesses of the other side.

The remedy for this difficulty lies wholly in our own hands. It will not do to abuse the lawyers for

it, however much they may abuse us when we are on the witness stand. Use, abuse, or misuse what and whom they will, they cannot make use of us for any purpose for which we refuse to be made use of.

A third order of difficulties has been alluded to, but may now be considered more fully. It is often assumed that expert witnesses are not called to give testimony as to fact, but merely to express opinions, and that hence opinion may properly be set against opinion. This is but partially true. Expert witnesses are frequently called to express opinions upon facts which they must themselves first testify to; or to express judgments of fact—and not opinions at all—upon investigations that they have themselves made. This is especially the case with chemists and pathologists. We can here confine our attention to chemists.

A chemist or pharmacist may be asked, for example, to make certain analyses in order to determine the purity of pharmaceutical products, or to ascertain whether foods or articles of commerce have been adulterated or have had foreign substances added to them to color, disguise, or preserve them; or to discover whether certain substances—sometimes human tissues—contain poison. He submits the suspected articles to certain physical and chemical manipulations; examines them with the naked eye, with the microscope, with the spectroscope, and otherwise. Upon the results of these examinations he forms a judgment. When describing in court the methods and results of his examinations, it will be generally admitted that he testifies as to facts. How about the judgment he has formed? That judgment, when stated in court, is commonly treated as an expression of opinion. In reality it is a judgment as to fact, as valid as any other judgment as to fact that can be made the subject of testimony. It differs from ordinary judgments in that special skill and knowledge are required, first, to obtain its data and, secondly to understand their significance; but so do many other judgments that we never think of treating as matters of opinion—which are indeed recognized to be therefore more accurate, not more dubious, than ordinary judgments; for example, that of a navigator as to the position of his ship, or of a surveyor as to the dimensions of a certain plot of ground, or of a skilled weigher as to the number of pounds contained in a heap of coal. The differences that may exist among these various judgments are not those of kind, but merely of degrees of complexity. Such judgments may be mistaken; but that, while it subjects them to correction, does not remove them to the category of opinions—unless the term opinion be extended to include every mental operation in the nature of a judgment.

Testimony concerning chemical analysis and its results is properly to be subjected to criticism as to the pertinency, correctness, skill, and accuracy of the manipulations and as to their conclusiveness; but such criticism deals with fact, and must be kept within due bounds. It is perfectly proper to point out, for example, that in the attempted identification of poisons, a careless observer may mistake antimony for arsenic; but it is misleading—and a competent chemist must consider it deliberately so—to attempt to make a jury believe that discrimination between arsenic and antimony is at all uncertain when the right tests have been made with due care and intelligence. It is not in any degree a matter of opinion, subject to debate and dispute, but an acknowledged fact of science. No expert should lend himself to a pettifogging practice of the nature described.

Again, it is proper to point out and inquire about all sources of error in manipulation, but undue insistence upon widespread contamination of vessels and reagents with, for example, arsenic, can be considered only captious criticism in the presence of statements that due care has been taken by blank tests and otherwise to exclude that source of error and when amounts have been found not to be accounted for even approximately by these common contaminations. I have elsewhere suggested that important examinations by official analysts should be made in the presence of experts representing the other side; or that both sides should, in cases in which this method is possible, be permitted to have analyses made by their respective experts. The further suggestion was also made that the results of final and decisive tests should be required to be preserved for exhibition and criticism in court. Such procedures would go far, I think, to avert the sort of criticism here deprecated and also to guard against incompetence, carelessness, or error, on the part of official or other partisan analysts.

Opinions may in certain cases of chemical analysis differ as to the scope and conclusiveness of special tests. In all such cases it is a simple matter for the expert witnesses on both sides to state the issue, first in technical terms for the record, secondly in non-technical terms for the enlightenment of court and jury, and in such a way as to make clear the exact point in dispute and its bearing on the final judgment of fact. It is also easy to take the opposite course in order to becloud the issue. Were the straightforward, scientific, impartial way obligatory in every instance, many issues which have been allowed to occupy much of the time and attention of courts and juries would at once be shown to be based on trivialities of no possible importance in the cause at trial.

Still another source of confusion between fact

and opinion arises from the questioning of expert witnesses as to what may be termed facts of science, and the failure of courts to rule uniformly as to just what testimony of this kind is admissible and what is inadmissible. One court will permit the widest and wildest latitude; another will exclude as "hearsay" all matters outside the personal experience of the expert witness. I do not purpose to discuss these conflicting rulings from a legal viewpoint. Shall doctors decide when judges disagree? But I may be permitted to point out the logical and scientific difficulties involved in both positions.

First let us consider the position of an expert witness called upon to differentiate between the knowledge he has obtained from reading and that which he has acquired by personal observation. How far a chemist or pharmacist may be able to do this, I do not know. If you have all verified by balance-tests and other appropriate methods the atomic weights, the valencies, the electric positions, and other properties of all the elements, and the structures of all the compounds, perhaps you may begin to think of qualifying under the "no hearsay" rule. I doubt, however, whether any physician could state accurately how much of the composite pictures he carries in his mind of the symptomatology and pathology of diseases and of the effects of drugs—even a disease so common as typhoid fever or of a drug so much used as opium or mercury, is based upon cases personally observed, to the exclusion of those read about. One of the best known pathologists in America, a man of enormous experience, told me that he had never personally made a post mortem examination of a case of combined sclerosis of the spinal cord, although of course he had seen and studied sections of cords from such cases. Some physicians have never seen a case of infantile scurvy; but they know that the affection exists and that it gives rise to discolorations of the skin that are often mistaken for bruises, and upon which unfounded charges of cruelty to children may be brought. I have never examined a thyroid gland for iodine or arsenic, yet I know that iodine is constantly and arsenic sometimes found in thyroid glands of men and animals, apparently in each case as a normal constituent. If the question of the possible presence of iodine or arsenic in normal thyroid glands should be of importance in a given trial, could I not properly state my knowledge as book knowledge? Must one send for Mendel or Gautier to testify to personal analysis? I have never seen an insane person commit homicide or suicide, yet I have testified in court that certain persons ought to be kept under restraint lest they should kill themselves or others and I believe the testimony was properly made and properly accepted. Would not the "no hearsay"

rule exclude this testimony also? Even had I seen the dead bodies of insane suicides or of the victims of homicidal maniacs, that fact would not seem to remove my knowledge from the hearsay category; nothing would do that except actually seeing the killing. I know that arsenic poisoning has been caused by contaminated beer, by wall paper, by stockings, though I have never analyzed beer, wall paper, or stockings for the presence of arsenic. I know that in this city fatal lead poisoning has been caused by cakes colored with chrome yellow, though I did not see any of the cases. I have not even seen the men at work painting or making lead whom I have treated for lead poisoning acquired in such occupations.

That iodine is a constant normal constituent of the thyroid gland and that Gautier, Bertrand, and others have found arsenic in the normal thyroid gland and other normal tissues; that maniacs have committed homicide and suicide; that arsenical poisoning has been caused by contaminated beer—are facts, not opinions. They are facts known only or best to certain persons because those persons have made special studies involving the knowledge of such facts; and whatever the law may be, it would appear reasonable that such facts should, when relevant to the issue, be testified to in court by qualified persons as parts of the sum total of the knowledge acquired by their reading and observation. On the other hand, when a fact of this nature is uncommon it is perfectly proper to bring out its rarity, and, if such is the case, to show that while an integral portion of the witness's knowledge it is outside of his personal observation.

(To be concluded.)

Brooklyn Hospital Saturday and Sunday Association.—Through its treasurer, the Brooklyn Hospital Saturday and Sunday Association reports a gratifying increase this year over the amount received last year. The amount received up to last night was \$1,272.60. This money is received from all sources—churches, lodges, clubs, business firms, and from individuals. The association was organized twenty-four years ago to secure contributions to various hospitals in Brooklyn. It takes its name from the fact that the last two Saturdays and Sundays of each year are appointed as the days on which to receive contributions. The following fifteen hospitals are beneficiaries of the association: The Brooklyn Hospital, Long Island College Hospital, Eastern District Hospital, Brooklyn Maternity, St. John's Hospital Home for Consumptives, the Memorial Hospital, Lutheran Hospital Association, Norwegian Lutheran Deaconesses Home and Hospital, House of St. Giles the Cripple, the Infants' Hospital, St. Christopher's Hospital for Babies, Williamsburg Hospital, the Methodist Episcopal Hospital, the German Hospital.

Original Communications.

POISONING BY WOOD, OR METHYL ALCOHOL AND ITS PREPARATIONS AS A CAUSE OF DEATH AND BLINDNESS; A SUPPLEMENTARY REPORT.

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Quite recently a large number of instances of death and several cases of blindness in the survivors have resulted from the ingestion of wood alcohol used as an adulterant.

Perhaps the most important of these recent intoxications *en masse* have been the deaths from methylated whiskey of some twenty people in New York city and fifteen (fourteen men and one woman) in Jurjew¹ (Dorpat), Russia. As a part of this wholesale intoxication there were three cases of blindness in Dorpat and an unknown number of toxic amblyopes in New York.

Inasmuch as not more than three cases of serious poisoning from wood alcohol had until June, 1904, been known in Great Britain and the continent of Europe²—two (1899) in Germany and one, still earlier, in France³ (1877)—these recent Continental poisoning cases should be of unusual importance in the eyes of health officers and toxicologists. The meaning of it is quite plain. In Russia, as in America, "purified" or "deodorized" wood alcohol (wood spirit deprived by chemical processes of its nauseous odor and taste) is at last for sale in drug stores and spirit shops. It is probable, also, that it is beginning to be used in Russia as a substitute for grain alcohol in many of those mixtures, domestic, proprietary, and official, which, we now know, enter into the composition of adulterated American drinks and condiments, into the essences, the cheap whiskey, the perfumes, the flavoring extracts, and the patent medicines. One may confidently predict that this form of wholesale poisoning, until a few months ago confined to America, will soon be common enough in Europe. As soon as European makers and vendors of spirituous mixtures, *intended or not for external use, but capable of internal consumption*, can (without easy detection)

adulterate with a portion of the cheap 20,000 barrels of "deodorized" wood alcohol yearly exported from this country, we are almost certain to have, in Europe, additional examples of wood alcohol poisoning.

The story of the Dorpat holocaust, inasmuch as it so closely resembles the New York tragedy, is of considerable interest to us and I shall take the liberty, in the light of our own experience of such cases, of commenting on Ströhmberg's report.

At the beginning of June, 1904, while the troops were being mobilized in Jurjew, an unknown number of men and women celebrated the event by indulging in a drink known in Russian Livonia as Kuntzen's balsam. This is a popular domestic remedy variously compounded of such fragrant herbs as salvia, peppermint, rosemary, lavender, etc., with water and 50 per cent. grain alcohol. Like some of our own patent and domestic "liniments," it is employed for both internal and external use. On occasions, also, it is drunk in Livonia just as thirsty souls in America, when more legitimate beverages are not available, imbibe alcoholic nostrums (whose names I do not care to advertise here) as well as Jamaica ginger, bay rum, Cologne water, and lemon extract. As long as these fluids are concocted with grain alcohol a simple intoxication is the consequence; compounded with "deodorized" or "purified" wood alcohol, death and blindness are usually the result.

The amount of wood alcohol drunk by the Dorpat victims was small. It could be estimated in at least five instances with sufficient accuracy. One woman, who died, drank during the day, on June 21, 1904, 125 grammes of Kuntzen's balsam. Three of the dead men imbibed most of 1,200 grammes. These three were joined by a fourth, who participated in the spree and probably also took about 400 grammes. Another death resulted from drinking 150 grammes. One man, who barely escaped with his life, drank on one day 7½ grammes; on the second day, 15 grammes. Another of the survivors became blind. He took only a "swallow" of the mixture. A third survivor, who with three friends altogether consumed 60 grammes, say 15 grammes for his share, also became blind. Assuming that the same quantity of wood alcohol was substituted for the grain alcohol in the balsam (i. e., one half to three fourths wood alcohol) we have from 75 to 200 grammes as the lethal dose of methyl alcohol in these cases. As it was not possible to obtain samples of the particular balsam drunk by the patients no analysis could be made; conse-

¹ C. Ströhmberg. 16 Vergiftungsfälle mit Methylalkohol. *St. Petersburger med. Wochenschrift*, October 8 and 15, 1904.

² Kuhn. Zur Kenntnis der akuten Methylalkoholintoxication. (One death and one case of blindness.) *Zeitschrift für Augenheilkunde*, Band 1, p. 38, 1899.

³ Viger. L'Année médicale. June, 1877; later the ocular condition of this patient (optic atrophy) was described by Mengin in the *Recueil d'ophtalmologie*, p. 636, 1879.

quently the actual quantity of pure wood alcohol imbibed could not be absolutely estimated. It may easily have been less than the amounts stated. Ströhmberg thinks 35 to 60 grammes "and more" to be a closer estimate.

A small quantity of the balsam appears to have produced blindness in at least one case. As in the American instances a fair percentage of the drinkers escaped without serious lesions.

The ages of the patients varied. The majority (10) were in the prime of life, 30 to 50 years old. One was 19 and another 80 years old. The woman who died was 60 years of age; the three blind men were, respectively, 34, 35, and 43 years old.

The symptoms corresponded exactly with what we know from a wide experience in America of this poison to be characteristic of poisoning from imbibing imperfectly "deodorized" wood alcohol. The preliminary period of exaltation, that commonly follows drinking of ethyl alcohol, seems in these cases to have been wanting. Almost immediately after the ingestion of the methylated balsam a nauseating, burning, bitter taste was experienced. This extended from the throat, along the œsophagus to the stomach; the dose was not followed by the warm, comfortable sensation in the abdomen that follows the drinking of ethyl alcohol. The patients complained of depression, weakness of and severe pains in the extremities (8 cases), headache (9), and vertigo (8). Although unsteadiness of gait marked most of the cases, seven of the patients did not present this symptom.

The heat and discomfort behind the sternum increased, in eight cases, to severe and even agonizing pain in the stomach and breast. Shortly (generally in a few hours) after taking the poison a feeling of general weakness (12 cases), and drowsiness (6) with chills (6) were noticed. In the milder cases these symptoms were delayed, but as a rule they appeared at once or at the latest the day after drinking the poison. The patients were quite ill and could no longer go about their usual work. A sensation of chilliness came on and increased until a decided rigor resulted. In one case this symptom was succeeded by fever and sweating. The weakness and chilliness usually lasted several days and the languid sensation generally deepened into semiconsciousness. The patients soon betook themselves to bed and sank into a stupor from which they were, now and then, aroused by attacks of abdominal distress and vomiting (in 13 cases). In 9 instances they complained of nausea, pains in the abdomen (12), and difficulty of breathing. They

almost constantly threw themselves from one side of the bed to the other in the vain hope of getting relief.

About this time the eyesight was affected, usually in the shape of a cloud before the eyes. This important diagnostic symptom was elicited in an unusually large percentage of the Dorpat cases, twelve in all. In two instances it deepened into complete blindness after 48 hours, without any preliminary clouding of sight. In two other cases the blindness gradually increased for five or six days. The complete amaurosis lasted from several days to a week. The ability to distinguish colors continued relatively late in the illness and either returned to normal or was entirely lost. The pupils did not react normally to light, but were in no case dilated *ad maximum*. Nevertheless, in two cases only were there undilated pupils. Twelve complained of severe pains and tenderness in the abdomen without diarrhoea; the others experienced most pain in the lower extremities, alternating with cramps of the leg muscles. Pains in the eyes were infrequent, occurring in two cases only. The face, generally red with cyanotic areas, sometimes bore a suffering, sometimes an apathetic appearance. In all cases there was no appetite, but generally much thirst. The urine of two patients in the hospital was examined. It was found to be normal, but, unfortunately, no tests were made for formic acid. Pohl⁴ found this agent in animals poisoned by wood alcohol. In another case, outside the hospital, albumin in large quantities was discovered. In our American experience, albuminuria is a common result, or coincidence, of methyl alcohol intoxication.

The pulse exhibited nothing abnormal. Generally it was (3 cases) about 60, although in a few (2) instances it reached 98.

Disturbance of breathing (10) was far more noticeable than an abnormal pulse rate. It is likely that this early sign of methyl intoxication was due to pulmonary hyperæmia. Although at first the breathing was rather labored the sense of oppression was not marked. However it soon became difficult, irregular, and superficial; shallow breaths alternated with deep inspirations. Before long there was rattling in the throat, followed by coughing and expectoration of much fluid, foamlike sputum. Finally, there was general cyanosis (5 cases), the extremities exhibited a lowered temperature, and the whole body was covered with a cold sweat. In some cases (5)

⁴ Ueber die Oxydation von Methyl- und Aethylalkohol im Tierkörper. *Archiv für exper. Pathologie und Pharmakologie*, Band 31.

complete unconsciousness set in half an hour to three hours before death; others (4) exhibited only stupor. Some patients were quite conscious at the time of death. Eight victims died within twenty-four hours after drinking the methylated balsam; two others were dead within forty-eight hours.

Three survivors of the debauch presented themselves for treatment. One of them had the usual, early symptom of irregular and difficult breathing, but it improved towards the end of the second day and became normal on the third day. Although he was able to take some nourishment at the end of the third day he experienced most of the typical symptoms, including the amblyopia, of wood alcohol poisoning. His blindness became complete on the sixth day. Another man who recovered had even a narrower escape from death. He became unconscious, and exhibited very labored, noisy breathing. At last he began to expectorate a large quantity of watery mucus, and at the end of two days showed decided improvement in his condition. In spite of this relief from the most urgent and dangerous symptoms the other signs of the intoxication persisted for a long time. These were especially blindness (optic nerve atrophy), vesical catarrh, marked nervous symptoms, headache, irregular pulse, pains in the shoulders and lower extremities associated with cramps in these organs. He also complained of persistent numbness, formication, and other paræsthesiæ of the extremities, which began on their dorsal aspect and extended to the forehead, neck, and back.

Thirteen autopsies were held. Ströhmberg is much impressed, as every one must be who studies this subject, with the uniformity and striking clearness of the picture presented by the lesions of wood alcohol poisoning.

In practically all the cases (12) the death spots were livid red, darker than in carbonic oxide poisoning. The *rigor mortis* was (in 10 cases) well marked, "goose flesh" (10) being distinctly noticeable. The face had a peculiar cyanotic color, distinct in five, not so well shown in seven cases. The pupil was of medium width (8); in two instances much dilated; in three others unaffected. The mucosa of the lips and mouth was unaffected (10); in two cases whitish.

On opening the various cavities there was in no case the characteristic odor of either ethyl or wood alcohol, aldehyde, or formalin. It may be said, in passing, that when "deodorized" wood alcohol is taken in comparatively small quantities mixed with aromatic oils (as is the case in Kuntzen's balsam, essence of peppermint, bay

rum, etc.), the aroma of the essential oils completely masks, inside or outside the body, the ethereal smell of the methyl alcohol.

The blood vessels of the mucous membrane lining the fauces, larynx, and trachea were injected. The heart was found relaxed (12); in two cases ecchymosed areas were found on its surface. In every instance (13) the blood was cherry red, thinner than normal blood, but not quite so thin as the post mortem blood of asphyxia. The lungs were hyperæmic and markedly oedematous. The stomach and bladder contained nothing characteristic. The mucosa of the stomach was hyperæmic, either in isolated patches (6), ecchymoses (4), or was rose colored throughout. It was unaffected in two cases. The same condition prevailed in the duodenum. Spleen (12) and liver (10) were hyperæmic.

Both the papillary and cortical substances of the kidneys were congested and of a dark color. The mucous lining of the bladder also exhibited marked hyperæmic changes. The vessels were decidedly injected in seven cases; there was a bright, uniform redness over the whole mucosa in three other instances. In one case only had the vesical lining a normal appearance. The cerebral vessels were filled with blood in eleven instances.

I exactly agree with Ströhmberg that the pulmonary oedema, the peculiar condition of the blood, the congestion of the brain and mucosa of the bladder, the post mortem appearance of the skin and the isolated areas of injection in the stomach altogether furnish a characteristic picture of the post mortem lesions of wood alcohol poisoning.

The treatment pursued was quite similar to that administered in America and with about the same results. If given very early it is occasionally helpful and may save life; generally it is of little use, sometimes because assistance arrives too late, more often because of the rapid absorption of the poison in overpowering quantities. The first aid is to wash out the stomach. Next in importance is the relief of the pulmonary oedema and retrobulbar neuritis by diaphoretics and hot applications to the extremities. Subcutaneous injections of pilocarpine and sweat baths are often useful and should be employed in most cases.

The symptoms and course of the blindness (already well known to us in America) are also well described by Ströhmberg in connection with the three cases of amaurosis among the survivors of the Dorpat debauch, and it is not necessary to repeat them here.

Since the publication of the investigations of

this subject by Buller and myself^a a number of methyl alcohol poisoning cases in America have come to light, some of which, for various reasons, deserve special mention.

CASE I.—*Poisoning from drinking methylated spirits. Recovery.*

Dr. Fred S. Spearman, of Whiting, Iowa, writes me as follows: "While a medical student at McGill College, Montreal, in 1903, I was working in a drug store. At that time the following case came under my observation: A. U., French Canadian, aged about twenty-six years, heavy drinker. He came into the store and asked for 6 ounces of methylated spirits to rub on sores on his legs. Knowing his habits I cautioned him strongly against drinking any of the spirits, telling him it was very poisonous. He afterwards acknowledged to me, however, that he had disobeyed; he drank nearly the whole quantity and was very sick for five or six days, but did not call a doctor. The symptoms were vomiting, severe abdominal pains with diarrhoea and great prostration. He said nothing about any eye symptoms."

The British methylated spirit (which contains ten per cent. of impure wood alcohol, two per cent. of mineral oil, and sixty-four per cent. of absolute ethyl alcohol) is a mixture so offensive to smell and taste that it is rarely used as a beverage. In a contribution to the *London State Journal of Medicine* (Volume X, 1902), J. C. McWalter claims to have discovered an increasing tendency on the part of the spirit drinking public to employ it internally. He estimates that there are in Great Britain 10,000 retailers of the mixture which is used, like our "Columbian spirits" and other forms of "deodorized alcohol," as a fuel, for stiffening hats, making varnishes, etc., to the amount of three and one half millions of gallons annually. McWalter's observations tally with the experience of the patient whose case has just been related. When driven to desperation for a drink some chronic drunkard might swallow a dose or two, but he could not take enough to kill or blind him. At least there has never been recorded a single instance of death or amaurosis from methylated spirits. Why cannot we also have (like the British and Germans) a cheap, untaxed ethyl alcohol mixture, so compounded that it will answer all the demands of commerce and yet not expose the public to such serious dangers as does the sale of our "deodorized" wood alcohol?

CASE II.—*Blindness from taking, according to directions, a patent medicine adulterated with wood alcohol.*

Dr. H. J. Hornbogen, of Marquette, Mich.,

^a Frank Buller and Casee A. Wood. Poisoning by Wood Alcohol. *Journal of the Am. Med. Association*, October 1-29, 1904.

reports: "On June 9, 1902, Theo. H., aged forty-two years, cook in a lumber camp, applied for treatment. A week previously, having contracted a severe cold, he began treating himself with Hinkley's bone liniment. He took, as directed on the label, teaspoonful doses in the form of a hot drink every hour or two. In the afternoon of the second day, having exhausted the contents of two bottles, he noticed a failure of vision, so that on the morning of the third day he had complete loss of sight in both eyes. The camp being located some distance from a railroad he was unable to get proper medical attendance until the seventh day.

"Upon examination I found the patient well nourished and in perfect physical condition, with the exception of total loss of vision in both eyes; he had not the slightest perception of light and the pupils were dilated to the fullest extent. An ophthalmoscopic examination showed the retina normal; disc white and slightly excavated. Patient was put on increasing doses of strychnine. Improvement was at first slow. In one month's time, however, V. O. D. = $\frac{15}{200}$; V. O. S. = perception of light. The patient returned to work for two weeks. Two weeks later the V. O. D. had again fallen to $\frac{15}{200}$; V. O. S. same as before. I have examined the patient several times during the past two years. He has a central scotoma. At the last examination his right eye had V. = $\frac{15}{200}$. With his left eye he can discern light only. I am reliably informed that in many of the lumber camp stores Hinkley's Bone Liniment is as much a staple as tobacco and that many of the woodsmen drink it in place of whiskey."

This report furnishes an excellent description of the typical amaurosis following wood alcohol intoxication from adulterated patent medicines. In the early onset of the symptoms and the almost complete and permanent blindness it closely resembles the Dorpat cases.

CASE III.—*Death from the secret use of "deodorized" wood alcohol as a beverage by a man unaware of its poisonous qualities.*

Reported by Dr. R. A. Walker and Dr. Calvin R. Elwood, Menominee, Mich. A. B., a man of good social position and supposed excellent habits, had acted strangely during the day and retired to his room. The suspicions of his landlady were aroused and a few hours later entrance was forced. He was found unconscious, and Dr. Walker was called. Patient did not recover from his coma and died a few hours later. No post mortem examination was made, except of the urine, which contained a large amount of albumin. His breath had a strong odor of wood alcohol and in his room was found an empty pint bottle (unlabeled), with a similar odor. The bottle was identified by a druggist as the one in which he had sold the victim wood alcohol the day before and which he had so labeled. He had also sold the man wood alcohol on previous occasions, without in the least suspecting his intention to take it internally. There is every reason to believe that the patient was unaware of the deadly

character of the alcohol; it is surmised that, until the day of his death, he had contented himself with merely taking "nips" from the bottle. At last he took an unusual quantity and, becoming unconscious, died before assistance could reach him.

CASES IV, V, and VI.—*Debauch of three men with a wood alcohol mixture. One death, one case of blindness, one recovery.*

Reported by Dr. H. S. Miles, of Bridgeport, Conn.

During the afternoon and evening of September 18, 1904, three men employed in a livery stable drank from a keg containing a remedy made with witch hazel two thirds and wood alcohol one third. This mixture was used as a liniment for rubbing on the horses. James M., who drank the most (an unknown quantity), became unconscious during the following night and died the next day with all the usual symptoms of methyl alcohol poisoning.

Robert N. says he imbibed "three big schooners, probably more." He suffered from pains in the abdomen, vomiting, and great thirst and was brought to the Bridgeport Hospital in a semi-conscious condition. His pupils were widely dilated, and (when aroused) he was found to be almost blind, being able to count fingers a few inches only in front of his face. On the first day his temperature was 96° F.; respiration, 26, and pulse, 94 to 116. He was given strychnine and pilocarpine injections. On the second day his sight was further reduced to perception of light in either eye. The ophthalmoscope showed some haziness along the margins of both nerve heads, but their color was not much changed. The arteries were small, but the veins were about of normal size. This patient slowly recovered. In a week the vision in his right eye was finger counting at one foot; in the left eye, fingers at six inches. Four weeks after the spree there was a further improvement. V. D. = fingers at ten feet; field good. V. S. = fingers at four feet; field not accurately measured, but found to be defective. At this date there were decided changes in the ocular fundi; the nerve heads were white, the retinal veins and arteries being both small.

The third member of the party, Frank W., had taken "only three drinks," which were followed by pain in the abdomen and vomiting, but his general condition, at the time, was not serious. His vision was $\frac{20}{40}$ in either eye, but as he said his sight had not been good before the drinking of the liniment, he was discharged without further examination.

The wood alcohol of commerce has undergone a complete change of character in recent years. Before 1896 it was variously known as wood spirit, wood naphtha, methylated spirit, pyroligneous spirit, etc., and found in the market as a vile smelling, greenish liquid possessing a disagreeable, burning taste. It was then, as now, employed for burning in spirit lamps, for polishing brass, dissolving gum in the manufacture of varnishes, for stiffening hats, for veterinary liniments, and for other useful purposes. Its powerful odor and nauseous taste prevented anyone

from drinking it or for substituting it for grain alcohol. In recent years, however, it has appeared under new names, and a more attractive guise. Deodorized and deprived of its disagreeable taste it has been put on the market in new forms and highly recommended as a suitable alcohol for "bathing and sponging the sick; making liniments; rubbing for rheumatism, etc." Columbian spirits is now employed in enormous quantities not only for legitimate purposes, but as an adulterant in numerous mixtures supposed to be made with pure ethyl alcohol. The more attractive varieties of "deodorized" wood spirit can with difficulty be distinguished from grain alcohol, having the same agreeable, vinous odor, warm taste, and some of the intoxicating qualities of the ethylic spirit for which it is so often substituted. When employed as we know it has been and is now used, to adulterate whiskey, "high balls," "punch," "hot drops," "witch hazel," "bay rum," eau de cologne, Florida water, essences of all kinds, Jamaica ginger, "extract of lemon," and the various "liniments," patent medicines, proprietary and domestic remedies, its taste is so disguised that it readily passes for the genuine article. Moreover, its solvent and intoxicating qualities are not inferior to those exhibited by grain alcohol.

Wood alcohol also appears in the retail market under other fanciful names. In the United States are on sale in many drug stores and other shops colonial spirits, union spirits, eagle spirits, and lion d'or; in Canada, green wood spirits and standard wood spirits; all being nothing more or less than "deodorized" or "purified" wood alcohol. The following quotation from a trade circular issued by a refinery of wood spirit in Boston, Mass., gives an idea of the commercial qualities claimed by the makers of the "deodorized" product:

"Lion d'or is a 98 per cent. pure methyl alcohol, the remaining two per cent. being water. It is a methyl alcohol of exceptional and remarkable purity, manufactured on a commercial scale as a substitute for the best quality grain alcohol, or cologne spirits, as used externally in the arts and manufactures. Lion d'or is readily miscible in all proportions with water, chloroform, ether, glycerin, and, in fact, in this respect is identical in behavior with the best known varieties of alcohol. Unlike other alcohols, lion d'or undergoes no deteriorating change with time, but after standing for years, will invariably open as pure and sweet as when first made.

"Lion d'or is clear and limpid, of purest water whiteness, and such odor as it may possess may be described as faintly spirituous; the sweet, sickening odor of the grain alcohol of commerce, and the empyreumatic and tar-like odors of wood alcohol are quite lacking. This almost total absence of odor constitutes, we may say, the most conclusive proof of the purity of our product. Lion d'or may be, and is being, used in the preparation of the finest perfumes, and the most delicate scents are brought out to an advantage hardly possible even with the use of the best French spirits."

Although the recent wholesale poisoning in New York city has drawn the attention of the public to the occasional employment of "deodorized" wood alcohol as an adulterant of whiskey, it is only fair to say that the practice of substituting methyl for grain alcohol for this purpose is not nearly as widespread as we have been led to believe. If it were, half the spirit drinking population would be dead or blind! Dr. Warren, pure food commissioner of Pennsylvania, who reported that "to February 5, 1904, he had collected and examined 1,000 samples of cheap whiskey from all parts of the State and found in over 95 per cent. of them varying quantities (some as high as 75 per cent.) of wood alcohol," has since admitted that the use of wood alcohol is less common than he at first suspected. In Chicago a well known publicist, influenced by the Stryker Farms tragedy, collected twenty samples of cheap whiskey from an equal number of low saloons. Not a single sample contained wood alcohol. According to a report made November 1, 1904, by District Chemist Hird to the health officer, there is no whiskey on sale in the bar rooms of Washington containing wood alcohol. The inspectors of the department picked up a dozen samples of whiskey in bar rooms where it was thought wood alcohol in whiskey was most likely to be found. Professor Hird's analysis revealed no trace of wood alcohol in any of the samples. Truths about the adulteration of food and drink in the United States are startling enough without exaggerating them.

Although it is probable that, for a time at least, the "nine days' wonder" of the wholesale poisoning in New York city will act as a deterrent and, perhaps, for a time entirely prevent the adulteration of whiskey with wood alcohol, it is doubtful whether it will have much effect, either now or hereafter, upon the substitution of Columbian spirits for ethyl alcohol in the manufacture of patent medicines, perfumes, condiments, essences, and flavoring extracts which are widely consumed for the alcohol they contain. Death and blindness from these sources usually occur in isolated instances only and are not frequent enough to arouse public interest in the dangers of poisoning from this sort of adulteration.

Poisoning by Inhalation.—The statement that blindness may be produced by the absorption of wood alcohol fumes is controverted by some. They assert that in hat and whip factories, where the employees are constantly exposed to the fumes of wood spirit and where the air is laden with the evaporated poison, no cases of blindness occur. A physician residing in a factory town

where wood alcohol is largely used writes me, "It is a well known fact among the employees in the filling rooms of our factories that many of the men, especially green hands, are affected with giddiness and act and talk as if intoxicated after working in these rooms. This intoxication, however, they attribute to the fumes of turpentine, benzine, and allied liquids that are largely used in these rooms. I believe the symptoms to be due to the fumes of wood alcohol and mean to investigate the subject a bit. I have just called up on the telephone the superintendent of one of our largest factories, who states that the poisonous character of wood alcohol is well known among the employees, that they had a very practical demonstration of it some years ago in the death of several men who drank it." It is only proper to reiterate that the breathing of wood alcohol fumes diluted with a sufficient quantity of pure air (as in any well regulated, properly ventilated factory) is not dangerous to the eyesight, although I should not, without further investigation, regard work in a wood alcohol, hat, whip, or varnish factory as a healthy occupation. It is work carried on in a confined space filled with re-breathed air and wood alcohol fumes that constitutes the dangerous occupation. The varnishing of closed beer vats, closets, or small rooms with the windows and doors closed, or the burning and evaporation of wood spirit in a confined space that has been responsible for a number of published and well authenticated cases of blindness.

The total number of cases of blindness and death from this poison continues to increase. Buller and I were able to report 153 instances of blindness and at least 122 cases of death. To the list of blind victims we must now add the three cases reported by Ströhmberg and the two histories given here. To the roll of deaths are to be added the 15 cases of death in Dorpat, the 17 deaths in New York, and the two hitherto unreported instances given in this article. Thus, we have 158 authentic cases of blindness and 156 deaths; in all, 314 serious examples of methyl intoxication. There is every reason to believe that if the whole truth were known these figures would be largely increased and the full number would exceed 400.

The Eye Signs of Wood Alcohol Intoxication.—Whenever a patient shows decided symptoms of alcohol intoxication, abdominal distress and weakness of the extremities, followed by sudden blindness in both eyes, the presumption is that he has imbibed some methylated preparation. However blind he may become, sight almost always improves after a few days, to relapse, once more into permanent blindness. The visual fields are con-

tracted and present absolute central scotomata. In the fundus oculi are seen at first a congested nerve head with injected vessels; later, grayish white (secondary) atrophy and contracted vessels. These signs, generally accompanied not only by blindness, but by redness of the eye ball, pain in the globes, tenderness on pressure over the lids, discomfort on looking about, slight photophobia, and dilatation of the pupils correspond in the first stage to an acute retrobulbar optic neuritis. When the early inflammation and swelling of the nerve subside, vision for a time improves but the damage to the nervous tissues shortly terminates in a postneuritic atrophy with eventual permanent blindness.

Prevention of Wood Alcohol Poisoning.—The section in ophthalmology and the house of delegates of the American Medical Association this year passed a unanimous resolution calling upon the various State and Federal authorities to have all wood alcohol preparations placed on the list of poisons. To their credit also, be it said, the Wood Products Company, of Buffalo, N. Y., makers of 95 per cent. of the deodorized wood alcohol consumed in and exported from this country, are doing all in their power to prevent poisoning from their Columbian spirits and other wood alcohol goods. My colleague, Dr. Frank Buller, has suggested that every package, wholesale and retail, of wood alcohol, of the "deodorized" article in particular, should bear the warning, "this fluid, taken internally, is likely to produce blindness." Such a label might be even more effective than the legend "Poison" and the familiar picture of the skull and cross bones, chiefly because to most people the fear of blindness is more impressive than that of possible death.

No doubt this precaution would limit the dangers of serious poisoning from methylated preparations, but it is very doubtful whether it will be entirely effective. As stated elsewhere, whenever a government permits the sale of deodorized wood alcohol (as in the case of Columbian spirits in the United States and of standard wood spirits in Canada) the only effective safeguards (the offensive odor and taste) against ingestion of the poison is removed and the annual sacrifice to death and blindness will certainly continue. Either the manufacture and sale of "deodorized" or "purified" wood alcohol should be absolutely prohibited or, as in *Germany and Great Britain*, an untaxed ethyl alcohol, or one rendered undrinkable by the addition of mineral oil, wood spirit, naphthalin, or some other nauseous compound, or both, should be allowed for use in the

arts in the place of Columbian spirits and similar dangerous preparations.

The fact that the annual consumption of millions of gallons of cheap alcohol in other countries has been going on for years without fatal consequences, while in America we have had hundreds of deaths and cases of blindness from the employment of an agent that possesses no advantages over methylated spirits, or *Brennspritus*, is surely an unanswerable argument in favor of this proposal.

THE TREATMENT FOLLOWING THE BLOODLESS REDUCTION OF CONGENITAL HIP DISLOCATION.

FOURTH ARTICLE.

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A short space will be devoted to a discussion of the paralyses which sometimes follow the bloodless reposition of congenital hip dislocation. The phenomena of paralysis appear in the fields of both the large nerves supplying the lower extremities.

The paralyses appearing in the field of the sciatic nerve are very important in a clinical and practical sense, as they form rather a serious complication. These paralyses are analogous in ætiology and clinical appearance with those which appear after the open operation for reposition. It is, therefore, permissible to apply the experience acquired in dealing with the paralyses observed in the open operation, to those appearing after bloodless repositions.

In order to overcome the shortening of the limb in the open operation, traction is applied immediately after the incision is made into the muscle and the capsule. The reposition of the dislocated femoral head and the application of the cast in a moderately abducted position are the next steps. It is apparent that the sciatic and crural nerves must be stretched in proportion to the extent of the previous, existing shortening. If the shortening has been considerable and the resistance great, it is not unusual to observe paralysis of the entire limb, both nerves being injured. As a rule the crural nerve proves to have received the less dam-

age. In a majority of cases only motility is lost, sensibility remaining intact. The least serious cases are characterized by the paralysis of the long and short peroneal muscles only. The next degree of paralysis involves the deep branch of the peroneus nerve also, which injury results in a consequent elimination of the sensibility of the foot, and a loss of motility in the tibialis anticus and the extensors of the toes. In a more serious degree of paralysis there appears an additional loss of motion in the muscles of the calf. In other degrees, motor and sensory paralysis of the entire lower leg is accompanied by motor paralysis of the biceps, semitendinosus and semimembranosus. Very often the quadriceps muscle is involved, and the most severe degree may be characterized by a total motor and sensory paralysis of the limb.

If the sensibility is involved, neuralgias appear some time after the trauma, and develop to hyperæsthesia, the toes especially becoming very sensitive even to the slightest touch. These conditions are characteristic when following a severe paralysis.

The diagnosis of injury in the sciatic field is very easily made from the loss of motility in those muscles which are supplied by the peroneal nerve, which is noticeable in every case where an injury of the sciatic nerve has been sustained.

The prognosis of an injury to the sciatic nerve is not a favorable one throughout. The sensibility, as a rule, returns, except in a few longitudinal strips, and a similar but only partial recovery is observed in the motor branches, the locations especially predisposed to permanent paralysis being the peroneus longus and brevis, and the muscles supplied by the deep peroneal branch. In all cases of motor paralysis in the peroneal muscles, abnormal positions of the foot will be formed, due to disturbance of the equilibrium of the musculature. These deformities are chiefly pes equinus and equinovarus.

The question arises why, among all the sciatic branches, the peroneal nerve is the greatest sufferer through paralysis. This is doubtless to be attributed to the more serious damage inflicted upon this nerve. This may be explained by its topographical course. After the sciatic nerve leaves the great sciatic notch, it runs between the extensors of the femur and the flexors of the knee, embedded loosely and very movable. At the lower third of the femur it branches, the larger branch forming the internal popliteal, and the smaller branch the external popliteal or peroneal nerve. The main trunk of the nerve, as the internal popliteal, continues loosely embedded be-

tween the muscles, and may be traced down through the popliteal space into the planta pedis. The peroneal branch proceeds outward through the popliteal space, attaching itself to the long head of the biceps, and is thus conducted to the head of the fibula. In the region of the head of the fibula the peroneal nerve forms a connection with the peroneal capsule by means of fibres which run into a funnel shaped canal from the capsule to the sheath of the nerve. This arrangement may be demonstrated if we dissect out the peroneal nerve above and below its entrance into the capsule, and then apply tension above and below. From these anatomical conditions, it is evident that the stretching force is unequally distributed, there being a fixed point in the peroneal capsule, while on account of the loose embedding of the sciatic trunk, the same force is distributed over a length twice as great as that of the peroneus. If the stretching force is applied rapidly, the danger of tearing the nerve at this fixed point is greatly enhanced.

The duration of the paralysis of the peroneal nerve is quite protracted. In severe cases there may be two or three months of the neuralgic stage, followed by four to eight months of the stage of flabby paralysis, after which there is a period of gradual restitution of motility, which is quite often not complete.

As to the therapy, we use during the neuralgic stage a weak descending galvanic current of from one to three milliamperes. This is applied to good advantage for several minutes in the form of the electric bath. Effleurage, if it is possible to administer it, is sometimes beneficial.

During the stage of flabby paralysis, faradization and galvanism may be successfully used. The constant currents are of medium intensity, three to six milliamperes, and the points of application must be repeatedly changed during the administration.

It is expedient to put on the patient, for his walking exercise, a movable splint, including the calf and foot. This splint furnishes a certain support for the knee, preventing the formation of pes equinus, and protecting the over sensitive foot from mechanical injury. In severe cases it may be advisable to include the entire leg and foot in plaster of paris until the neuralgic stage subsides.

Another cause for paralysis of the peroneal nerve is pressure, sometimes occurring during manipulations in extreme abduction, and due probably to the pinching of the nerve between the femoral head and the pelvis. With unskilled operators this is a frequent cause for this paraly-

sis, which is likely to affect both the internal and external popliteal branches. The clinical symptomatology and therapy are the same as already given.

A specific paralysis peculiar to the bloodless reposition is represented by the isolated motor paralysis of the crural nerve. Its origin is not so apparent as the paralysis of the sciatic nerve. The prognosis, however, is decidedly favorable, as this paralysis uniformly subsides after a duration of from three to eight months. As a rule restitution takes place under the first cast. Although it is true that this paralysis is generally observed after a difficult reposition, still it does not seem to be due to the direct stretching force. The probability is that the nerve is squeezed either against the pubic bone or the femoral head, or that it is compressed by the fascia, which is put under great tension because of the position of over extension.

It is unnecessary to deal extensively with the isolated quadriceps paralysis, as it gives no cause for apprehension. It is, however, necessary in these cases especially, to lay great stress upon the regular, passive, extreme extension of the knee, because of the threatening possibility of a contraction of the knee.

CONSERVATIVE TREATMENT OF AFFECTIONS OF THE UTERINE ANNEXA. ITS INDICATIONS AND LIMITATIONS.*

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The development of modern surgical therapeutics is undoubtedly in the direction of conservatism. Says Tillmanns in the last edition of his work on general surgery: "The antiseptic and aseptic method has expanded our operative activity in a way never dreamed of, but has at the same time promoted the conservative direction of our therapeutics; more and more do we succeed in avoiding mutilating operations." Speaking of the surgery of the future, the writer declares his belief that its endeavor will be to heal diseases without the knife, that have been hitherto incurable, and especially general toxæmic conditions of the body produced by bacteria. Gynæcological surgery has felt the influence of the spirit of late years, and thereby its scientific standing has been largely augmented. In his excellent work on operative gynæcology, Howard Kelly expresses himself in most positive terms in favor of con-

servatism, in the diseases under discussion, and enters into an elaborate argument to prove the correctness of his position. This chapter is well worthy of careful study by all interested. Listen to the language used by the late William R. Pryor, whose premature death was so great a loss to science: "It is but a few years ago that for the most trivial reasons the ovaries were sacrificed. The unthinking and rash way in which those who posed as specialists in the diseases of women operated upon and removed organs which did not conform to some ideal in structure which the operator had adopted, very justly brought the specialty of gynæcology into disrepute. A better knowledge of the physiology and of the pathology of diseases peculiar to women has brought about a most radical change in our views regarding the propriety of removing the ovaries and tubes."

Prophylaxis demands that the principles of asepsis should be carried out in the conduct of every birth and in all operative procedures. Its main problem, however, is to prevent the ascent of gonococci in fresh cases of gonorrhœa in women. All intrauterine manipulations should, in these circumstances, be strictly interdicted, nor should the patient be allowed to use vaginal douches, as thereby the ascent of the infection might be favored. The husband should be taught the evil results of recrudescences of the gonorrhœal infection and the danger of extending the inflammation in consequence of sexual intercourse. While he is undergoing a cure, the wife should have absolute rest, so far as her sexual life is concerned and thus the infection may be limited to the cervix. In affection of the tubes even the slightest operation upon the genital organs may be attended with danger. The treatment of salpingitis, or salpingoophoritis necessarily varies according to the stage of the disease in which intervention comes into play. During the development of the acute phenomena two cardinal principles must guide our treatment; absolute corporeal and sexual rest. If an ice bag is placed over the hypogastrium and, if necessary, the liquor opii compositus given internally or the aqueous extract of opium per rectum, even the worst external forms of gonorrhœal peritonitis will run a favorable course.

Another method of treatment found an enthusiastic advocate in the late Dr. Pryor, and I cannot commend it too highly. The underlying thought of the method is the prevention of the destructive effects of the infection, by a conservative operative procedure. The patient being placed in the lithotomy position, a thorough curettage is made, taking care that the operation is a

* Read before the Virginia State Medical Society at its thirty-fifth annual meeting.

thoroughly aseptic one. The object of the curettage is to cut off the main source of infection. Douglas's cul de sac is now opened, serum and lymph making their escape through the opening. The index finger is carried into the cavity behind the uterus and a thorough exploration made. The tubes and ovaries are freed from the investing lymph and all adhesions loosened. The tubes may be brought to the vaginal opening for inspection. A probe passed through the fimbriated extremity assures us that it is patulous. A piece of iodoform gauze may be passed into the tube, during the manipulation, as suggested by Pryor. After the ovaries and tubes are freed from all adhesions, the gauze pads, which had been inserted to keep the intestines out of the way, are removed and the pelvis is carefully dried, the gauze being removed from the tubes. It may here be observed that for these manipulations in the cul de sac, the operator will be greatly facilitated in his task if the patient is in the Trendelenberg position, at an angle of 45°. The uterus is now packed tight with iodoform gauze. I use by preference the gauze prepared according to Pryor's formula, as I have never seen a case of iodoform poisoning follow its use. It fulfils three indications; it checks bleeding, it absorbs discharges, and maintains the parts in an aseptic condition. Strips of iodoform gauze are carefully inserted into the opening into the posterior cul de sac, filling it and extending as high as the internal os. The uterus is now restored to its normal position and the vagina packed with gauze. After the expiration of two days the vaginal and uterine dressings are removed and substituted simply by a vaginal. The packing in the cul de sac remains in place for a week. Another dressing is then introduced, which remains untouched for about five days before being renewed. The great advantage of the operation is that it prevents suppuration and leads to permanent cure.

In chronic cases the *weight* therapeutical method has been used with such a marked degree of success as to warrant adoption into practice. The vagina is first of all thoroughly disinfected. A colpeurynter is then introduced. In filling it care is taken to cause no pain; in order to accomplish this, the tube of the colpeurynter is drawn over the neck of the flask containing the quicksilver. The flask is now elevated and the quicksilver is allowed to run into the colpeurynter. As soon as the patient feels pain the operator stops or even allows some of the quicksilver to return, 500 to 1,000 grammes sufficing. The foot of the bed is elevated about twelve inches, so that the weight of the quicksilver acts upon the pelvic

roof. A portion of the contents is again allowed to run off. A bag of shot is spread over the abdomen, extending from the symphysis to the umbilicus. Instead of the colpeurynter a condom containing shot may be used. This treatment may continue day and night. An application of the treatment for three or four hours each day is also productive of good results. The symptoms show soon a marked improvement. At times, however, fever comes on and may be high. This indicates the presence of pus and the continuance of the treatment is contraindicated.

In cases of accumulation of pus in the pelvic cavity, whether in the tubes or involving tube ovaries and peritonæum, the vaginal incision of the pus sacs is indicated in a large number of cases, and especially is this true in the case of young women. The surpassing virtue of the conservative method of treatment is that if circumstances subsequently demand it the radical operation may ensue as the *ultima ratio*. The objection has been raised that by this method the majority of cases of pyosalpinx are insusceptible to cure. J. Veit remarks on this point as follows: "The technique of the opening is in itself not difficult, but the drainage and the irrigation of the opened part of the tube do not act on the entire pyosalpinx. Particular sections, on account of the flexed course, may lie so unfavorably that healing is out of the question. In this way originates the picture of the perforated pyosalpinx with all its horrors." This experience, however, is exceptional and should not deter from the performance of the operation, which is eminently successful in the larger proportion of cases, if properly performed. If we succeed in evacuating the pus, which is found in or around the tubes, in a thorough manner, and provision is made for satisfactory drainage, the ovary and tube may be allowed to remain; they will heal like any other abscess wound.

The method of operation is as follows: The patient is placed in the lithotomy position and an anæsthetic exhibited. The uterus is dilated and a curettage performed, a piece of iodoform gauze is passed into the uterine cavity and then withdrawn; this may be done a second time for the purpose of cleansing the endometrium and removing all débris. The cervix is seized with a bullet or traction forceps, while an incision is made through the vagina close to and behind the uterus. The uterus is more or less fixed by adhesions and of course cannot be pulled down as under ordinary circumstances, consequently the peritonæum seems to be high up. The best way of gaining entrance into the peritoneal cavity is by the index

finger. After its introduction into Douglas's pouch, the finger explores the posterior face of the uterus and then passes on each side behind the broad ligament. Some portion of tissue will perhaps be found softer than the remainder and by a little effort a pus cavity is opened. Sometimes the tissue is too tough to be broken into by the finger, and a pair of closed scissors, not too sharp at the points, will open the way. By combined manipulation, a hand on the abdominal wall cooperating with the finger within, we ascertain whether there is a single pus cavity or whether there are several, and in more or less proximity. An effort should be made to break up the partition wall between the respective pus cavities, so as to unite them in one. Irrigation should not be used, as there might be danger of forcing the fluid through the roof above formed by adherent organs and so carrying infection into the general peritoneal cavity. During the entire operation it is of paramount importance, by combined manipulation, to ascertain the exact situation of the inner exploring finger and whether pockets of pus still exist unopened. The cavities are then packed carefully with iodoform gauze. The dressings are renewed as often as necessary.

Pryor believed that in cases of sepsis the iodine was the effective agent in combating the disease by its absorption, when employed as described. It now appears, according to the most recent researches of Heile (1903), as quoted by Lexer, *Lehrbuch der Allgemeinen Chirurgie*, that the iodine becoming free is not the most important substance, and that under certain circumstances a strong antiseptic effect appertains to the iodoform. The effective body is probably diiodoacetylde, which, however, is only formed under exclusion of oxygen, consequently in deep cavities, in the decomposition of iodoform by reduction. The toxicity of this substance is responsible for the phenomena of iodoform poisoning. On the contrary, when iodoform decomposes with free access of air, the poisonous products of decomposition are transformed into non-poisonous ones by oxygen, according to Heile, which explains the fact that in superficial wounds a bactericidal effect is not produced.

In spite of the fact that inflamed organs are left behind, and that only the product of inflammation, the pus, is removed, a good result may be expected, if thorough drainage is carried out, and the treatment is further aided by weight on the abdomen. In a large proportion of cases just as much, nay more, is accomplished than by the removal of the entire internal genital organs. A hydrosalpinx is usually amenable to conservative

treatment. It may often be treated by vaginal incision and posterior colpotomy. The tube is freed from adhesions and drawn into the vagina, an incision is made and loose tissue trimmed off. A piece of iodoform gauze is then inserted and the vagina packed with the same gauze. In hydrosalpinx, when the tube is closed, salpingostomy is indicated. The operation, of course has, as a postulate, that the perisalpingitis process has come to an end and that the contents of the tube are not purulent, otherwise the salpingostomy might cause the death of the patient in consequence of septic peritonitis. It is well to bear in mind the warning given by Veit, vide *Handbuch der Gynäkologie*, Bd. III S. 819: "If we find in a sterile woman occlusion of the tube or salpingitis," he remarks, "local therapeutics of any sort of serious nature should not be undertaken in such a case, until we are quite sure that the husband is quite sound." Salpingostomy, he believes, would be justified only when the physician has found living spermatozoa in the husband.

The most difficult problem in the direction of conservative therapeutics is furnished by gonorrhœal pyosalpinx. Our efforts at conservatism in such cases may here prove fallacious and the patient after a short period of improvement may have a recrudescence, to be followed by all the old pains and annoyances. After a continuance of the disease for some time, there is a reaction on the general health. The constant pains lead to hysteria, lack of exercise in the open air and pains in defecation lead to constipation, thence follow loss of appetite, dyspepsia, insufficient amount of daily food being taken, until the clinical picture presented is a combination of emaciation, anæmia, nervous irritability, and cachexia. The patient consults one physician after another and finds that all her efforts to regain her lost health are in vain. If such a woman has to work for her living, and so many of them have to do that now under the conditions of our modern civilization, it is no wonder that she embraces with pleasure the opportunity of being relieved of all her woes and restored to health by a radical operation, especially if the operator holds out hope of certain cure. In some cases the hope is fully realized, and by the radical operation of removal of the annexa, with or without the extirpation of the uterus, the patient is awakened to a new life. But in others this is not true, the phenomena called forth by the forcible anticipation of the menopause being so distressing as to make many a woman declare that her condition is much worse after than before the operation. Internal pains, due to exudation about the stump,

may also make life miserable. Before a radical operation is advised, the gynecological surgeon should let his patient know that she purchases her restoration to health at the expense of the loss of her internal genitalia, the faculty of generation, and libido. In cases of double gonorrhoeal salpinx, however, the possibility of impregnation is lost, in any event.

It having been decided that a radical operation is indicated, a number of questions present themselves which have been answered differently by different operators. The first relates to the route, whether by vaginal or abdominal incision. For my own part I prefer the abdominal way, as then we gain a better view of the tube sacs, the nature and extent of the intestinal adhesions, the topographical relations of the inflammatory products, and, lastly, are much better able to control hæmorrhage. The technical difficulty in the way of ligating the ovarian arteries per vaginam being sometimes invincible.

Another question relates to the advisability of leaving behind or removing the uterus, when tubes and ovaries are removed in cases of double pyosalpinx. At the meeting of the American Gynecological Society, in May, 1903, this subject was discussed by a number of gynecologists, the majority arguing in favor of total hysterectomy. Those who are interested will find their account in consulting Volume 28, *Transactions of the American Gynecological Society*. The best method, I believe, is not to remove the entire uterus, but to perform a supravaginal amputation, after the method of Fritch,¹ by a wedge shaped incision and then unite the cut surfaces, coronally, the peritonæum being drawn over the wound. It has been recommended to burn the cut surface of the cervix with the Paquelin thermocautery. Instead of this, I especially recommend the use of collargolum. After the removal of the annexa, the uterus loses its significance and often has the disturbing influence of a foreign body, standing in the way of perfect recovery. It is important, however, to retain the vault of the vagina, in its normal integrity, and this we do by this method of operation. It is all important whenever possible in the performance of the radical operation, to leave a portion of the ovary, knowing as we do the influence it exerts on the entire organism.

An excellent conservative operation has been suggested by A. Palmer Dudley² and Daederlein³ in these cases, in which the tubes are removed, and which consists in the implantation of an

ovary into the fundus of the uterus. This operation is especially indicated in young women, and is thus performed: An opening is made into the fundus uteri, large enough to admit two fingers, which opens the cavity of the uterine body, and into this opening the ovary is inserted and fastened by sutures, with the view of maintaining the function of the uterus and, possibly fertility. Daederlein has never known the operation to be followed by pregnancy, nor did it occur in Dudley's case.

In conclusion, I would say that the attitude of modern gynecology towards inflammatory affections of the annexa is eminently a conservative one. It recognizes the fact that in the majority of cases it is not the disease that threatens life, but rather the operative procedure. Radical operations, involving the removal of all the internal genital organs, are reserved for those cases in which life is jeopardized by a continuance of the disease.

63 WEST FIFTY-FIRST STREET.

Pennsylvania State Pharmaceutical Board.—

The following Philadelphians have passed the examinations of the Pennsylvania State Pharmaceutical Board, and are licensed as registered pharmacists or justified assistants:

Registered Pharmacists—Nellie J. Stevenson, William J. Shea, Samuel S. Newcomer, Clarke Gamble, Genaro Titomanlio, John G. Armstrong, Charles J. Hendler, Le Roy W. Kurtzman, Louis H. Hausmann, Jr., Arthur William Crawford, D. Morris Hassman, Louis Wagner, Otis L. Ulrich, Harry Eisenhardt, John Henry Gross, Louis Green, Virden P. Ashmead, Robert K. Pentland, Robert W. Shelton, Howard T. Jackson, Albert N. Humpton, Henry C. Long, Jr., Galeno A. Ciccone, Harry C. Bingham, Isadore Henry, Jacob D. Albright, Calvin M. Reigel, and Louis Baun. Justified Assistants—Robert R. Saunders, Samuel Goldberg, Samuel Feldman, Samuel Canter, William A. Rabb, William E. Gregory, Frank Eidam, Edwin W. Bray, Herbert E. Slough, Silvio Ciancareli, Emil Vogel, Frank G. Fogg, J. Bowman Metz, George Lewis Pfeiffer, George I. Olewiler, Louis Entine, Harvey P. Feigley, Joseph H. Feckula, Jay Fisk Smith, Clawson S. Coler, Raymond Sharp, Franklin L. Tallman, Charles W. Evans, George J. Crouse, George Ruby, Adolph Hopkin, Jayson A. Herr, William W. Witmer, Samuel Axilbund, Paul P. Robinson, Wilfred S. Thompson, Raymond J. Wolf, John D. Dawson, Gibert March, George Edward Paules, Harry M. Fahr, Fred R. Perry, Benjamin H. Jenkins, Ira G. Gasser, William W. Fester, Jr., Charles Mann, William A. Glenn, Thomas A. Doud, and Alexander F. W. Mackie.

In addition to Miss Nellie J. Stevenson, whose name appears on the above list, two other young women in Pennsylvania passed the examination for registered pharmacists, M. Margaretta Hodge, of Blairsville, and Merle E. Arnold, of Dillsburg.

Church Hill, Va., Medical Society.—The Church Hill Medical Society held its annual meeting on December 8th. Dr. Julian Oppenheimer was elected president; Dr. A. L. Leftwich, first vice-president; Dr. E. W. Gee, second vice-president; Dr. M. Benmosche, secretary, and Dr. George E. Barksdale, treasurer.

¹ Vide *Die Krankheiten der Frauen*. 10te aufl., p. 470.

² Paper read before the Amsterdam Congress, August, 1899.

³ *Lehrbuch der Gynäkologie*, S. 264.

THE MANAGEMENT OF PNEUMONIA.*

By OLIVER T. OSBORNE, M. A., M. D.,

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Pneumonia, second only in importance to tuberculosis, has begun to compete with the latter in claiming the attention of municipal boards of health. Certainly during the last ten years the number of reported deaths from pneumonia has greatly increased in most of our large cities. This reported increase, however, is not an absolute one, as with the ever advancing education of the people along insurance lines, many certificates are handed in for pneumonia which really should be for consumption. Also, many deaths of children are now reported as due to bronchopneumonia which were previously reported as deaths from bronchitis or capillary bronchitis, and statisticians compute bronchopneumonia with pneumonia.

However, the fact that pneumonia is the most fatal of all acute infections is my excuse for considering a subject which is so well understood. We can, perhaps, not have too frequent discussions of a disease that so many times baffles us all, hence in making a few suggestions I may be pardoned for reciting many well known truths.

In considering inflammation of the lung we should not forget that the latter has two distinct systems of circulation; that derived from the pulmonary arteries carrying venous blood to the air vesicles and returning the aerated blood through the pulmonary veins; and that coming through the bronchial arteries from the aorta carrying arterial blood and nutrition to the lung tissue; a weak right side of the heart impairing one circulation and a weak left side of the heart impairing the other. Also, a weak right ventricle will allow a profuse bloody or prune juice exudate and expectoration, while a weak left ventricle may be one cause of the lack of resolution in a pneumonic lung.

Pneumonia is due to an infection, and often causes a temperature out of all proportion to the amount of lung involved, or it may cause irritation of the brain out of all proportion to the local manifestations. The germ that causes this disease may migrate to different parts of the body and cause trouble in different parts, and such secondary infections are frequent.

Probably, ordinarily, only the toxins of the pneumococci enter the blood and cause the later

symptoms of toxæmia. If the pneumococci themselves enter the blood, various complications occur, such as empyema, perhaps from the extension of the infection, endocarditis, middle ear or mastoid inflammation, or a joint complication. The crisis of pneumonia may be due to the pneumococci themselves producing enough of their own toxins to inhibit their further growth, somewhat like the ferment of the tubercle bacilli, or it may be due to a sufficient amount of antitoxine formed in the blood to combat their growth or their toxins. In normal cases this occurs at the eighth, ninth, or tenth day. If such a crisis does not occur, it is probably because other fresh foci of pneumococci have started fresh toxins, or because the leucocytosis is not sufficient, or an antitoxine is not produced in sufficient amount. The toxine formed by the pneumococci seems to be a decided depressant to the heart, vying, perhaps, with the depressant action of the diphtheria bacilli.

Although there cannot be a real pneumonia without the *Micrococcus lanceolatus* of Fränkel or Sternberg, we recognize a streptococcus pneumonia, which is the variety that develops upon la grippe, or influenza. Traumatism does not produce true pneumonia.

The blood count in pneumonia is interesting and prognostic, a leucocytosis of the polymorphonuclear cells being always present, **except** in cases of bad prognosis. This leucocytosis varies in amount, but in ordinary severe cases it should be not far from 20,000 per cubic millimetre. A low white blood count either indicates a very mild infection or, more frequently, the inability of the system to react to the infection, and a persistently low blood count gives an unfavorable prognosis.

The principal danger in this disease lies in heart failure, and it is the right side of the heart that generally fails. This can sometimes be foretold by the accentuated closure of the valve at the pulmonary orifice suddenly becoming less pronounced. At this time fibrin seems to easily form in white clots, sticking to the chordæ tendineæ, to the wall of the heart, or to a valve, causing murmurs; such obstruction is often the final cause of cardiac failure. Also, a weakened right ventricle may cause enlargement of the liver, and even some jaundice from passive congestion, enlargement of the spleen, and an albuminuria.

The greater the consolidation, and the more lung tissue involved, the more difficult it is for the right ventricle to force blood through the pulmonary circulation. This causes an overfilled right ventricle and an under filled left ventricle,

* Read at the meeting of the Connecticut Medical Society, held in New Haven, May 25 and 26, 1904.

and often therefrom irregular contractions of the heart, and the dicrotic pulse, a dangerous symptom. The imperfect action of the right ventricle can cause the peculiar dusky hue of the countenance due to venous stasis, and except in collapse this is not due to lack of oxygen or lack of aeration of the blood, as the rapidity of respiration, nature's way of increasing oxygenation, is generally sufficient. This same venous disturbance is doubtless often the cause of the cerebral irritability, restlessness, wakefulness, and finally delirium which occur so frequently in pneumonia, and there may be even sufficient congestion in the brain to cause an extravasation of liquid into the ventricles without actual infection of the meninges.

Though it is doubted by some, I believe that pneumonia can start from the central part of the lung, the so called "sneaking," or central, pneumonia, and in the first stage give no positive physical signs. The symptoms which should cause such a pneumonia to be suspected are fever preceded by a chill, some cerebral congestion, flushing of the face, often herpes of the lips, and increased respiration.

We must also recognize the not infrequent occurrence of pain referred to the abdomen, even low down, from lung irritations. This occurs not infrequently in children with pleurisy and even with pneumonia, and can occur in the adult. Also, some of these abdominal pains and abdominal resistance are due to associated diaphragmatic irritation, which is a condition often ignored or overlooked. Hence in obscure abdominal signs, with fever, the lungs should be carefully interrogated.

Besides the interest which attaches to the microscopical and bacteriological investigations of the sputum, which will always give a clue to the character of the infection that we have to combat, it is interesting to note that the sputum contains a large amount of albumin and sodium chloride, which latter is probably the reason that the urine contains so few chlorides during the pneumonic process. This also gives an indication to supply sodium chloride and plenty of albumin with the food.

Deaths occurring during the second and third days of pneumonia are often not caused by a large amount of lung involved, but apparently by the intensity of the infection. This sort of toxic death is seen in malignant diphtheria, malignant scarlet fever, and malignant dysentery, and perhaps means, as I have elsewhere termed it, "medical shock," which is probably a toxæmia sufficient to prevent leucocytosis and to paralyze the supra-

renals and the vasomotor system. Deaths that occur later are generally from exhaustion, largely cardiac, and, except in double pneumonia, are not due to the amount of lung involved.

As to the prognosis of conditions, it may be stated that a very severe chill in the beginning shows that the infection is serious. When both lungs are involved, less than half the patients recover. A feeble or dicrotic pulse, or a pulse too high for the temperature, is a bad omen. A temperature of 105° is not particularly objectionable if short-lived, but above 105° there is progressively more danger. A concomitant bronchitis of the other lung is very undesirable, and of course œdema of the lungs is dire. Valvular lesions of the heart, kidney insufficiency, or an arteriosclerosis make the prognosis bad. Scanty expectoration in the second and third stages is often of bad omen.

The mortality varies with age, the lowest, about 10 per cent. or even less, being between the ages of twenty and thirty years, while the highest mortality is from 50 to 60 per cent., being in patients over fifty years old. Hospital cases do not do so well as private cases. This is natural, in view of the class of people that are taken to the hospitals on account of pneumonia, and also on account, generally, of the severity of their exposure.

We may premise any suggested therapy by the assertion that about 50 per cent. of patients with pneumonia will get well by good nursing, good nutrition, and proper hygienic surroundings. With the other 50 per cent. a great deal can be done and a great deal must be done by the physician, and except in about the above 50 per cent. pneumonia does not necessarily tend to recovery. However true it may be that twenty or more years ago pneumonia tended to recovery, since the last la grippe epidemic, which began ten years ago, pneumonia in at least 50 per cent. of cases does not tend to recovery.

Although we have no specific treatment for pneumonia and cannot shorten its process or fight the pneumococci as such, as is so well said by Pell, of Amsterdam, it would be a poor captain who left his ship to its fate because he was not able to subdue the gale. It was just his high duty, which must not be underrated, to steer the ship clear of breakers and cliffs safe into the sheltering port. Therefore the management of pneumonia was of great importance.

A word as to prophylaxis. While we have been turning our attention toward the prevention of tuberculosis, and promoting sanatoria for the treatment of that disease, pneumonia has been in-

creasing its ravages. Doubtless the pneumococcus is wafted about in the dust as is the tubercle bacillus, and as a matter of fact pneumococci are many times found in the mucus of the mouth and throat, although they probably never cause pneumonia unless they reach the minute bronchi or an air vesicle, to which place they may be conducted by any catarrhal condition that may be present, and especially easily when the la grippe germ is at work.

Among the inmates of damp, ill ventilated, dark, and crowded dwellings, pneumonia occurs the most frequently, although prolonged exposure to cold, and especially such exposure after exhaustion, is a strong predisposing cause. Also, the presence of some other infection, such as measles, whooping cough, influenza, or typhoid fever is a frequent cause of this disease. As for tubercle bacilli so are these dark tenement houses breeding places for the pneumococci, and certain houses can positively be stigmatized as pneumonia breeders. From these places the pneumococcus is disseminated, and no walk of life is exempt from its onslaught. The disease is also certainly communicable directly, hence pneumonia should be a reportable disease, and the boards of health should begin to disinfect tenement rooms after pneumonia as they now do after a case of tuberculosis.

The first consideration in the treatment of pneumonia should be the same care as to hygienic surroundings as we take with a typhoid case, namely, a well ventilated, large room, with plenty of fresh air; then the oxygen tank will not be so often needed. Also a patient should be frequently moved from side to side to prevent hypostatic congestion of the unaffected lung.

I think that pneumonia can both abort itself and also be assisted to abort. This may not be frequently, but often is true. In rare cases in plethoric, sturdy men with a full, bounding pulse and marked signs of serious congestion of the lung, venesection can be done with good results. These, however, are the very cases in which fair sized doses of a cardiac depressant or a drug like antipyrin will also be of advantage. The profuse sweating caused by a gramme of antipyrine, with the action of some brisk purge, followed by morphine to stop the pain, and dry cupping, or if preferred, a hot poultice, may and often does abort a case of pneumonia. The old treatment with aconite and veratrum viride will probably give the same results. Personally I do not use these drugs, as I fear prolonged cardiac depression, much greater than can possibly come from one dose of an antipyretic. There certainly is no justification for

giving cardiac depressants or coal tar products after the first stage of pneumonia.

The case not aborting and the pneumonic process proceeding, the general management becomes of importance. The nutrition should be sufficient, but not so forced as to cause gastric flatulence or tympanites, any fermentation in the bowels not only adding its disturbance to the heart from the bowel distention, but also adding one more depressant and cerebral irritant by the absorption of bowel toxins.

The nutrition should be by milk, provided that it causes no indigestion, but probably it should not be given in such large amounts as we have been accustomed to give; a quart in twenty-four hours, combined with other nutriment, being better than two quarts. Two raw eggs a day, given in bouillon or coffee, or with sherry or brandy as seems best, furnishes the kind of albumen the patient needs. Expressed beef juice, which means more than the blood from meat, the actual, expressed meat serum, is one of our best heart muscle stimulants, and should be given in ounce doses three or four times a day.

The bowels should be moved daily, often best with small glycerin enemas, or, if the tongue is badly coated and there is some intestinal gas, a small amount of saline, such as hunyadi water, is indicated.

Troublesome, high temperature should be treated by sponging down with tepid water, sponging the extremities and the abdomen, but not the chest. Gentle massage of the extremities is advisable, with or without alcohol, as tending to promote the excretion of the muscle toxins and to establish a brisker peripheral circulation.

If the blood count shows the leucocytosis to be insufficient, or the patient seems not to be fighting the disease well, some nuclein preparation doubtless affords good treatment. This may be nucleic acid, in the dose of one grain three or four times a day, or thymus, in doses of three grains, or some other nuclein preparation. The dose of any of them, however, should not be large.

There is considerable difference of opinion as to the value or the advisability of local applications. Certain it is that warm, moist applications over the portion of the lung involved, during the first stage, will mitigate the pain and add to the general comfort of the patient. These applications may be of hot water, or water and alcohol fomentations, but nothing holds the heat better than the old flaxseed poultice bound tightly to the chest, especially if a hot water bag is placed alongside of it. Such applications should be

changed every two or three hours and not allowed to become cold. They certainly seem to promote easy expectoration and often apparently hasten resolution. In the case of children I am in doubt of their value. It has sometimes seemed to me that the continuation of poultices, at least for too long a time, has been the cause of stimulating, by dilating the blood vessels of the pleura, the pneumococcus to come out and make trouble, causing an empyema, which so frequently occurs in the pneumonia of children.

In stopping the use of the poultices I believe the best method is to gradually reduce their size, and then to put on some warm, dry absorbent cotton, when no chill will be felt and the patient will not miss the poultice. If the surroundings of the patient are such, that at certain times of the day or night the room becomes suddenly colder, or the patient cannot have the care of a good nurse, poultices had better not be used.

The question then arises as to the value of one of the glycerin pastes. They certainly make impervious dressings, but to get their best value, they should be changed at least daily, and better every twelve hours. I believe they do considerable good.

Among the poorer classes, where such changes or dressings are not advisable, the old pneumonia jacket may be used and do good. I do not believe in blistering or even in using iodine over the chest in pneumonia.

Many troublesome symptoms occur in pneumonia which need modification, and as already stated, although there is no specific treatment for this disease, certain it is that we can ameliorate the intensity of all symptoms. If there is an irritable cough, and not every cough produces expectoration, some sedative expectorant is indicated. Codeine seems to me better than morphine or heroine. Of course, the dose of any one of the opium series should be small, as the respiratory centre must not be depressed, and the patient must be alert to cough as frequently as there is anything to expectorate. There seems to me to be no better stimulant for the bronchial mucous membrane than ammonium chloride in small doses, especially if combined with a very small amount of ipecac; this, put up in an acid preparation, is almost invariably well received by the stomach. The time of sweet, nauseating cough mixtures has gone by. A little syrup of citric acid or dilute phosphoric acid in watery solution and given well diluted, makes a good menstruum, and is almost invariably well received by the stomach. I believe there is very little advantage in giving ammonium carbonate, as other car-

diac stimulants are more pleasant, and it is very irritant to the stomach. If the pneumonic expectoration becomes very profuse terpene hydrate, in capsules or tablets, becomes a good treatment.

Now as to the care of the heart, and especially the use of alcohol. I do not believe alcohol should be given simply because we have a case of pneumonia, but should be given only when the circulation seems to demand it. This means that it is not to be relied upon for a long time in cardiac depression, although for a short time it will tide over such depression and whip up a flagging heart. By its tendency to dilate the peripheral blood vessels and bring more blood to the surface and cause perspiration, especially when the skin is dry, and also where not enough nutriment is taken, it certainly has value. The enormous doses of whiskey given, and recovered from, are certainly not advisable. The dose should be such as not to give strong odor to the breath, not to cause a dry skin or a bounding pulse, but just enough to keep the surface of the body warm and the pulse regular. This means from one to three teaspoonfuls of whiskey every three hours, provided that the heart has shown signs of weakness. If the heart still fails, and the pulse tone is poor and the rate rapid, not more whiskey should be given, but other cardiac stimulants. Many cases of delirium are caused by an overdose of alcohol in acute disease. In cases of high fever, alcohol is doubtless a fat saving food, as it aids in furnishing something for the system to burn, although it may not save proteid material. In cases of very low temperature, alcohol is not the best stimulant.

Many times, instead of alcohol, nitroglycerin can be used to equalize the circulation, dilate the arteries, and render a tense pulse less hard. The dose for this purpose is $\frac{1}{200}$ of a grain every three to six hours. Also, in an emergency a hypodermic of $\frac{1}{100}$ of a grain of nitroglycerin will give a flagging heart a start and allow time to get the action of other drugs.

As it is generally the right side of the heart that fails, if there is much cyanosis and the veins are dilated, with jugular throbbing and a laboring heart, venesection of a few ounces of blood will relieve this condition as well as the hypodermic of nitroglycerin, as just stated.

In any stage of pneumonia, if the pulse shows very poor tension and becomes irregular, whether the rate be fast or slow, strychnine is indicated, and should be given in soluble tablets at the rate of $\frac{1}{30}$ of a grain every six hours. If the heart becomes still weaker, and cardiac failure is feared,

it should not at first be given more frequently, but rather every twelve hours or every six hours, hypodermatically, at the same dosage.

Caffeine should be given from the beginning of pneumonia in the form of coffee, at least once in the morning, and perhaps several times early in the day, but not late in the day on account of preventing sleep. Coffee, besides being something of a food, is certainly a decided cardiac stimulant and tonic.

If a patient is very sleepless and it is decided that the caffeine should not be used, aromatic spirit of ammonium, or camphor water, or spirits, makes a good substitute. In acute heart failure, the hypodermic injection of the saturated solution of camphor in olive oil may be used, and repeated every half hour, several times if needed. I have never seen an abscess from such an injection.

Also, when the pulse tension begins to worry us, but not too soon, adrenalin or suprarenalin solution, one part to a thousand, should be used in drops on the tongue, five drops every fifteen minutes, several times in an emergency, or five drops every three hours regularly. I wish to caution against using suprarenal extract in large doses or for too long a time, as I believe depression occurs from it, so that as soon as the emergency is passed it is better to reduce the frequency or omit the drug entirely for a while.

Now as to oxygen. In severe cases of pneumonia it certainly does no harm to have a tank of oxygen on hand, as in emergencies it is of undoubted value. If a patient can afford to use it freely, it will relieve the dyspnea of the worse stages and certainly it is an aid in cardiac depression. However, it is not curative and should not be expected to work miracles.

If for any reason, sufficient liquid is not taken by the patient, or the kidneys are not acting well, a high injection of normal saline solution is of great value, provided there is no oedema anywhere. If there is pulmonary oedema, and the heart is failing, saline transfusions or injections should not be used, as the circulation has already all that it can take care of, and it is a mistake to give saline solutions in failing heart unless there has been hæmorrhage or large loss of fluid.

During convalescence from pneumonia, if the pulse and heart are weak, there is no better cardiac tonic than tincture of strophanthus in five to eight drop doses every six hours.

One of the most troublesome symptoms in pneumonia is sleeplessness, and if this cerebral irritation goes a step farther there is delirium; there is nothing in medicine much harder to combat than a noisy delirium from pneumonia, and

the prognosis is very grave. Perhaps chloral is the best hypnotic, especially if delirium is present, but we must consider the possibility of its causing cardiac weakness and perhaps we should combine it with a good cardiac tonic. Hyoscine may be used hypodermatically, and is often very successful; paraldehyde may be of value, but I believe the bromides should not be given, as they tend to cause too much cardiac debility.

Ergot is a good drug for all cerebral congestions and irritations, and may be used hypodermatically. It contracts the blood vessels of the brain and raises the blood pressure everywhere, therefore it can do nothing but good to a weakened circulation.

Morphine should generally not be resorted to in delirium, as it requires very large doses to make any impression on excited brains, and large doses are dangerous.

Severe headache may be often well combated by an ice cap or a saline purge. Profuse perspiration, especially during the convalescent period, should not be discouraged, but the excretion should be carefully washed off with warm water, several times a day if necessary.

Nothing need be said of the serum treatment of pneumonia, as its use is as yet experimental and its value unproved.

HÆMORRHOIDS.*

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Hæmorrhoids are classified as *external* or *internal*, according to their location; the former being covered by the integument and the latter by the mucosa. According to their structure the external are further divided into the *thrombotic* and the *cutaneous* varieties, while of the internal there are also two types, the capillary and the venous. Occasionally one encounters pile tumors possessing characteristics of both the external and internal, their lower portion being covered by the skin and their upper part by mucosa; these have been designated *externointernal* or *combination* hæmorrhoids, and since they require practically the same treatment as the internal venous variety, they will not be discussed further.

Thrombotic hæmorrhoids usually occur in robust persons. Their onset is sudden and is caused by the rupture of one or more small veins during the expulsion of hardened feces. They are usually single, although occasionally there may be two or more; are located at the mucocutaneous junc-

* Read before the Harlem Medical Society.

tion, and vary in size from that of a millet seed to that of a cherry. They are ovoid in shape, livid or dark blue in color, and appear and feel like bullets or small shot beneath the skin. At first they cause a sensation of swelling at the anal margin; as the clot becomes larger and harder there is a feeling as of the presence of a foreign body in the lower part of the anal canal. This is resented by the sphincter, which spasmodically contracts, occasionally at first producing a drawing sensation; later the contractions become more frequent and of longer duration, and intense suffering is experienced because of the almost constant constriction of the pile.

The suffering caused by a thrombotic hæmorrhoid becomes so intense that the patient is unable to sleep or obtain relief, no matter what position he assumes. Because of the tenesmus, irritation by the fæces, and sphincteralgia, they soon become highly inflamed and very sensitive. Even if not treated the clot may be absorbed; occasionally, however, the tumors become ulcerated as the result of continued irritation, infection of the clot takes place and marginal abscess terminating in fistula results.

Cutaneous hæmorrhoids consist of hypertrophied elongations of the skin, and are frequently secondary to the absorption of the clot in thrombotic hæmorrhoids, where the skin is bruised or stretched. They may be single or multiple, are usually chronic, irregular in shape, of variable size, and except when accurately inflamed, are the color of the skin. Cutaneous hæmorrhoids cause less suffering than the thrombotic variety; in fact, they may exist for years without causing the patient any trouble, providing proper care is observed. But when bruised from any cause, such as a kick or fall, sitting on a hard seat, stretching of the parts during defæcation, etc., or when irritated by acrid discharges from the rectum or vagina, they may become inflamed and produce much pain and annoyance. When the inflammatory process is subacute, the pain is slight and the patient complains of heat and fullness about the anus and discomfort during defæcation.

When acutely inflamed, cutaneous piles become greatly swollen, highly colored, cedematous, painful, extremely sensitive to the touch, and cause frequent spasmodic contractions of the sphincter muscle. The pain is usually confined to the anal region, but may be reflected up the back, down the limbs, or to neighboring organs.

Capillary hæmorrhoids consist in a dilatation of the capillaries of the mucosa, the vessels beneath the membrane being rarely involved; they are flat, project slightly above the surrounding mucosa,

are bright red in color, soft and spongy, and have a strawberry like appearance. They are uncommon, may be single or multiple, and vary from one fourth of an inch to one inch in diameter. They bleed very frequently, but the hæmorrhage is of an oozing character, and usually not profuse. They cause but little pain, rarely protrude, and may occur alone or in conjunction with the internal venous variety.

Internal venous hæmorrhoids are varicosities involving the veins and capillaries of the mucosa and submucosa in the lower rectum, and are characterized by a tendency to bleed and protrude. They may cause very slight or very intense suffering depending upon their number, size, and location, and whether they are in an inflamed condition, ulcerated, or strangulated. In their incipency they are small, rarely protrude, and cause but little discomfort other than sensations of heat and fullness about the anus; but later on, when they become larger and protrude more frequently and become ulcerated, they may produce considerable pain during and following stool. When strangulation occurs and the tumors cannot be returned above the sphincter muscle because of its spasmodic contraction, the suffering thereby induced is most agonizing, and it is impossible to obtain rest or relief until the strangulation is overcome.

Hæmorrhage from these hæmorrhoids is venous in character, and may be slight in amount, appearing only as streaks upon the fæces, or moderate oozing from the anus for some time after stool, or so profuse that the patient is partially or completely exsanguinated; the blood may be discharged fresh and fluid, or if retained for a considerable time in the bowel, in clots resembling coffee grounds.

Other symptoms which may be induced by internal venous hæmorrhoids are vesical and prostatic disturbances, proctitis and reflected pain. When ulceration is extensive the discharges may cause excoriations of the anogluteal region, producing a persistent annoying pruritus. If infection occurs abscess and fistula may follow.

Treatment.—The treatment of hæmorrhoids when intelligently carried out is universally successful. It may be non-operative or operative, but when left to the surgeon to decide, the latter method is by far the more satisfactory, as it gives the quickest relief and effects a permanent cure.

The non-operative treatment is simple and consists in requiring the patient to remain in the recumbent position, in restricting the diet to liquid and semisolid foods, regulating the movements of the bowels by the administration of laxatives in

order to secure one or two semisolid stools daily, applying the ice bag, and in exhibiting astringent remedies to diminish the inflammation and swelling, so that the hæmorrhoids may be reduced. If they are strangulated and there is much pain and sphincteric spasm, it is best to apply hot water compresses, or poultices, and insert suppositories containing a quarter of a grain of morphine, eucaïne, or cocaine as often as is necessary to give relief. In cases marked by depleting hæmorrhages, with or without protrusion, the bleeding may be arrested and the ulceration diminished by the daily insertion of a small plug of gauze about the size of the little finger and three inches in length, moistened with a solution of silver nitrate two per cent., ichthylol ten per cent., or balsam of Peru, fifty per cent., which is allowed to remain several hours in the anal canal. When this is not efficient, the ulcers should be cauterized with the Paquelin or galvanocautery. In most instances, however, this method of treatment is only palliative, and an operation eventually becomes imperative.

The operative treatment of hæmorrhoids has been practised certainly since the time of Hippocrates, and numerous operations have been suggested for their cure, some of which have proved useful, simple, and effective, while others are but little short of barbaric, are unreliable, cause great suffering, and not infrequently leave the patient in a condition far worse than before the operation.

The operations which are most frequently practised for the relief of internal hæmorrhoids are (1) clamp and cautery; (2) ligature; (3) excision; and (4) the injection method. Other operations have been suggested, such as submucous ligation, divulsion of the sphincter, crushing, removal by *écraseur* or galvanocautery, wire loop, cauterization, puncture or linear, or by means of caustics; but these will not be discussed further in this paper as they have become obsolete, or have met with but slight favor at the hands of the profession.

The procedures which have proved most popular and reliable are the clamp and cautery and the ligature operations. The writer is partial to the former, especially when *general anæsthesia* is employed; but either method when properly performed is invariably followed by satisfactory results. The excision operation for hæmorrhoids, originated by Whitehead, of England, and modified by Pratt, of Chicago, wherein the lower two or three inches of the rectal mucosa are completely excised, cannot be too severely condemned, because of the difficulty of performing the opera-

tion, and the grave complications and sequelæ which so often occur, such as obstinate ulceration, stricture, incontinence, abscess, pruritus, etc., not infrequently leaving the patient in a permanent state of invalidism. Hæmorrhoids may be excised, however, by means of elliptical or other incisions sufficient to remove the tumors, but leaving strips of healthy mucosa undisturbed, thereby avoiding retraction of the bowel and its troublesome sequelæ.

A great deal has been written concerning, and much has been claimed for the injection method or operation by its advocates, who maintain that by the injection of caustic or astringent fluids into hæmorrhoids, they can be cured, causing but slight if any pain and without detaining the patient from his business or requiring him to take a general anæsthetic. Experience has convinced the writer that, although cures are occasionally obtained by this method, yet in most instances it is unsatisfactory, in that permanent results are not attained, and further because the injection of carbolic acid and similar agents may produce much pain, swelling, extensive sloughing, abscess, fistula, phlebitis, and long delay from business; even cases of death from embolism have been reported. Therefore, this method once so popular with the laity has fallen gradually into disrepute.

At the present time it is the custom of most surgeons to insist that patients suffering from hæmorrhoids, irrespective of their number, size, or condition, must forego business and social engagements to enter the hospital for operation under general anæsthesia. The writer is convinced that this is unnecessary and indeed unjustifiable in the vast majority of cases, and during the last three years he has succeeded in permanently relieving nearly all of his hæmorrhoidal cases by radical operation, performed under local anæsthesia in the office, patient's home, or dispensary.¹

With but very few exceptions, uncomplicated cases of hæmorrhoids, irrespective of variety or condition, can be radically operated upon, outside the hospital under local anæsthesia produced by the injection of eucaïne or cocaine or of sterile water. While the anæsthesia produced with cocaine and eucaïne is satisfactory, dangerous toxic effects not infrequently accompany their use; there is often copious bleeding during and shortly following the operation, and after the immediate anæsthetic effect has worn off, the postoperative pain is severe and prolonged. Because of their disadvantages, the

¹ A Plea for the Non-Hospital or Office Treatment of Diseases of the Rectum and Anus, by Samuel G. Gant, M. D., LL. D., *New York Medical Journal*, April 18, 1903.

writer has discarded these agents in the treatment of hæmorrhoids, and now operates under local anæsthesia induced by distending the tissues by means of injections of sterile water,² the pressure exerted upon the terminal nerve filaments being sufficient to prevent cutting pain, although some patients suffer momentary discomfort caused by the distention, this being immediately relieved when the tissues are excised. This method is devoid of danger of poisoning, there is almost no bleeding during the operation and little if any pain following it, while the dangerous postoperative hæmorrhage has been extremely rare.

The methods employed by the writer to produce local anæsthesia for operations in the ano-rectal region by the injection of sterile water into the tissues, have already been fully described and published recently in the *New York Medical Journal* and *Philadelphia Medical Journal*,³ and it is therefore unnecessary to enter into detail here, further than to reiterate that sufficient water must be injected to distend the tissues until they are of a glassy white appearance, when anæsthesia is complete.

In the thrombotic variety of external hæmorrhoids the water is deposited only between the layers of the skin, and the tumor is then transfixed, laid open, the clot turned out, and its cavity packed with gauze. In the cutaneous variety the injections are made into both the skin and the centre of the tumor; the latter is then excised and the wound sutured or left to heal by granulation.

Internal hæmorrhoids are first anæsthetized by injecting sufficient water directly into the centres of the tumors; they can then be painlessly operated upon by the ligature, clamp and cautery, or linear excision methods. The clamp and cautery is satisfactory when the operation is performed at the home of the patient and he remains in bed for a short time afterward, but when it is performed in the office or dispensary, and he desires to be up and about immediately after it, the ligature method is safer because less apt to be followed by hæmorrhage.

In the vast majority of cases, the patients complain of little or no pain on the days following the operations, other than slight soreness. This the writer attributes to careful divulsion of the sphincter muscle by insertion of the fingers or anal calibrator, prior to the operation, to the use of a very fine and soft but strong linen ligature; to the fact that no dressings are left in the anal

canal to irritate the wound or excite sphincteric spasm, and that the stools are kept in a semisolid state by the administration of laxatives.

The patient is made more comfortable and the danger of bleeding lessened if a wedge-shaped compress of gauze is applied to the anus after the operation and held firmly by means of a snug fitting T bandage. In order to prevent the secretions from collecting and irritating the skin, which may cause itching, and to relieve pain and sphincter algia should it occur, gauze compresses wrung out of water as hot as can be borne by the patient should be applied frequently as may be convenient. Should this not suffice to relieve suffering, ointments, or suppositories containing opium, cocaine, or eucaine alone or in combination may be prescribed to be used as often as required.

In case of profuse accidental or secondary hæmorrhage, the bleeding can be quickly arrested by introducing a good sized proctoscope, through which a thick plug of gauze is inserted into the bowel and held in place, while the proctoscope is withdrawn over it, the lower end of the gauze being allowed to project from the anus; the wedge-shaped compress and T bandage are then replaced.

The writer, in conclusion, would state that he has operated upon more than two hundred and fifty cases of hæmorrhoids, under sterile water anæsthesia with the most gratifying results; one hundred and eighty-six of these were included in a collection of three hundred and twenty cases of various rectal operations, performed under this method of anæsthesia and reported at the recent meeting of the American Proctological Society. This group of operations embraced every variety of pile tumor, under all conditions ordinarily encountered, and effective radical treatment was rendered by this method, so simple and easy to accomplish in the office, patient's home, or dispensary, without resorting to general anæsthesia and with so little danger and inconvenience to the patient, that in the writer's opinion it should relegate to oblivion the much vaunted but uncertain and dangerous injection method of treating hæmorrhoids which has accomplished little and caused much suffering, but nevertheless has enabled the quacks or medical vampires throughout the country to extort enormous sums from this class of sufferers.

58 WEST FIFTY-SIXTH STREET.

Detroit Physician Elected a Potentate.—Dr. Henry C. Corns, of Detroit, was elected potentate of Moslem temple of the order of the Mystic Shrine on December 5th.

² Sterile Water Anæsthesia in the Office Treatment of Rectal Diseases, by Samuel G. Gant, M. D., LL. D., *New York Medical Journal* and *Philadelphia Medical Journal*, January 23, 1904.

³ January 23, 1904.

PNEUMOCOCCUS ARTHRITIS — REPORT OF A CASE.

By W. H. WITT, M. D.,

WITH PATHOLOGICAL REPORT.

By WILLIAM LITTERER, M. D.,

NASHVILLE, TENN.

Cases of arthritis demonstrated to be of pneumococcus origin are still sufficiently interesting to deserve a report. In 1899 I had a case of arthritis of the right knee complicating pneumonia in a man aged 66 years. The fluid from the joint was not tested bacteriologically. There was also extensive infection of the calf of the leg. The process made such progress that a successful amputation at the middle of the thigh was eventually done. At that time only one textbook at my command even mentioned such a complication of pneumonia and I could find no help in the current literature. The article by Cave which appeared in the *Lancet* of January 12, 1901, was the first that came under my observation. It was, I think, the first that appeared in English. Since then several cases have been reported by Cole, Howard, and others. I have recently observed the following case:

G. N. B., aged 36 years, very good personal and family history, was seized with chill January 22, 1904, and was attended by Dr. Haley, of this city. Signs of pneumonia gradually developed in both lungs, and in a few days he was very ill. I saw him January 28th. The urine became scanty and loaded with casts, and a fatal issue was expected. Under hypodermoclysis and hypodermic injections of caffeine his condition improved, and he seemed in a few days to be on the road to recovery. On February 7th, I saw him again and there was evidence of fluid in his left side. Some of the fluid was removed and tested bacteriologically. The next day a resection of a rib was done, and a pint of purulent fluid taken from his pleural cavity. On this day the right knee began to swell rapidly, and fluid was aspirated from its cavity. The patient was very septic, and gradually sank and died on February 10th. A few hours before death the right arm swelled from the elbow to the hand. This was probably due to a septic thrombosis, said to be one of the very rarest complications of pneumonia. There was no autopsy. I append the report of Dr. Litterer.

BACTERIOLOGICAL REPORT FROM THE LABORATORY OF THE MEDICAL DEPARTMENT OF VANDERBILT UNIVERSITY.

The fluid aspirated by Dr. Witt from the right knee joint was yellowish, serum like, and slightly turbid. Cultures from this were made in milk, on

plain and glucose agar plates, and on blood serum slants.

The next morning all the plates and slants showed many small, opaque, white, circular pin point colonies. Smears were made and showed diplococci which in shape and staining reactions were identical with the *Diplococcus pneumoniae*. From the milk, smears stained by Welch's method demonstrated typical lanceolate diplococci with a fairly definite capsule. The above organisms were run through the various media and showed typical growth in glucose, glycerin, and plain agar slants, bouillon, blood serum, litmus, milk, and gelatin, and the provisional identification as the *Diplococcus pneumoniae* was fully confirmed.

A few drops of a thirty-six hour glucose bouillon culture injected subcutaneously in a mouse caused death in forty-eight hours; $\frac{2}{10}$ cc. was inoculated intraperitoneally into a rabbit and caused death in thirty-six hours. The organism in both the mouse and rabbit was recovered in pure culture from the heart blood and peritoneum. Smears stained by Welch's method showed beautiful typical lance or barley shaped diplococci with distinct capsules. The cultural and tinctorial characteristics were identical with those of the original stock. After passing the organism through several mice the virulence was increased until it killed in eighteen hours.

Cultures were made from the pleuritic effusion and showed many colonies of *Staphylococcus pyogenes aureus* and the *Diplococcus pneumoniae*, the former predominating.

Officers of the American Association for the Advancement of Science.—The following officers were elected for the coming year:

President, Calvin M. Woodward, of Washington University; vice-presidents, mathematics, Dr. W. S. Eichelberger, United States Naval Observatory, Washington; physics, Professor Henry Crew, Northwestern University; chemistry, C. F. Mabery, Case School of Applied Science, Cleveland; mechanical science and engineering, F. W. McNair, president Michigan School of Mines; geology and geography, Professor W. North Rice, Wesleyan University; zoology, Dr. Henry B. Ward, dean of medical faculty, University of Nebraska; botany, Professor Irwin F. Smith, United States Department of Agriculture; anthropology, Dr. George G. MacCurdy, Yale; social and economic science, Dr. Irving Fisher, Yale; physiology and experimental medicine, Dr. William T. Sedgwick, Massachusetts Institute of Technology; permanent secretary, Dr. Leland O. Howard, Department of Agriculture, Washington; general secretary, Professor Clarence A. Waldo, Perdue University; secretary of the council, John F. Hayford, United States Coast and Geodetic Survey; secretaries of the sections, mathematics and astronomy, Professor L. G. Weld, Iowa University; physics, Professor Dayton C. Miller, Case School of Applied Science, Cleveland; chemistry, Professor Charles L. Parsons, New Hampshire College; mechanical science and engineering, William T. Magruder, Ohio State University; geology and geography, Dr. Edmund O. Hovey, American Museum of Natural History; zoology, Professor C. Judson Herrick, Denison University, Ohio; botany, Professor F. E. Lloyd, Columbia University; anthropology, George H. Pepper, American Museum of Natural History; social and economic science, John Franklin Crowell, Bureau of Statistics, Department of Commerce and Labor; physiology and experimental medicine, Dr. W. J. Gies, New York College of Physicians and Surgeons; treasurer, Professor R. S. Woodward, president Carnegie Institute, Washington. It was decided to hold next year's convention in New Orleans, beginning on December 29th. Boston was recommended as the place of meeting for 1906. No summer sessions will be held next year as has been the custom in the past.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXV.—What is your experience in the therapeutical use of yeast? (Answers due not later than January 16, 1905.)

XXXVI.—How do you treat bunions? (Answers due not later than February 16, 1905.)

XXXVII.—What diet do you prescribe in typhoid fever? (Answers due not later than March 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The price of \$25 for the best essay submitted in answer to question XXXIV has been awarded to Dr. Lucien Lofton, of Emporia, Va., whose article appears below.

PRIZE QUESTION NO. XXXIV.

THE NON-OPERATIVE TREATMENT OF INTERNAL HÆMORRHOIDS.*

By LUCIEN LOFTON, A. B., PH. D., M. D.,
EMPORIA, VA.

I have successfully cured within the past four years sixteen cases of internal hæmorrhoids by the following original method: Preliminaries are of course gone through before treatment is begun, as is usual in surgical procedures. Arming an all metal hypodermic syringe with two drachms of boiling water or, preferably, decinormal salt solution equally hot, you exclude all air from the needle. Have the patient assume the knee-chest or Sims's position. By carefully inserting one of the latest improved rectal specula you bring into view the field of operation. You proceed to attack one and all of the sacs exposed by thrusting the needle approximately half through the tumor, where from ten to fifteen drops of the solution are deposited. After waiting a second or two, pull the syringe needle out about one sixteenth of an inch and repeat the injection, the last deposit of the fluid being made directly beneath the mucous surface. You may attack each sac at

various points at one sitting if you desire, and go boldly to the base of each pile in addition. There is practically no pain to the operation, if you desire to call it such. Be careful to keep the salt solution or water as hot as possible, as this means success, and there will be failure if it is lukewarm. A gradual slough of the diseased tissue takes place in from six to twenty days, and healing usually occurs rapidly, provided the stools are kept mushy. Not one, but ten piles can be treated at one time by this method, and usually one thorough application will suffice. No rest or detention from business is necessary. The cure is simple, safe, and sure; no embolism will result.

Dr. Everett S. Hicks, of Port Dover, Ontario, writes as follows:

We will take it as granted that we have eliminated or have used appropriate treatment for such complications or causes as urethral stricture, retroflexed uterus, stone in the bladder, etc. In all cases attention should be drawn to certain points:

1. Diet.—As a rule, we advise abstinence from alcohol, coffee, tea, cheese, cabbage, beans, and very coarse breads. Our diet will be aimed at the relief of constipation and the production of a soft stool.

2. To avoid acute inflammatory attacks, we caution the patient to treat diarrhœas early, to avoid sitting on cold or wet surfaces or on upholstered chairs, generally to avoid bicycling and horse-back riding or excessive sexual intercourse.

3. We note the occupation and prescribe exercise, generally walking, to suit the case.

4. We advise rigid cleanliness and in many cases the use of cold water after the stool.

5. We treat constipation as we would treat it in any case, drawing special attention, however, to the usefulness of injections to soften the fæces, to water drinking as a habit, and to the avoidance of straining. Show the patient how much straining can be avoided in cases of hardened fæces by pushing forward on the fæcal mass with the fingers placed between the coccyx and the anus. We advocate as a laxative sulphur, occasional doses of calomel or compound licorice powder, or podophyllin with hyoscyamus or strychnine in full doses may be added.

6. In cases with portal congestion we use static purgings and abdominal massage as auxiliary measures.

7. We have found it wise in many cases to advise the patient to have the daily stool at bedtime, so that any inflammation caused may be improved by morning.

Coming to the piles themselves, our most urgent cases will be those with a history of profuse

* Our contributors are correct in supposing that the expression, "without an operation," does not bar out injections.

recurrent bleedings. In the worst cases this is usually due to hæmorrhage from a small artery.

Ointments are a waste of time. Put the patient in the Sims or lateral position and ask him to strain. As he strains, evert the mucous membrane of the rectum with your fingers, holding all you gain between the straining efforts. Using your free hand to wipe away the blood, you will soon see it coming in jets from one small spot. Touch this spot thoroughly with fuming nitric acid or strong liquor ferri perchloridi. Other cases with bleeding will usually be venous. Ointments may be applied by the finger or with the pile pipe. Suppositories are fully as useful. As astringent remedies, tannic acid or the subsulphate of iron will do well. I have found witch hazel, distilled or colored, a useful injection or pledget application, and I have had success with adrenalin in some cases in which an examination was declined. For the pain, cocaine, 10 to 20 grains, and chlorotone, 60 to 100 grains to the ounce of vaseline, are very satisfactory. Other anodynes include morphine, hyoscyamus, belladonna, and iodoform. Our patients will regard as non-operative such radical measures as the injection treatment. After one lesson I have never used this measure in inflamed cases, or on more than two piles at one sitting, the sittings being seven to ten days apart. Ask your patient to strain down the piles and grasp the one to be treated with a volsella, injecting into it sufficient of the weakest Schleich solution to blanch it. Wait a minute and inject from five to fifteen drops of a solution of carbolic acid, 1 part; glycerin, 3 parts; and water, 3 parts. Morphine may be needed afterward, and your patient may be forced to bed even with this treatment, which is milder than that usually recommended. Galvanic electrolysis is useful to dispel hard nodules left after the injection treatment, or as a cure for chronic pile tumors that are not too vascular. We still have left the cases with inflammation, prolapse, and strangulation. As a prophylactic measure we may use a mechanical support or advise the wearing of glass dilators at night, thus keeping the parts in position and affording some compression. If the piles are strangulated, put the patient in the knee chest position, grease the tumors, and put them back by taxis, working in one point at a time. If unsuccessful, give ether to primary anæsthesia, dilate the sphincter, and try again. Such cases can be left to nature. Raise the buttocks, apply ice or hot poultices, and use morphine as required.

Palliative treatment will be fairly successful if we refuse to treat a case without examination and combine our remedies to suit the case as examination shows it to be not as the patient says it is.

Dr. Elizabeth Mercelis, of Montclair, N. J., writes as follows:

In a consideration of the non-surgical treatment of internal hæmorrhoids there must be outlined the treatment for cases with acute and those with subacute symptoms, as well as the general measures beneficial to both.

The cases with symptoms of considerable severity are best treated by putting the patient to bed at once. Elevation of the hips by pillows and the assumption of the knee chest position at intervals are desirable. Next in importance is the application of cold or heat, according to the preference of the attendant. Cold may be effectively applied by giving small repeated enemata of chilled water, or sometimes even the introduction of a small piece of ice is of service. Hot or cold rectal irrigation (the rectal return flow irrigator being used) is of great service. Where hot water is used it is desirable to continue the irrigation for ten or more minutes, repeating it as indicated.

With cold, applications of shorter duration act best, as the astringent action is immediate, and if the cold is too long continued, relaxation may supervene.

Enemata, hot or cold, may contain drugs, usually astringents, such as nitrate of silver, tannin, etc., and are with advantage followed by a very small oil enema, which is retained. Unless an enema is given for the purpose of emptying the colon, a small one, of not more than eight ounces (sufficient to reach the diseased portion of the rectum, and being usually retained), is much more satisfactory.

Where the pain is severe it may be necessary to use an anodyne in some form. Starch water enemata containing deodorized tincture of opium or a suppository of opium and belladonna, or of iodoform alone or with belladonna, are useful. Where an idiosyncrasy exists for these, cocaine may be used with immediate relief, but is not so effective, as there may be relaxation of the capillaries as the effect wears off.

Electricity—the alternating or sinusoidal current, one pole within the rectum—may help greatly in relieving the pain and improving the pathological condition. The same may be said of the fine massagelike movements of the best vibrators. With this instrument, also, the soft rectal point is gently introduced through the sphincter, the action thus being strictly local.

Lastly, where there is abrasion of the membrane, topical applications may be indicated, as of silver nitrate, nitric or chromic acid, ichthyol, iodoform, witch hazel, etc. A rubber bag covered with an ointment containing any one of these or some other drug may be introduced into the rec-

tum, then inflated and left in position. This brings uniform pressure upon the distended blood vessels. In some cases this procedure produces an increase of pain, and must be abandoned.

In subacute cases the treatment must be directed toward establishing the ultimate integrity of the rectal wall. Of local measures, the most important is daily cold rectal douching or enema followed by astringent suppositories (i. e., containing ergot, krameria, etc.). Cold forcible douching of the sphincter ani and perinæum (the fountain bag hung high and a small tip used) is of benefit, as is also the cold spray over the sacrum and hips.

Diet is perhaps the most important of the general measures, for upon it depends to so great a degree the regulation of the bowels. Where constipation or constipation alternating with diarrhœa exists, a diet containing an abundance of fat foods, leaving a large residue, and fruits is usually indicated. The resulting stool should be pultaceous and normally evacuated.

If there is persistent diarrhœa, the intestinal indigestion may best be controlled by a simple and limited diet. Other causes of constipation, such as fissured anus, tumors, etc., or of diarrhœa, such as extreme nervous conditions, fecal impaction, etc., must be studied and treated.

An average amount of active exercise is desirable, and rest on the back should preferably follow such exercise. Exercises of the leg and abdominal muscles, which do not increase pelvic congestion, are indicated, as are also general massage and stimulation of the sacral nerves by tapping over the sacrum.

The knee chest position two or three times daily is of advantage. To be avoided is long continued standing or work which brings much strain upon the abdomen, also marked fatigue from any cause.

Of cathartics, any, such as aloes, which increase the congestion of the lower bowel should be avoided. As an example of a good one for use in these cases may be mentioned the compound sulphur tablets, several being given three times a day, as needed. These produce a stool of good consistence, which is of so great importance.

General tonics are indicated. *Nux vomica*, strychnine, and bitters stand first perhaps, though many others may be used with advantage. Iron preparations act least satisfactorily.

Dr. G. N. Murphy, of Paducah, Ky., writes as follows:

I have treated internal hæmorrhoids for the past six years without an operation with

great satisfaction by the following method: Have the patient clear the bowels with salts on the day before the treatment. At the time of treatment I wash the lower bowel with hot water enemata, and when all the water is expelled, which is in about forty minutes after the enema is given, the patient is placed on his side on a table or bed in a good light, and requested to extrude the pile tumors by straining down. Large tumors are easily brought into plain view and held down for treatment, but small ones are with difficulty exposed sufficiently to be treated outside the sphincter, and have to be treated through a conical slide speculum. I use one of the Brinkerhoff variety.

The larger tumors are treated outside the sphincter muscle, as they are easily held down and need no mechanical aid to keep them exposed.

These tumors, large and small, I inject with a fifty per cent. carbolic acid solution, made according to W. P. Agnew's formula, using just enough of the fluid to turn the tumor white or of an ashen gray color.

The amount of fluid injected is a matter of judgment purely, and only experience can teach the proper amount to use in any given case, but the aim is to use enough to unite with every unit of tissue of the tumor. In a tumor no larger than a pea two minims are sufficient to produce necrosis, but in one as large as a small hen's egg, from four to eight hypodermic syringefuls are required. Large tumors require from twenty to thirty minutes of time to inject properly, and should be greased with vaseline and returned within the sphincters. The patient is advised to keep off his feet for four or five days and take only a liquid diet. The bowels should be moved with a warm water enema the first time a movement is desired after treatment. The bowels should be confined for three or four days after the tumors are injected. Disintegration generally takes place and the tumors come away by sloughing in from five to eight days.

The wound generally heals in about ten days to two weeks thereafter.

Sometimes there is considerable hæmorrhage following the sloughing of those large tumors, and in one case in my practice the rectum had to be packed with gauze for a few days to control the bleeding. I have never seen sepsis follow this treatment. Prior to the adoption of this method of treating internal hæmorrhoids I practised the knife and ligature operation exclusively in all forms of hæmorrhoids. My reasons for using and recommending the hypodermic injection method

Dinner to the Health Commissioner of Baltimore.—Dr. James Bosley, city health commissioner of Baltimore, was entertained on December 27th at the Hotel Rennett by the employees of the city health department. Since Dr. Bosley's connection with the city government he has refused to accept presents such as are usually made to the heads of the various departments, and it has become an annual custom of the employees of the department to tender him a banquet.

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RAILWAY SLAUGHTER IN THE UNITED STATES.

It has long been known that our American railways were open to the reproach of being operated without due regard to safety, as shown by the appalling lists of their killed and injured as compared with similar lists pertaining to railway work in other countries. But there has been no adequate realization on the part of the public of the disgrace of this state of things, and there has been no sufficient action taken by legislative bodies to do away with an utterly needless, because almost entirely preventable, loss of life. It is to be hoped that an article published in the January number of the *World's Work*, written by Mr. Leroy Scott, will do much toward arousing a public sentiment that will exact the necessary reform.

Undoubtedly the medical profession's greatest present title to general admiration is its determined and persistent devotion to preventive medicine. The duty of such devotion it could not have evaded and still have professed solicitude for the public welfare. None the more, it seems to us, can it longer avoid taking an active part in promoting reform in this matter of railway homicide. If it is our duty to do everything in our power to prevent death and impairment of health by disease, we are under no less an obligation to do our best to prevent such results

from violence. We fully realize that many lives are saved and that much disability is prevented by the admirable surgical service maintained by many of our more important railways. But this is not enough; it is much better to prevent a collision, for example, than to save the lives or alleviate the sufferings of its victims. If we as a body make ourselves heard in the legislative halls—and we can certainly do so—there can be little doubt of our being able almost single handed to abate the horrors that have gone on unchecked for years. The railway companies are not ignorant concerning the means they ought to take to put a virtual stop to the continuous holocaust; let them be compelled to resort to those means, and let our profession be the prime mover in instituting the compulsion.

LIGATION OF THE SUPERIOR LONGITUDINAL SINUS FOR EPILEPSY.

Surely this is the era in which surgery is reaching out for new fields in all directions, and he would be a rash man who should say that we were yet at the end of operative novelties in the treatment of epilepsy. One of them, which its author seems to look upon as promising, appears to have been discovered by accident, like many another advance. M. Delagénère (*Archives provinciales de chirurgie*, October; *Semaine médicale*, December 14th) trephined a man who was an epileptic. In the course of the operation the superior longitudinal sinus was wounded at a point about a third of an inch behind the fissure of Rolando. To stop the hæmorrhage, the wound of the sinus was plugged with aseptic gauze, and the flap of scalp was immediately returned to its place and sutured. Not only did the man recover well from the operation, but his epileptic attacks ceased entirely, and the cure has now remained complete for more than two years.

Reasoning that plugging the sinus was equivalent to ligating it and attributing the favorable result in this case largely to the altered state of the subcranial venous circulation consequent on its occlusion, M. Delagénère deliberately tied the sinus in a subsequent case, and the result is reported to have been somewhat encouraging. There was a little headache for two days, and a week later there was slight dulness of the intellectual faculties, but the epileptic attacks were entirely absent for three

months. At the end of that time there was an exceedingly light seizure in which the patient did not fall or lose consciousness. It does not appear how frequent the paroxysms had been before the operation or for how long a time the patient was under observation after it.

There seems to be no particular difficulty in the operation itself. The proper site, about a third of an inch behind the fissure of Rolando, having been exposed by reflecting a flap of scalp and bone, a small anteroposterior incision is made through the dura mater about two thirds of an inch to one side of the median line. A transverse incision of the dura mater, crossing the median line and meeting the first cut, is made cautiously with a pair of scissors. Two catgut ligatures, about a third of an inch apart, are then passed around the sinus and tied tight. There is no need of dividing the sinus between the ligatures.

THE VICISSITUDES OF LACTATION.

While not in the least swerving from the well grounded conviction that the mother's milk is by all odds the most satisfactory food for an infant, we all recognize that maternal lactation is not wholly free from occasional defects. We realize this in a general way, and the textbooks take due notice of it, but it is to be feared that it is not sufficiently emphasized by clinical teachers. It is gratifying, therefore, to find that such a commonplace topic was recently taken by so eminent a teacher as M. Budin in a clinical lecture (*Journal des praticiens*, September 3rd). There is nothing startling or novel in what M. Budin had to say, but it is well to reiterate the teachings of every day experience for the benefit of the young practitioner.

The bad habit of allowing a half-sleeping infant to cling to the breast is still too prevalent, it is to be feared, among ill informed mothers. M. Budin insists that a newly born child should be nursed regularly every two hours, and that each nursing should last not longer than three or four minutes. Sometimes, perhaps without any assignable cause, a child fed at the breast gets out of condition and makes only feeble attempts at nursing. The consequence is that the mother's milk begins to grow scanty, and there is danger

of its failing altogether. Under such circumstances the child should be fed artificially for a few days, an older child, one that is healthy and strong, taking its place at the breast. The probability is that the rightful nursling will speedily regain its avidity for the breast, and it may then be returned to its legitimate source of nourishment.

Occasionally the mother's milk is either deficient in fat or contains too much of that element. It is well to remember that the milk that first flows contains less fat than that which is drawn subsequently, and to manage the nursings accordingly. The occurrence of menstruation in the mother is apt to derange the child's digestion, but the derangement is only very temporary, and the return of the menstrual function is no reason for giving up lactation. Even pregnancy does not unfit the mother for nursing her child. A child that took the gold medal at a baby show in Boulogne-sur-mer, says M. Budin, was suckled by its mother while she was pregnant. The great lesson of all these considerations is that maternal lactation should not be given up without some very substantial reason.

THE MORAL RESPONSIBILITY OF THE HABITUAL CRIMINAL.

It has long been recognized that the cerebral powers, including under this term all the intellectual, moral, and emotional capabilities and actions of the brain, were apt to differ in the habitual criminal to a greater or less degree from those in the average person of the same age and race. In the beginning this difference was rather unconsciously acknowledged in thought and was ascribed entirely to a perverse moral nature which the criminal could and should have corrected, and it was generally believed that for the crimes and misdemeanors committed in accordance with it he was indubitably and most properly liable. Within the last thirty years much more attention has been paid to criminal psychology, and although this branch of science is as yet only on the threshold of knowledge, its existence has been established and recognized. This subject has been approached from various directions. The writings of Lombroso and his followers, of Baer and others, have drawn attention to the peculiar characteristics of degeneration said to exist

in this class, and whether the statements made by some of these writers and warmly disputed by others can or cannot be verified, medical and scientific attention has been turned toward the existence of physical peculiarities and hence to the consideration of mental peculiarities among the inmates of our prisons and other institutions of correction.

The large and ever increasing number of criminal trials which have occurred within the last few years in which this question of the moral or legal responsibility of the accused has been raised, and the defense of insanity offered, has also had a strong effect in calling the attention both of the medical profession and the public to the general question of moral and legal responsibility, and has justified the present interest in this subject. Moreover, many of our best medical experts have been engaged in the consideration of special cases which bear directly upon the general question. The tendency among some of the most able mental experts to recognize the existence of moral insanity as a separate entity from the ordinary intellectual insanity is viewed with alarm, not only by the unlearned, and to a certain extent by the legal profession, but also by many physicians, and, among these, by many neurologists and alienists. If the plea of moral insanity as a defense can be frequently raised and justified by experts, it is feared that the difficulties in the way of conviction of those who have committed crimes will be greatly increased, and the more numerous and more atrocious the crimes, the more strenuous will be the defense and the more difficult the conviction. While the question of the existence of a pure moral insanity and the possibility and justifiability of its use as a means of defense in criminal trials may be disputed, the interest aroused by this discussion has caused renewed attention to be paid to the psychological problems offered by criminals. It is now generally if not universally admitted by those who have most to do with habitual criminals that their cerebral powers, including in these the intellectual, moral, and emotional, are not the same as those of the average person of their race, age, and sex, and that they have in certain directions less power of control and a lack of certain definite qualities which is not normal or not that of the average individual. It is also admitted that this lack of emotional or moral functions (and

possibly of intellectual) and loss of control power are plainly apparent to those who have the occasion and opportunity to examine into this matter; that in most cases they reach a moderate degree, although of course the degree varies in each individual. If it passes beyond a certain point, the person should be considered insane and treated accordingly. But in spite of the fact that we are inclined to enlarge perhaps too hastily the boundaries of insanity, the very large majority of these persons cannot be considered insane in the sense in which the word is ordinarily used. At the same time they are not mentally normal, and it is probable that their actual criminal responsibility is a diminished one. They have not the power or capability, when once free from restraint, to refrain from crime or misdemeanor, and for this reason they should be kept for the safety of society under perpetual restraint. This restraint need not necessarily be the stone walled, window barred prison, but much better some large place in the country where moderate freedom can be combined with proper surveillance; where they are not let loose on the community, since they are incapable of controlling their actions so as not to be a menace to it, nor are they confined permanently in close quarters with prison discipline. This class should for the safety and comfort of the community be confined or restricted in the manner mentioned, for life or for such long periods as should suffice to render them harmless. They should be recognized and treated as beings but partially responsible for their actions, kindly and firmly, with as much freedom as is consistent with proper restraint, but they should never, while capable of committing crimes, be set free within the community. Settlements, such as those now in use in Massachusetts for the adult feeble-minded and for the chronic insane, might prove the proper means to this end.

WILLIAM N. BULLARD.

SIR CHARLES WYNNDHAM.

It is not often that the opportunity is afforded of paying a visit to a titled and distinguished English medical man for the modest sum of two dollars—the usual fee, we believe, is at least a guinea. Such an opportunity is presented in the professional tour of Sir Charles Wyndham in this country, and for busy physicians we know of no more agreeable relaxation than an evening's en-

joyment of the refined and conscientious art of this eminent confrère. Medical men have achieved distinction in many fields, and there have not been wanting examples of success in dramatic literature. Dr. Schiller's plays constitute a large part of the national literature of Germany. Dr. Smollett wrote several moderately successful plays, and in recent years a distinguished New York laryngologist made an essay in play writing. Perhaps the most notable contemporary achievement of this kind is *Waterloo*, the powerful and pathetic one act sketch by Sir Conan Doyle, so ably presented by Sir Henry Irving. So far as we know, however, examples of physicians forsaking practice for "the buskin'd stage" are rare indeed, and Sir Charles Wyndham's career is unique in the position and success which he has won. He has throughout his long association with the stage retained his interest in his early profession, and as recently as a year and a half ago he delivered a brilliant address at the opening of the London City Hospital. It is not mere fancy, we think, that in some of his rôles there may be traced the influence of his early medical studies. Thus, in the eloquent apostrophe deploring the taint of degeneracy in the second act of *Mrs. Gorrings's Necklace*, there is a suggestion of the broad experience with life and the human sympathies of the true physician. Sir Charles is the possessor of degrees in medicine from the Royal College of Surgeons and Apothecaries' Hall, and is also an M. D. of the University of Giessen. His first appearance on the stage was in this country. He has also acted in German, and fought in the American civil war.

THE CAUSES OF SENILITY.

To those of us who recall Sir James Paget's beautiful likening of senescence to a ripening process it seems harsh to find it ascribed to actual disease. But our friends the pathologists are ruthless in their analysis of its ætiology. At a recent meeting of the Paris Society of Biology (*Semaine médicale*, December 14th) M. Lorand related a number of clinical and experimental facts going to show that it was the result of degeneration of the vascular glands concerned in the maintenance of nutrition, which degeneration was in turn due to certain exhausting agencies, such as excessive childbearing with prolonged lactation, sexual abuses, exogenous or endogenous toxins, chronic infectious diseases, etc.—agencies which in themselves contributed directly to the production of senility. He suggested that by a judicious

use of hygienic measures and organotherapy it might be possible to mitigate some of the symptoms of senility, particularly of the premature type, which, he said, had many points in common with myxœdema.

A SHORTAGE IN SIMPLES.

It is reported that there is a scarcity of various medicinal roots and herbs, especially those of American production, and that in consequence the market prices of those crude drugs have been decidedly raised of late. We may imagine that the activity of the synthetist is driving the herbalist out of business, though it may be that the soil has not recently yielded the usual amount of medicinal plants. Whatever may be the cause of the present deficiency, it is to be hoped that it will be remedied in another season, for we can hardly yet do without the old vegetable *materia medica*.

SPITTING IN THE SUBWAY.

In an editorial in our issue of November 26, 1904, we spoke of the absence of signs in the subway forbidding spitting. It appears that a negro, arrested for that offense on January 2nd, was released by the magistrate on the ground that such signs were absent. Health Commissioner Darlington has since promised, we understand, to order the prohibitory signs placed at once. It is a much needed reform.

THE NEW YORK CITY HEALTH DEPARTMENT.

It is gratifying to observe that in his recent message the mayor speaks in terms of great satisfaction concerning the work of the Health Department during the year 1904. We have no doubt that Commissioner Darlington has fairly earned the mayor's good opinion, and commendation always ought to be bestowed where it has been deserved, not only as a just tribute, but also as an incentive to continued good work.

HALLUX FLEXUS.

A writer in the *Semaine médicale* for December 14th, summarizing an article by M. L. Longuet which appeared in the *Revue d'orthopédie* for September, remarks that M. Longuet proposes the name of hallux flexus for the condition known as hammer toe. If Longuet really first proposed the name, he must have done it long ago, for the term has figured in literature for several years.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 9th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, January 10th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private) (election); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private) (election); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, January 11th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society (annual); New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, January 12th.—New York Academy of Medicine (Section in Pediatrics); New York Academy of Medicine (Section in Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society (annual and election); Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, January 13th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, January 14th.—Obstetrical Society of Boston (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending December 31, 1904:

	December 24.		December 31.	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	163	4	126	6
Diphtheria and croup.....	338	49	302	45
Scarlet fever.....	227	15	206	16
Smallpox.....	1	..	..	..
Chickenpox.....	185	..	87	..
Tuberculosis.....	347	143	434	134
Typhoid fever.....	60	17	52	7
Cerebrospinal meningitis.....	..	17	..	18
	1,321	245	1,207	226

Presbyterian Hospital.—A special offering was requested in the Madison Square Presbyterian Church on Christmas morning for the Presbyterian Hospital, the amount realized being \$3,575.78.

Bellevue Hospital Appointment.—Dr. Edwin Sternberger has been appointed assistant visiting physician in the fourth division of Bellevue Hospital.

Mount Vernon Medical Society.—The annual meeting of the Mount Vernon Medical Society was held December 23rd. Dr. F. W. Shipman delivered the annual address, which dealt with conditions in that city for some time past. The following officers were elected for 1905: Dr. W. S. Fleming, president; Dr. Merriam Myers, vice-president; Dr. Grace G. Prior, secretary; Dr. J. H. Tallman, treasurer; Dr. A. M. Campbell, Dr. T. F. Goodwin, and Dr. E. F. Brush, trustees.

Lincoln Hospital and Home.—Twenty beds were added to the capacity of the Lincoln Hospital and Home, East One Hundred and Forty-first Street and the Southern Boulevard, when the Kathleen Vanderbilt Ward for Children, given by Reginald C. Vanderbilt, was opened on December 26th. Fifteen children were moved into the ward. Mr. Vanderbilt gave \$5,000 for the equipping of the ward, which has been fitted up with the most approved sickroom appliances. The ward is named for Mr. and Mrs. Vanderbilt's daughter, Kathleen.

The Alumni of New York Medical Colleges Dine in Boston.—The New England Alumni Association of the New York City Medical Colleges dined on December 30, 1904, at Young's Hotel, Boston, Dr. J. C. Irish, of Lowell, the president, presiding. Dr. Emerson, of Boston, was toastmaster. There were sixty-six members present, representing Bellevue, the University of New York, and the College of Physicians and Surgeons. There are said to be 250 graduates of these three institutions in Massachusetts, and it is expected that a large association of the alumni there will be built up.

A Luncheon to Dr. Foster.—In commemoration of the twenty-fifth anniversary of Dr. Foster's service as editor of the *New York Medical Journal*, he was tendered a luncheon at the Harvard Club by Mr. A. R. Elliott, President of the A. R. Elliott Publishing Company, on Saturday afternoon, December 31st. Among the guests present were: Dr. Thomas L. Stedman, editor of the *Medical Record*; Dr. Robert W. Taylor, clinical professor of genitourinary diseases; Dr. Reginald H. Sayre, clinical professor of orthopaedic surgery at the University and Bellevue Hospital Medical College; Dr. John Winters Brannon, Dr. E. B. Bronson, Dr. Carl Beck, Dr. C. L. Wheeler, Mr. W. H. Evans, Mr. E. H. Gane, Mr. Caswell A. Mayor, editor, and Mr. T. J. Keenan.

State Hospital for the Insane Wanted in Brooklyn.—A strong plea for the permanent establishment of a State hospital for the insane in Brooklyn borough is made in the annual report of Superintendent O. M. Dewing, of the Long Island College Hospital. The institution now located in Clarkson Street, Flatbush, may go out of existence on October 1, 1905, when the lease of the present site and buildings expires. The report gives in detail the work of the hospital for the year. The number of patients treated was 1,396. The year began with 1,200, of whom 420 were men and 780 women. There were no fatal accidents, no suicides, and no epidemics during the

year, and the two fires which occurred were of trivial nature.

Williamsburg Hospital.—At midnight, New Year's eve, the ambulance service of the Williamsburg Hospital was reestablished and that institution became an emergency hospital for the reception of public patients. The installation of the ambulance service was an important thing to the hospital. Two years ago the hospital was compelled to discontinue its ambulance service because of its expense, and the ambulance was sold to the Bushwick Hospital. An appropriation will be made by the city to cover the expense of the service. The surgeon in charge is Dr. William E. Butler; the house surgeon is Dr. Dorn, and the ambulance surgeon is Dr. Paul Lenox. Mrs. J. M. Walters will remain in active charge of the institution as superintendent.

New York's Death Rate for 1904.—The death rate per 1,000 in Greater New York for 1904 was 20.32, an increase of over 2 per cent. over 1903, when the death rate was 18.18; an unusually low rate. There was a total of 77,985 deaths in the city in 1904, against about 69,000 in 1903. The estimated population is now 3,838,024. There was an increase in the number of deaths from pneumonia and bronchitis. There were 14,518 deaths from those two diseases, while in 1903 there were only 11,550. The report shows that Bright's disease carried off 6,204 persons in 1904, against 5,636 in 1903. There was an epidemic of cerebrospinal meningitis, which killed 1,211, while in 1903 only 271 died from that disease. Including accidents, there were 55,195 violent deaths in 1904, against 4,063 in 1903, and 169 homicides, against 137 in 1903. Perhaps we have figured the population too low. The rate has been as follows in recent years:

1898.....	20.26	1901.....	20.02
1899.....	19.51	1902.....	18.74
1900.....	20.57	1903.....	18.18

The Postgraduate Hospital in Need.—An appeal is made by the directors of the New York Postgraduate Medical School and Hospital, at Twentieth Street and Second Avenue, to the citizens of New York for the sum of \$100,000 independent of the contributions which are made through the hospital association. If the directors can raise this amount an additional \$100,000 has been pledged to them. Dr. D. B. St. John Roosa, president of the corporation, says that the needs of the hospital are great, among them being the extension of the tuberculosis annex in East Nineteenth Street. It has been demonstrated in the dispensary of the Postgraduate Hospital that pulmonary tuberculosis is curable in New York city, through the personal care and proper feeding of poor people so afflicted who are able to obtain none of the luxuries of life either in lodging or food, and who are not always able to secure what may be termed the necessities. More than twenty of these have been cured. There is also pressing need of an ambulance service. The expenses of treatment have been greatly increased by reason of the higher cost of living and of coal. Increased facilities are needed, for the last year's

record shows that while 20,714 was the number of free patients treated in the dispensary and 2,814 occupied free beds, and only two thirds of those who applied could be taken care of.

Academy of Medicine.—The section in pædiatrics will meet on Thursday, January 12th, at 8.15 p. m. Order: Presentation of Patients; A Case of Empyema Apparently Cured Without Operation, by L. E. LaFétra, M. D.; Paper, Standardized Gruels: The Application of the Percentage Principle to Cereal Feeding, by Henry Dwight Chapin, M. D.; discussion by Dr. J. E. Winters, Dr. W. Gilman Thompson, Dr. Henry Koplik, Dr. John Dorning, and others. L. E. LaFétra, M. D., chairman; John Howland, M. D., secretary, 49 East Fifty-third Street.

The section in otology will meet on Thursday, January 12th, at 8.15 p. m. Order: Exhibition of Specimens and Instruments: (a) A New Model for Teaching Otology, by Gorham Bacon, M. D.; (b) Presentation of the Encephaloscope, with Suggestions as to Its Employment, by Fred. Whiting, M. D.; (c) A Case of Epithelioma of the Middle Ear, with Microscopic Slide, by T. Passmore Berens, M. D.; (d) Microscopic Slides from a Case of Epithelioma of the Middle Ear, by W. H. Haskin, M. D.; Papers: (a) A Report of Two Cases of Acute Otitis Media Suppurativa, Followed by Mastoiditis and Meningitis and Caused by the Diplococcus Intracellularis of Weichselbaum, by Gorham Bacon, M. D.; (b) A Report of a Case of Liver Thrombosis, Followed by Infective Arthritis of Both Hips with Spontaneous Dislocations: Operations; Recovery, by W. P. Eagleton, M. D.; (c) Thiosinamine in the Treatment of Tinnitus Aurium, by S. McCullagh, M. D. Emil Gruening, M. D., chairman; W. H. Haskin, M. D., secretary, 42 East Forty-first Street.

PHILADELPHIA.

Personal.—Dr. Henry C. Chapman entertained the members of the American Physiological Society at luncheon at 1.30 p. m. on Thursday, December 29th.

Neurological Society.—The following is the programme of the meeting of the Philadelphia Neurological Society, held November 22nd: Dr. William Pickett, A Case of Arteriosclerosis of the Nervous System; Dr. Charles S. Potts, A Case of Hemiplegia Following Typhoid Fever; Dr. Joseph Sailer, A Case of Tic Convulsif (?) in a Girl of Six, and A Case of Hemiparesis, Muscular Rigidity, and Exophthalmus with von Graefe's Sign; Dr. William G. Spiller and Dr. H. B. Allyn, A Case in Which the First Left Temporal Convolution was Destroyed in an Adult Without Causing Word Deafness; Dr. F. X. Dercum and Dr. Alfred Gordon, A Case of Multiple Spinal Sclerosis, with Remarks Upon the Ætiology of the Affection.

Papers of Interest to Medical Men.—Among the papers read at the meeting of the American Association for the Advancement of Science that attracted considerable attention may be mentioned that of Dr. Edward Anthony Spitzka on

Somatic Anthropology of the Brain of Distinguished Persons, of Individuals of Various Races, and of Criminals. Dr. Spitzka said that the study of criminals by anthropological methods did not necessarily tend to establish a criminal type as maintained by the Lombroso school. Hereafter the classification of criminals must rest upon the observation of individual criminals. The address of Professor George Grant McCurdy, on Prehistoric Surgery; that of Dr. Leon L. Waters, on Food Adulteration; that of Dr. J. B. Smith, on the Breeding Habits of Mosquitoes; and that of Dr. P. S. Maignen, on the Study of Sanitary Science, were also of interest.

Scientific Society Meetings for the Week Ending January 14, 1905.—Monday, January 9th. Section on General Medicine. College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, January 10th. Kensington Branch, Philadelphia County Medical Society; Philadelphia Paediatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, January 11th. Philadelphia County Medical Society; Exhibition Meeting, Pathological Society. Thursday, January 12th. North Branch, Philadelphia County Medical Society; Continuation of Exhibition Meeting, Pathological Society. Friday, January 13th. Northern Medical Association. Saturday, January 14th. West Philadelphia Branch, Philadelphia County Medical Society.

The Health of the City.—During the week ending December 24th the following cases of transmissible diseases were reported:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	84	8
Scarlet fever.....	52	0
Smallpox.....	1	0
Chick-pox.....	122	0
Diphtheria.....	82	12
Measles.....	7	0
Whooping cough.....	5	0
Tuberculosis of the lungs.....	55	56
Pneumonia.....	73	76
Erysipelas.....	20	2
Puerperal fever.....	1	3
Trachoma.....	3	0

The total deaths for the week were 508 in an estimated population of 1,408,154, corresponding to an annual death rate of 18.76 per 1,000 population. The total infant mortality was 108; 90 under one year and 18 from one to two years of age. There were 39 still births; 24 males and 15 females. The deaths from diseases of the respiratory system (160 cases) continue high. The temperatures have continued low, the thermometer reading 18° on the 22nd. Snow fell on the 24th.

The Meeting of the American Association for the Advancement of Science.—The fifty-fourth annual meeting of the American Association for the Advancement of Science and its affiliated societies, about 40 in number, was held in Philadelphia on December 27, 28, and 29, 1904. The president's address was delivered in the main hall of the new gymnasium of the University of Pennsylvania on Wednesday evening, December 28th, by the Honorable Carroll D. Wright. The subject of Mr. Wright's address was upon the questions of tariff and labor. The meeting was well attended. Among the affiliated societies the proceedings of which will be of special interest to

physicians are the American Physiological Society, which held its seventeenth annual meeting in the medical laboratories of the University of Pennsylvania and in the physiological laboratory of Jefferson Medical College, and the Association of American Anatomists, which held its sessions in the Wistar Institute of Anatomy.

Society Programmes.—At the meeting of the Philadelphia Paediatric Society, held November 8th, the following papers were read: A Note on the Duration of the Prodromal Period in Röteln, by Dr. D. J. Milton Miller; Posttyphoidal Insanity in Children, by Dr. David L. Edsall; Pathological Report of a Case of Hermaphroditism and Sarcoma of the Suprarenal Gland, by Dr. C. Y. White and Dr. Verner Nisbet. Dr. George W. Norris exhibited a patient with endocarditis.

The following was the programme of the meeting of the Pathological Society of Philadelphia at its regular meeting, held November 10th: Dr. D. J. McCarthy, Congenital Deformities, with Presentation of a Case of Deformity of the Extremities of a Dog; Dr. J. Funke, Erosive Gastritis; Dr. M. H. Fussell, Malignant Endocarditis; Dr. David L. Edsall, Decidua Malignum.

At the meeting of the section in ophthalmology of the College of Physicians, held on Tuesday, November 15th, Dr. Alexander Duane, of New York, read a paper by invitation on The Practical Application and the Relative Value of the Tests Used in Examining the Eye Muscles, with Demonstration of Methods.

The following was the programme of the meeting of the section in general medicine of the College of Physicians, held November 14th: Report of a Case of Cancer of the Esophagus Simulating Thoracic Aneurysm, by Dr. J. A. Scott; The Pharmacological Action of Mercury, Its Influence on Autolysis, by Dr. D. L. Edsall and Dr. Caspar W. Miller (by invitation); Some Clinical Observations on Cirrhosis of the Liver, by Dr. Alfred Stengel; Hæmorrhagic Diathesis in Bright's Disease, a Report of Two Cases, by Dr. David Riesman.

The following programme was offered at the monthly meeting of the section in otology and laryngology of the College of Physicians, held November 16th: Dr. Wendell C. Phillips, of New York, Inflammatory Manifestations in the Upper Air Passages Due to Malarial Plasmodium; Dr. W. G. B. Harland, Verruca Obstructing the Nostril in a Colored Child; Dr. G. B. Wood, A Case of Antral Neurosis; Dr. J. K. Knorr (by invitation), A Case of Papilloma of the Larynx; Dr. Walter Roberts, A Case of Malignant Adenoma of the Larynx; Dr. A. W. Watson, A Case of Sarcoma of the Antrum Ten Years After Operation.

The American Physiological Society.—The following was the programme of the American Physiological Society at the meeting held last week:

Dr. V. C. Vaughan, A Contribution to Cell Chemistry; Dr. P. A. Levene, The Autolysis of Animal Organs; Dr. A. S. Lovenhart, Some Observations on the Catalytic Decomposition of Hydrogen Peroxide by Organ Extracts; Dr. G. H. Parker, Ciliary Reversal in Metazoans; Dr. G. M. Meyer and Dr. W. J. Gies, A Study of the Coloring Matters in the Purple Pitcher Plant (*Sarracenia purpurea*);

Dr. P. B. Hawk, A Study of the Conditions Following the Establishment of the Eck Fistula in Dogs; Dr. A. Mandel (by invitation), On Paralactic Acid; Dr. F. P. Underhill, Certain Aspects of Experimental Diabetes; Dr. E. T. Reichert, A Second Coagulation of the Blood Due to a Substance Not Identical with Fibrinogen and Coagulable by Saturation with Neutral Oxalate; Dr. F. C. Busch and Dr. C. Van Bergen, Further Results in Suprarenal Grafting; Dr. J. J. R. Macleod and Dr. H. D. Haskins, A Method for the Estimation of Carbamates in Animal Fluids; Dr. J. J. R. Macleod and Dr. H. D. Haskins, Some Remarks on the Chemistry of Carbamates; Dr. W. Koch, On the Origin of Kreatinin; Dr. L. B. Mendel and Dr. O. E. Closson, On the Elimination of Creatinine; Dr. O. Folin (by invitation), The Nitrogen of Urine; Its Distribution Among the Four Important Constituents.—Urea, Ammonia, Uric Acid, Kreatinin; Dr. F. P. Knowlton (by invitation), A Case of Tumor of the Floor of the Fourth Ventricle with Cerebellar Symptoms, in a Cat; Dr. E. R. Posner and Dr. W. J. Gies, A Further Study of Protogin; Dr. O. Klotz (by invitation), On the Presence of Soaps in the Organism in Certain Pathological Conditions. Preliminary Communication; Dr. E. P. Lyon, On the Theory of Geotropism in Paramoecium; Dr. W. Koch, On Psychic Secretion; Dr. W. B. Cannon, Observations on the Alimentary Canal After Splanchnic and Vagus Section; Dr. W. T. Porter, Further Observations on the Physiology of the Vasomotor Centre; Dr. Y. Henderson and Dr. M. McC. Scarborough, The Volume Curve of the Mammalian Ventricle; Dr. Y. Henderson, The Events Within the Heart; Dr. J. Erlanger, An Instance of Complete "Heart Block" in Man; Dr. G. P. Clark, A Method of Measuring and Recording Maximum as Well as Minimum Blood Pressure in Man; Dr. F. S. Lee, Some of the Physical Phenomena of Muscle Fatigue; Dr. J. R. Murlin (by invitation), Gelatin as a Substitute for Proteid in the Food; Dr. T. B. Osborne and Dr. L. B. Mendel, Further Studies on Ricin; Dr. T. Sollmann, The Effect of Isotonic Solutions on the Kidney; The Effect of Blood on the Blood Vessels of the Kidney; Dr. S. J. Meltzer and Dr. J. Auer, On the Rate of Absorption from the Muscular Tissue; Dr. E. M. Houghton, The Pharmacology of Ethyl Salicylate; Dr. F. S. Lee (for Dr. H. Emerson), Demonstration of a New Water Manometer; Dr. G. P. Clark, An Adjustable Tracheal Cannula for Artificial Respiration; Dr. W. T. Porter, An Exhibition of Physiological Apparatus; Dr. E. P. Lyon, Demonstration of Apparatus; Dr. A. P. Brubaker, Demonstration of Apparatus.

GENERAL

Baby Born in the Chicago Pesthouse.—A girl was born in the Chicago pesthouse on December 20th of a mother suffering from smallpox. She was vaccinated immediately and it is hoped to save her.

Hospital of the Good Shepherd, Syracuse, N. Y.—The Syracuse Hospital of the Good Shepherd has received a New Year's gift of \$50,000 from William B. Cogswell, of that city, who has at various times contributed large sums to its support.

St. Peter's Hospital, Albany.—Dr. Arthur W. Elting has been appointed to the staff of St. Peter's Hospital, Albany. On account of the resignations of Dr. J. V. Hennessey and Dr. Charles E. Davis, there will be a reorganization of the staff.

The Jefferson County, Ky., Medical Association, at its tenth annual meeting on December 20th, at Louisville, elected the following officers: President, Dr. William Cheatham; vice-president, Dr. John Moran; treasurer, Dr. Sidney Meyers; secretary, Dr. E. O. Witherspoon.

Massachusetts General Hospital.—The will of E. M. Codman has been filed at Salem, Mass., and by its terms the family fortune goes to Harvard

University and to the Massachusetts General Hospital. The value of the estate is estimated at about \$1,250,000. The fortune is divided in equal shares between the two institutions.

South Carolina State Hospital for the Insane.—At the annual meeting on December 30th of the board of regents of the South Carolina Hospital for the Insane an assistant superintending physician was elected in the person of Dr. H. H. Griffin, who is the son of Dr. P. E. Griffin, who was for thirteen years superintendent of the institution.

A \$5,000,000 Hospital for Boston Assured.—The gift of \$5,000,000 under the will of Peter Bent Brigham for the purpose of founding a hospital for people in indigent circumstances in the city of Boston was sustained by the United States Circuit Court of Appeals on December 7th, in the case of Herbert F. Brigham vs. the Peter Bent Brigham Hospital *et al.*

The Delegates to Panama Delayed.—A heavy fog settling down on the St. Charles River at 3 p. m., December 27th, prevented the sailing of the steamship *Athos* for Colon, Panama, with a party of 38 delegates and visitors who were to attend the Pan-American Medical Congress at Panama, January 3rd, and the later meeting of the American Public Health Association at Havana.

Gift to London, Eng., Hospitals.—It is reported that Lord Mountstephen, formerly president of the Canadian Pacific Railroad, has presented to the King's Hospital Fund as a New Year's gift \$500,000 in Argentine funding bonds and \$500,000 in Buenos Ayres water works bonds, yielding an annual income of \$55,000. His lordship, it is further said, has received a personal letter of thanks from the king.

The Medical Society of the County of Clinton, N. Y.—The annual meeting of this society will be held in the Grand Jury Room at the Court House, in Plattsburgh, N. Y., on Tuesday, January 10, 1905, at 1.30 p. m. Programme: President's address, by Dr. Silver; Injury to the Cranium and Its Contents, with Report of Cases, by Dr. Ransom; Prophylaxis in Pregnancy and Labor, by Dr. Rogers; Obituary Notice of Dr. L. C. Dodge, by A. W. Fairbank; Some Experiences in Appendicitis, by C. W. Arthur, M. D. D. S. Kellogg, secretary.

A Memorial Folder to Dr. Osler.—We have received from the *Maryland Medical Journal* a memorial folder of Dr. William Osler, who leaves Baltimore next spring to accept the appointment of regius professor at the University of Oxford. Attention is called to Dr. Osler's impress upon medical journalism as a factor in professional progress. It was he, the memorial says, who infused new life into the *Journal*, and his interest in its welfare was never lost, no matter how exacting were the demands of his profession. The memorial contains a poem on Dr. Osler, written by Mr. Thomas O. Clark, and comments by several publications upon the announcement of Dr. Osler's intention to sever his connections with the Johns Hopkins Hospital.

Milwaukee County, Wis., Medical Association.

—At the annual meeting of the Milwaukee County Medical Association held on December 9th, the following officers were elected: President, Dr. J. W. Coon; vice-president, Dr. R. G. Teschan; treasurer, Dr. Joseph Kahn; secretary, Dr. A. W. Gray; censor, Dr. E. Copeland. The election of delegates to the meeting of the State association was deferred to the next meeting.

St. Louis Medical Society.

—At the annual meeting of the St. Louis Medical Society, held in its hall in the Y. M. C. A. building, December 17th, the following officers were elected for the year: Dr. Frank L. Henderson, president; Dr. John C. Moffit, vice-president; Dr. Thomas A. Hopkins, recording secretary; Dr. Charles J. Orr, corresponding secretary; Dr. R. M. King, treasurer; Dr. B. M. Haypes, member of board of censors.

Maryland's First Tuberculosis Hospital.

About 50 patients suffering with tuberculosis are comfortably housed and being cared for at the first public hospital for consumptives in Maryland, which is situated not far from Bayview Asylum, near Baltimore, on a beautiful hill, near an old farm house, and commands a splendid view of the surrounding country. The farm house has been transformed into quarters for five nurses, who will be in attendance. Sunlight and pure air are the methods of treatment that have been aimed at especially.

Recent Graduates of Rush Medical College,

Chicago.—The degree of doctor of medicine was conferred upon the following seventeen graduates at the quarterly commencement exercises of Rush Medical College on December 19th: Paul Raymond Badger, Joseph Louis Baer, William Rudolph Boose, William W. Bradley, James Henry Fairchild, Charles Emerson Ingbert, Arthur Edward Johnson, Martin Ingeman Olsen, Joseph Rowland Morrell, George Albert Landes, Carl August Ostling, Romney Moore Ritchey, Max Jason Salamon, George Senn, Harry Francis Sloane, Frank Hastings Stevenson, Norman E. Williamson.

The Denver Academy of Medicine was formally opened on December 19th at 1434 Glenarm Street. The officers of the association are: President, Dr. Henry Sewall; secretary, Dr. Edward Jackson; directors, Dr. W. W. Grant, Dr. G. M. Macomber, Dr. Thomas H. Hawkins, Dr. W. A. Jayne, and Dr. Edward Jackson. The qualifications for membership are that the applicant must be a reputable physician who has been practising at least three years and who has been a resident of Denver for at least two years. The society will subscribe for about 150 medical journals, and will add, from time to time, to the library the best books known on medical subjects. There is a large hall in connection with the meeting room, and in this it is designed to hold all meetings of medical societies.

Medical Society of the Missouri Valley.

—In response to a cordial invitation from the Jackson

County Medical Society, the semiannual meeting of the association will be held in Kansas City, Thursday, March 23, 1905. Those desirous of presenting papers should send their titles to the secretary not later than February 1st. Papers will appear upon the programme in the order in which they are received. An invitation has been extended to the presidents of the State associations within the territory embraced by the Missouri Valley, and to the profession in general, and an interesting and profitable meeting is expected. Any one not a member of this association should send in an application to the secretary at once. Initiation, one dollar; annual dues, one dollar. S. Grover Burnett, M. D., president, Kansas City, Mo. Charles Wood Fassett, M. D., secretary, St. Joseph, Mo.

Statement of Mortality in Chicago for the Week Ending December 24, 1904, compared with the preceding week and with the corresponding week of 1903. Death rates computed on United States Census Bureau's estimated midyear populations of 1,932,315 for 1904 and of 1,873,880 for 1903:

	Dec. 24, 1904.	Dec. 17, 1904.	Dec. 26, 1903.
Total deaths, all causes.....	548	509	514
Annual death rate per 1,000.....	14.83	13.77	14.29
By sexes—			
Males.....	293	293	310
Females.....	252	216	204
By ages—			
Under 1 year.....	94	96	87
Between 1 and 5 years.....	55	40	59
Over 60 years.....	126	112	116
Important causes of death			
Acute intestinal diseases.....	21	15	14
Apoplexy.....	23	15	8
Bright's disease.....	37	45	30
Bronchitis.....	21	29	21
Consumption.....	83	57	49
Cancer.....	31	24	21
Convulsions.....	11	13	14
Diphtheria.....	14	11	15
Heart diseases.....	40	42	53
Influenza.....	1	3	2
Measles.....	2	0	4
Nervous diseases.....	27	27	27
Pneumonia.....	114	95	139
Scarlet fever.....	2	4	2
Suicide.....	8	5	8
Smallpox.....	4	0	0
Typhoid fever.....	6	8	7
Violence (other than suicide).....	20	15	20
Whooping cough.....	7	4	1
All other causes.....	101	104	76

After three weeks of unusually low December mortality the seasonal winter increase has set in sharply. The 548 deaths from all causes reported during the week represent a 7.6 per cent. increase over the previous week and nearly 4 per cent. more than the corresponding first winter week of 1903. In themselves none of the important causes of death shows any increase sufficient to create alarm; consumption only six more, cancer seven more, diphtheria three more, pneumonia nine more, smallpox four more, and whooping cough three more than the previous week. But the revelations of the Chicago laboratory indicate a serious increase of atmospheric impurity, only temporarily checked by the snowfall. The germs of all the air borne diseases are rife and the influenza bacillus or grippé germ is endemically prevalent in many sections of the city. The health department renews its warning against all unnecessary exposure to those suffering from any of the contagious and infectious diseases, especially from pneumonia and influenza.

Pith of Current Literature.

PRESSE MEDICALE.

November 0, 1904.

Pain in Floating Kidney,

By TH. TUFFIER.

Floating Kidney.—Tuffier describes two cases, in one of which the pain was very severe with exacerbations, in the other very slight. He considers pain as variable in existence, intensity, localization, radiation, severity, form, and intermittence, and believes that from these variations indications can be drawn regarding prognosis and treatment. He divides the pain into two general forms, constant and intermittent. The constant form is centred in the lumboliliac region, whence it radiates in many directions, is rarely acute and is increased by pressure. It is rarely met with in children, usually in adults, appearing as a rule slowly and progressively. It is frequently associated with pains in the liver, intestines, stomach, uterus and annexa, from which it must be distinguished. The intermittent form presents two varieties, one simply a dragging sensation with radiations to the lateral parts of the thorax, very rarely toward the abdomen; the other the pains due to an intermittent hydronephrosis.

November 12, 1904.

The Bloodless Reduction of Congenital Dislocation of the Hip Joint,

By J. GOURDON.

Bloodless Reduction of Congenital Dislocation of the Hip Joint.—Gourdon describes with illustrations Lorenz's method of reduction, which is quite familiar, but adds nothing new. He says correctly that the criterion of the efficacy of the method is its adoption by all orthopædic surgeons.

November 16, 1904.

Pyelonephritis During Pregnancy,

By E. BOCHARD.

Pyelonephritis During Pregnancy.—Bochard reports a case of pregnancy in which signs of pyelonephritis appeared first on the right side, later on both. In spite of all medicinal treatment the patient's physical condition constantly grew worse. As a last resort premature labor was induced, after which the threatening symptoms immediately abated.

SEMAINE MEDICALE.

November 0, 1904.

The Rôle of Heredity in Renal Pathology,

By CASTAIGNE and RATHERY.

The Rôle of Heredity in Renal Pathology.—Castaigne and Rathery conclude from their investigations that the theory of renal heredity rests upon a clinical, an anatomopathological, and an experimental basis. The clinical result shows that mothers with nephritis have children with kidneys which are susceptible to infections and intoxications and that they occasionally succumb during the first few hours or days of life. Autopsies upon such cases have demonstrated that extensive nephritis was present. Experimentation confirms the results observable in human histology. Chronic nephritis has been produced in female animals which have subsequently been impregnated and their offspring

has presented the same disease, either in the form which is like that which has been observed in the human fœtus, or with superficial lesions, such as would be expected to cause albuminuria. The blood serum and the amniotic fluid of females suffering with nephritis contain substances which are poisonous, and these substances are transmitted in abundance to the offspring.

November 16, 1904.

Idiopathic, or Congenital Dilatation of the Colon,

By CHEINISSE.

Idiopathic, or Congenital Dilatation of the Colon.—Cheinisse cites various authors to show that this condition is not so very rare. While it is more frequent in young infants it is not unknown in adults and especially in the aged. While it is frequently fatal it is not necessarily so. It may be caused by a stricture of the rectum or the sigmoid flexure, the dilatation being above the obstruction. While the walls of the colon are usually hypertrophied, especially the muscular coat, they are sometimes atrophied. The mucous membrane in the very young is seldom diseased. In those who are older it is sometimes ulcerated. The dilatation may be so great as to require puncture of the intestine to relieve the gas which has resulted from retention and putrefaction of fecal matter. Large enemata are recommended and careful regulation of the diet. If these fail, surgical interference will be required. Anastomosis will usually be only a palliative remedy; resection may be required to produce permanent benefit.

November 23, 1904.

1. Pathological Rôle of Poisons in the Intestines,

By CHARRIN and LEPLAY.

2. Tubal Abortion,

By LEJARS.

1. **The Rôle of Poisons in the Intestine.**—Charrin and Leplay conclude from their investigations that in the normal condition of the digestive tube innumerable poisonous substances are constantly present. In addition there are toxic substances, the diastases, for example, which are indispensable to the nutritive changes of the body. The organism has various means for defending itself, and the tendency of disease is to break down such means of defense. If the views of pathogenesis advanced by the authors are true they signify that general therapeutical measures are inadequate. They indicate that the enemy is to be attacked directly and also that the means of defense must not be broken down. Normal organic products are often morbid and the physiological digestive secretions themselves are such at times. Before destroying them it is necessary to allow them to accomplish their proper functions and maintain intact all the means of defense with which the body is provided.

2. **Tubal Abortion.**—Lejars observes that tubal rupture with all its dramatic surroundings is the accident connected with tubal pregnancy which is most often observed. Tubal abortion is almost as frequent. Of 100 cases of tubal pregnancy in which an operation was performed at the

Moabit Hospital in Berlin 48 were tubal abortions and 50 were ruptures. Tubal rupture before the eighth week of impregnation usually implies involvement of the uterine third of the tube, and is usually primary. If the pregnancy involves the ampulla, the death of the ovum and hæmorrhagic effusion during the first two months are not followed by immediate rupture, the tubal sac remaining intact with the possibility of a secondary rupture, or else of subsequent results which may be equally bad. Very important is the diagnosis of early tubal abortion. It may be suspected when the menses are delayed and after a few days or weeks come with abundant flowing, which is prolonged far beyond the usual period. The uterus is usually soft and somewhat enlarged, and a small sensitive mass will be present on one side or the other or in Douglas's cul de sac. The symptoms may disappear entirely within a few days, but more frequently there will be trouble of a serious character in the future.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

November 13, 1901.

1. Migration of *Ascarides* from the Intestines Into the Pancreatic Duct, Followed by an Interstitial Pancreatitis, By GIOVANNI GHEDINI.
2. On the Cardiopulmonary Changes Met with in Typhoscolioses, By ANTONIO PISANI.
3. Anthropological Considerations on a Case of Bilateral Hereditary Plantar Keratoma, By MARIO COSTANZO.
4. Action of the Muscular Plasma of Healthy and Immunized Animals Upon the Bacillus of Koch, By R. B. PALLIERI.

1. **Ascarides Producing Pancreatitis.**—Ghedini reports the case of a child who died after a symptom complex resembling that of basilar meningitis. The child had complained for some days before death of a severe recurrent pain in the abdomen, which was found sensitive on pressure. There was also obstinate hiccough. The autopsy showed that the intestines were full of ascarides, some of which had passed into the pancreatic duct and had penetrated into the pancreas itself, especially into the head of that organ where they could be found on section. The pancreas was found to be the seat of an interstitial pancreatitis. This case is an extremely rare example of the migration of ascarides. They have been found not infrequently in the liver, but seldom in the pancreas.

ROUSSKY VRATCH.

November 20, 1901

1. The Treatment of Congenital Dislocation of the Knee, By G. I. TURNER.
2. The Operative Treatment of Empyema (*To be continued*), By S. S. GRIGOLAV.
3. On the Question as to Dysentery in Manchuria (*Concluded*), By V. G. KORETCHENSKI.

1. **Congenital Knee Dislocation.**—Turner describes a case of congenitally dislocated knee in a young woman, twenty years of age. Congenital dislocation of the knee is a much less frequent deformity than congenital dislocation of the hip.

Within the past few years, however, an increasing number of cases of congenital knee dislocations has been reported, and the interest in this subject has been enhanced by recent improvements in the methods of orthopædic surgery. The diagnosis of this condition does not offer great difficulties and it is usually made out at an early age, in contrast to congenital hip dislocations, which are often not noticed until the child has reached an advanced age. The cause of congenital knee dislocations is an abnormal position of the fetus in utero, with the legs extended and the soles of the feet facing the child's face. No characteristic anatomical lesions are found in these cases. The ends of the bones are fully developed but do not show any mutual adaptation. On the other hand, the crucial ligaments are poorly developed, the semilunar cartilages are very thin and the articular surfaces flattened. In the case reported the patient walked on the ends of her thighs, and her knees were completely turned forward. She was unable to contract the flexor muscles of the knee, and to straighten out her limbs. This was prevented by a contraction of the quadriceps muscle. There was, in addition, club foot on both sides. The muscles of the thighs and legs were perfectly well developed, and the Röntgen rays alone showed the condition of the bones about the knee joint. The operation consisted of removing the crucial ligaments, and the cartilages, and in so fashioning the ends of the bones with chisel and sharp spoon that there was formed a rounded femoral end which fitted into a hollow in the upper end of the tibia. The cartilaginous surface of the patella was removed and the patella fitted into an artificial hollow in the femur. The joint was then closed and put in plaster of Paris. At a subsequent operation the deformity on the other limb was remedied in a similar manner. The tendon of the quadriceps was first cut, and the leg straightened. The club foot was corrected on both sides by appropriate tenotomies. The result was that the patient could walk without supports, but the right knee was ankylosed, while the left showed a mobility of thirty degrees, with a slight bend in the wrong direction.

3. **Dysentery in Manchuria.**—Koretchenski submits a very complete report on dysentery among the Russian troops in Manchuria, with special reference to the effects of Shiga's and Gabritchewsky's serum for the treatment of this disease. He treated in all seventy cases of dysentery of various degrees of severity. The doses of this serum varied from 20 to 110 c.c. at one injection, and the amounts administered to a single patient varied from 20 to 360 c.c. No drugs whatever were employed for a while, until the dejections had become purely fecal in character. During the catarrhal stage, when the stools were still fluid, bismuth, salol, and the like, were used. In some cases, in addition, irrigations with weak solutions of potassium permanganate were also employed. Koretchenski concludes that the serum undoubtedly presents a valuable means of treating dysentery. In the mild cases 20 c.c. of the serum aborted the disease. In the more severe cases 40 or 60 c.c. were required, and then the dose had to be repeated sometimes. In very severe cases he gave 100 c.c. at first and repeated the dose

when necessary. In almost all cases it was necessary to repeat the dose when the infection was severe. Unfortunately, there were cases of dysentery which had been neglected or which were so severe from the start that the serum did not have any effect. The same has been noted in the use of antitoxine in diphtheria. There is no question that the serum shortens the duration of the disease, and is superior to all other remedies hitherto applied. No relapses were noted after the use of the serum, and in no case did an acute dysentery become chronic.

November 27, 1904.

1. Ligation of the Femoral Artery in Hunter's Canal.
By S. I. KALANTAROFF.
2. Secondary Cesarean Section in a Case of Narrow Pelvis,
By V. N. ORLOFF.
3. Empyema and Its Operative Treatment (*Continued*),
By S. S. GIGOLAFF.
4. On Septicæmia in Early Childhood,
By S. E. OSTROFFSKY.
5. A Case of Situs Viscerum Inversus,
By N. A. ZIEVAKINE.

1. Ligation of the Femoral in Hunter's Canal.

—Kalantaroff publishes some interesting researches concerning the technics of ligation of the femoral in the femoropopliteal canal. This ligation he considers to be the most difficult one in the lower extremity. The lines of incision indicated for it by various authors, including Malgaigne, Poupert, Richer, etc., all have some defect, and only Quaine (? Quain) gives the proper directions for this incision. The chief difficulty in finding the vessel lies in the fact that the insertion of the sartorius, which serves as a landmark, is subject to variations. It is a common error to take the internal head of the quadriceps femoris for the sartorius and thus the operator fails to find the artery. The author investigated the anatomical relations of Hunter's canal in sixty cadavers, and came to the conclusion that the best method for this ligation is as follows: After the patient has been placed in the proper position for the exposure of Hunter's canal, first find the sartorius. This is done by measuring a distance of thirteen cm. from the tubercle of the adductor muscle, a point which indicates where the sartorius muscle in the average person crosses the line of incision. The incision should be made from four to five cm. in length, on the right side from above downward to the point marked, and on the left side from this point downward. The incision is made along the line indicated by Quaine, namely, one drawn from the middle point between the anterior superior spine and the symphysis, down to the tubercle of the great adductor muscle. This indicates the course of the femoral artery. By measuring thirteen cm. along this line we are able to find the sartorius, without which we cannot find the artery.

2. Two Cesarean Sections in a Patient With Narrow Pelvis.—Orloff relates the case of a woman, aged twenty-seven years, who had an absolutely contracted pelvis due to rickets, which necessitated a Cesarean section in 1901, from which the patient recovered uneventfully. A second

operation was performed in the same woman in 1904. The interesting feature in this case was, that the ovaries and tubes had been left intact during the first operation, at the special request of the patient herself, in spite of the assurance that she could not bear children normally. Although in both operations the uterus was incised during the first stage of labor, there was a prompt and efficient contraction of the uterine vessels, and the loss of blood was not greater than during normal labor. The author thinks that the best rule as to the time when such operations should be undertaken is, that if the woman is otherwise healthy and there is no tuberculosis or other imperative reason for hurrying, the section should be performed when true uterine contractions have begun, thus insuring an arrest of hæmorrhage without much trouble. He believes that drainage into the vagina by means of a gauze strip is useless in these cases, and that it only facilitates infection.

4. Sepsis in Infants.—Ostroffsky relates the case of an infant, aged fourteen days, in whom he observed the development of a septicæmia at the acme of which streptococci appeared in the blood. At the autopsy no infection was found to have taken place through the umbilicus, and the only possible portal of entry seemed to be a slight injury to the right ankle. The treatment proved ineffectual but the author did not employ antistreptococcus serum.

MEDICAL RECORD.

December 31, 1904.

1. On What Lines is the Treatment of Malignant Disease Advancing,
By ROBERT ABBE.
2. Problems Relating to Simple Ulcer of the Stomach,
By BEVERLEY ROBINSON.
3. The "Yolk Cure" in the Treatment of the Undeveloped,
By HEINRICH STERN.
4. Trachoma,
By ALBERT C. BARNES.
5. The Present Attitude Regarding the Treatment of Prostatic Hypertrophy,
By MARTIN W. WARE.

1. Malignant Disease.—Abbe holds that the treatment of malignant disease has made notable advances recently in three directions, viz., (1) in the recognition of the *principle* that carcinoma and sarcoma are primarily of local origin. This makes the cure almost certain when very early operation is done. (2) In recognizing the enormous value of increasingly extensive operation in advanced cases—widening the field of skin removal and lymphatic dissection. (3) In establishing the value of radiotherapy. Apart from these we have to record attempts to utilize serum therapy—antitoxine—and tissue metabolism by oophorectomy (Beatson's method) and thyroid extract administration. Serum therapy is still of undetermined value. The author has performed oophorectomy eight times in five years for malignant disease of the breast. In all but one case retrograde changes occurred and life was prolonged. Ultimately all the patients but one died of cancer. Phototherapy is of no value in malignant disease. There remain for consideration the Röntgen rays, the ionized rays, and the rays from radium. The author is of the opinion

that radium promises the best results of any of these forms of treatment.

2. **Ulcer of the Stomach.**—Robinson makes a strong plea for continuing to consider ulcer of the stomach a medical disease. If perforation occurs the condition is unquestionably surgical, and it is also a surgical condition if repeated hemorrhages endanger the patient's life. Statistics show that with careful medical attention most cases of simple ulcer will recover. Surgical treatment has a high mortality and "cures" are often temporary.

3. **The "Yolk Cure."**—Stern defines his yolk cure thus: "Under 'yoke cure' I understand a dietary regimen in which the greater portion of calories is yielded by the yolk of the hen's egg, and in which the latter forms the only fatty substance. Besides this *rigid* 'yoke cure' we may speak of *modified* forms of the same. A modified 'yoke cure' is a dietary regimen which is either (a) not a succession of 'yolk days' (that is 'when days on which yolks do not preponderate in the diet are inserted'), or (b) when the yolks although contained in the diet in a certain amount, do not furnish the bulk of the calories and are not the sole representatives therein of the fatty ingesta. In a majority of instances a modified 'yolk cure' will be found to offer certain advantages over the strict regimen when the patient's alimentary tract is in good condition and after subsidence of the acute decline, or after the patient has started to gain in body weight. Moreover, the 'yoke cure,' modified according to the individual needs and desires and remodified from time to time in accordance with the changed conditions in the organism is the only means by which a yolk diet may be continued for many months and even for years." The paper discusses the scientific basis for this form of treatment and gives in detail a sample menu destined for a consumptive weighing 110 pounds, whose normal weight ought to be 149 pounds.

5. **Prostatic Hypertrophy.**—Ware holds that in uncomplicated cases prostatectomy is best done by the perineal route. A calculus, vesical hemorrhage or a large diverticulum call for the suprapubic method. On the other hand, the perineal route is one of absolute necessity, when there is suppurative inflammation of the prostate or diseased conditions of the urethra, such as stricture or perineal extravasation. In well-to-do patients operation may, with safety, be delayed until the symptoms become urgent. In the poor it is best to operate at once.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 31, 1904

1. Antoine Francois Saugrain (De Vigni). "The First Scientist of the Mississippi Valley."

By N. P. DANDRIDGE.

2. A Plea for a More Thorough Examination of Doubtful Specimens of Ectopic Pregnancy,

By J. WESLEY BOVÉE.

3. Extrauterine Pregnancy with Atypical Symptoms,

By WALTER B. DORSETT.

4. The Treatment of Lupus Erythematosus by Repeated Refrigeration with Ethyl Chloride,

By M. B. HARTZELL.

5. Diseases of Children Occasioned by Affections of the Nose. The Necessity for Recognition and Treatment.

By LOUIS J. LAUTENBACH.

6. Treatment of Chorea by Prolonged Warm Baths,

By W. C. HOLLOPETER.

7. Double Radial Rupture of the Iris,

By S. C. AYRES.

8. Two Additional Cases of Sympathectomy for Glaucoma,

By WILBER B. MARPLE.

9. Blastomycosis of the Eyelid,

By WILLIAM H. WILDER.

10. Subjective Refraction,

By JOHN A. TENNEY.

11. The Effect of Pilocarpine Hydrochloride in Strychnine Poisoning,

By S. J. MELTZER and W. SALANT.

12. Idiopathic Gangrene in the Young,

By M. L. STEVENS.

13. The Resistance of the Peritonæum. Illustrative Case,

By CHESTER M. ECHOLS.

2 and 3. See this *Journal*, Vol. LXXX, page 133.

4. **Lupus Erythematosus.**—Hartzell has treated five cases of lupus erythematosus by the following method: (1) Large doses of quinine internally; (2) locally repeated freezing of the diseased areas with ethyl chloride. The parts should be kept frozen for from five to eight minutes at each sitting and treatment should be repeated every two or three days for an indefinite time. Small superficial areas may heal by the end of six weeks or two months. From his limited experience with the method the author is inclined to look upon it as an extremely useful one in the treatment of this obstinate affection.

5. See this *Journal*, Vol. LXXX, page 331.

6. **Chorea.**—Hollopeter has treated from forty to fifty cases of chorea by the method to be described and asserts that the duration of the disease was reduced to six weeks from three months. Method: Place the child in a warm bath (90° to 96° F.) and keep it there, immersed to the neck, for at least one or two hours twice a day. At the end of each bath gentle superficial massage should be practised. A nap follows each bath.

8. **Sympathectomy.**—Marple reports two cases of sympathectomy for the relief of glaucoma. In all he has observed five similar cases. From his personal observation he concludes: (1) Sympathectomy is not indicated in acute inflammatory glaucoma. (2) If the operation is ever justified it is in cases of chronic simple glaucoma. (3) This method of treatment has not, probably, a very brilliant future.

11. **Pilocarpine in Strychnine Poisoning.**—Meltzer and Salant refer to a case of strychnine poisoning in which recovery was claimed to have been due to the use of pilocarpine hydrochloride hypodermatically. They have tested the probability of this assertion by means of experiments upon rabbits and frogs. They are of opinion not only that the pilocarpine did not save the child's life, but also that in cases of strychnine poisoning pilocarpine is positively contraindicated.

12. **Idiopathic Gangrene.**—Stevens reports the case of a girl of 13 years who died of gangrene

of both feet and legs. No autopsy was obtained. There was no apparent cause to account for the gangrene.

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 29, 1904.

1. The Ultimate Results of Cauterization of the Lower Turbinate, with Therapeutic Suggestions Based Upon Histological Findings, By J. L. GOODALE.
2. Standard Records of the Leucocytes in Normal Blood for Reference in Clinical Work, By HENRY F. HEWES.
3. An Improved Method of End to Lateral Intestinal Anastomosis. A New Mattress Stitch, By ALFRED H. GOULD.
4. Bacterial Counts of Boston's Milk Supply, By HIBBERT WINSLOW HILL and FRANCIS HENRY SLACK.
5. Isolation Methods and Precautions in Contagious Disease, By F. P. DENNY.
6. A Case of Suspected Homicide Proved to Be Suicide by Strychnine, By F. J. CANEY.

1. Cauterization of the Lower Turbinates.—

Goodale gives first the results of a histological examination made into a series of cases which had been previously cauterized for swelling or hypertrophy of the lower turbinates, and which had reported later with a recurrence of nasal obstruction. With these results as a basis he formulates the following rules for the proper cauterization of the turbinated bodies: (1) If the object is to contract a relaxed or distended mucous membrane, we should endeavor to reach the submucous and deeper layers where the lymph spaces and blood vessels are chiefly situated, producing at the same time the minimum amount of disturbance to the mucous membrane itself. This result is best attained by deep linear applications, as narrow as possible, of chromic acid, or of the galvanocautery, or by submucous cauterization, which is an admirable and most effective method. (2) If we seek to diminish the amount of nasal fluid, as in certain forms of excessive post-nasal secretion, we may advantageously sacrifice a certain number of canaliculi in the basement membrane by broad, superficial applications to a definite area of the septum and lower turbinates posteriorly. (3) In the event of recurrence of enlargement after cauterization, we should remember that a more impervious and resistant mucous membrane probably exists, together with a proportionately greater amount of connective tissue than originally was present, and that consequently each subsequent cauterization is less likely to bring about contraction of the parts. Under such circumstances, it is probably best to dispense with further cauterizing and proceed immediately to the excision of a definite amount of obstructive tissue.

2. The Estimation of the Leucocytes.—

Hewes details a rapid clinical method of approximately determining the total leucocyte count from the ordinary stained specimen. In order to use the method one must first construct a standard table of blood counts. This table differs according to the microscope used. Essentially the method consists in counting the number of leucocytes in one hundred fields of a stained specimen and then comparing

these figures with those of the standard table. Those interested in hæmatology should consult the original paper, for the method, while easy in practice, is difficult to describe.

3. End to Lateral Anastomosis.—Gould's paper is the first of a series of four articles dealing with proposed changes in surgical technics. The changes proposed have been worked out upon animals and upon the cadaver. The present paper describes a method of joining the end of the small intestine to the side of the large. The technical details, for which originality is claimed, are: (1) Method of trimming the invaginated gut. (2) Method of placing the first layer of sutures. (3) A new mattress stitch. (1) The small gut at its free end is split opposite the mesentery for one and one half inches, and the corners are then rounded off. By this expedient the future anastomotic opening will be larger than the calibre of the small intestine. (2) The first line of sutures is a continuous over and over stitch applied by the aid of guide sutures, much on the plan of the Connell method of end to end anastomosis. (3) The new mattress stitch is a cross between a Lembert suture and a Halstead stitch. The loop of the Halstead stitch is placed near the cut edge and the ends are rotated through one hundred and eighty degrees before being introduced into the opposing edge of the gut in the Lembert fashion. When this stitch is tied the cut edges of the gut are inverted and peritonæum is opposed to peritonæum. The article is illustrated.

MEDICAL NEWS.

December 31, 1904.

1. The Effect of Hysterectomy on the Sexual Function, By HIRAM N. VINEBERG.
2. The Difficulties of Anæsthetization and Their Correction, By VICTOR C. PEDERSEN.
3. Hyperacute Melancholia: Report of a Case, By ROBERT N. TODD.
4. The Finsen Method, By MILTON FRANKLIN.
5. The Antiseptic Treatment of the Puerperal Woman, By LOUIS KOLIPINSKI.
6. Cerebral Palsies in Children, By J. M. AIKIN.

1. **Hysterectomy.**—Vineberg discusses the effect on the sexual function of hysterectomy performed on the adult woman. It is nil. "The conclusion I would draw from my own experience and from a study of the literature on the subject is that whatever other effects the removal of the uterus and ovaries may have upon the female human economy, it has little or none upon her sexual feelings."

2. **Anæsthetization.**—Pedersen reviews in very great detail the chief difficulties which may arise during the administration of an anæsthetic. One point made in the paper may be worth repeating. The diagnosis between pure respiratory and pure circulatory cyanosis is easily made by noting the capillary circulation. This is most readily done by compressing the finger nails and noting the more or less rapid return of the expelled blood.

4. **The Finsen Method.**—Franklin describes in some detail six types of Finsen lamp. Most space is devoted to the Finsen-Reyn lamp, which is

the one best adapted to private practice. As to the value of the Finsen method in the treatment of lupus vulgaris the author has this to say: "I think that the Finsen method when properly practised, and this necessitates the employment of suitable apparatus free from glass and of sufficient power, is superior to all known procedures for the treatment of lupus vulgaris. This opinion is the result of a close observation of the results obtained at the only place where the method has been properly employed. The use of the x ray has been too limited to warrant the positive assertion that it is a specific in lupus. The cases that have been positively cured by the Finsen method are almost without number, while those cured by the x ray are few and scattered, and their authenticity shrouded in uncertainty. It may be that we shall finally find a valuable therapeutic agent in the high frequency currents, but in the meantime we have the ultraviolet treatment of Finsen."

5. **The Puerperal Woman.**—Kolipinski is in favor of treating all puerperal women with large boric acid douches repeated three or four times a day.

AMERICAN MEDICINE

December 31, 1901

1. Ideal Method of Removing the Vermiform Appendix,
By HOWARD A. KELLY.
2. Tuberculosis of the Kidney, Ureter, and Bladder,
By J. M. BALDY and EDWARD A. SCHUMANN.
3. Primary Sarcoma of the Stomach: A Report of Three Cases,
By JOHN A. SIPHER.
4. The Reflexes in the Diagnosis of Nerve Lesions, Due to Trauma,
By HENRY S. UPSON.
5. On the Cause of Death in "Operated Cases" of Intestinal Perforation Occurring in Typhoid Fever,
By J. H. ANDERSON.
6. Polyneuritis Complicating Typhoid Fever with Unusual Localizations,
By ALFRED GORDON.

1. **Amputation of the Appendix.**—Kelly reviews the history of amputation of the appendix and describes about a dozen methods for treating the stump. He then proposes a new method. This requires a special crushing and cooking forceps. "The appendix is exposed, and the meso-appendix is tied off. A circular suture of fine silk is then laid around its base, about a centimetre distant, but not drawn up. The appendix is then grasped at its base with the forceps and crushed, while just beyond the forceps (distally) it is seized with an ordinary artery forceps to prevent the escape of its contents. Paquelin's cautery is now used to amputate the appendix between the two forceps, when it is laid aside in the grasp of the artery forceps. The crushing forceps, which is now to be converted into a cooking, sterilizing, sealing iron, is carefully isolated by tucking dry gauze under each blade, so as to lift the end of the forceps up on a cone, away from all contact with the cæcum. The next step, which is the most important one, is to keep the red hot point of the cautery slowly travelling up and down the groove in the crushing forceps for from 40 to 60 seconds, so as to burn off every vestige of the stump, and at the same time to heat the forceps so thoroughly that the narrow ribbon of

crushed appendix in its grasp becomes converted into a translucent gristle-like substance, in which the lumen of the appendix is completely destroyed. The lumen is so effectually obliterated that it never gapes. The final step is the tightening of the purse string suture, and the inversion of the cooked base, after which the serosa is carefully united over the whole with another row of fine silk sutures. I have cut off a little piece of the cooked tissue in seven cases, and dropped it into a test tube containing an agar medium, and in but one case was any growth obtained."

2. **Tuberculosis of the Kidney.**—Baldy and Schumann report a case of tuberculosis of the kidney, ureter, and bladder. The diseased kidney and ureter were removed at operation. The case is of interest chiefly because the condition was mistaken for tubal disease. There were no kidney or bladder symptoms.

3. **Sarcoma of the Stomach.**—Sipher reports three cases of primary sarcoma of the stomach which were studied in the pathological department of the Western Reserve University. Up to 1902 Howard found 61 similar cases on record. The author has been able to find records of five other cases since this date; there are therefore a total of 66 such cases on record.

4. **Nerve Lesions Due to Trauma.**—Upson calls attention to the very great aid that may be derived from a study of the various reflexes in an attempt to reach a correct diagnosis, specially in cases where it may be to a patient's advantage to mislead the physician; as in suits for damages. The author gives his estimate of the value of the following reflexes: Knee jerk, Achilles jerk, Babinski reflex, and ankle clonus. The claim of impotence, as a result of injury, is at times made. Direct proof is out of the question. The following points if carefully noted will at times clear up all doubts. The cremasteric reflex, the virile reflex, and the papillas along the posterior edge of the glans penis, if all of them are present, exclude organic impotence due to nervous shock or nervous disease, in men who present no evidence that the spinal cord is cut or compressed. Of these, the virile reflex should be given the first place. To obtain it, press the forefinger against the patient's perineum, and with the other hand pinch the mucous membrane of the glans penis. At each pinch a muscular contraction is plainly felt in the perineum, due to the action of the erector penis muscle. The absence of this reaction is the strongest presumptive evidence of impotence.

5. **Perforation in Typhoid.**—Anderson emphasizes his belief that one of the causes of death following operations for typhoid perforation is the toxæmia which arises from the contents of the paralyzed bowel. The author recommends that the ileum be emptied of its contents and the bowel irrigated either through the perforation itself or through a special incision. He has employed this method in nine cases. The results obtained satisfy him that the expedient is a useful one.

LANCET.

December 17, 1904.

1. On the Operative Treatment of the Conditions of the Gastrointestinal Tract Which Result from Chronic Constipation, By W. A. LANE.
2. Benign Villous Tumor of the Renal Pelvis: Hæmorrhage; Nephrectomy; Recovery, By H. SAVORY and W. G. NASH.
3. Ethyl Chloride as an Anæsthetic in General Practice, By H. HILLIARD.
4. Acute Lymphocythæmia, By L. S. DUDGEON.
5. Two Cases of Severe Cranial Injury, By W. D. CHAPMAN.
6. A Case of Congenital Hypertrophic Stenosis of the Pylorus in the Adult, By A. E. MAYLARD.
7. Notes Upon Two Renal Cases, By W. H. CLAYTON-GREENE.
8. A Case of Anencephalous Monster, By H. BEATTIE.
9. Appendicitis and Pregnancy: Notes of a Case with Operation and Recovery, By H. A. LEDIARD and R. E. SEDGWICK.

1. **Operative Treatment of Constipation.**—Lane considers the causation, pathology, symptoms, and treatment of the changes in the gastrointestinal tract which result from and are associated with the habitual overloading of the large bowel. Dilatation with corresponding lengthening is a marked feature in certain portions of the intestine, the most marked examples being the cæcum, the transverse colon, and the rectum. Fixation with a corresponding atrophy of the muscle coats of the wall of the intestine is especially marked in every portion of the large bowel except the bulk of the cæcum and the entire transverse colon. This fixation is brought about by a gradual process of anchoring the outer aspect of the upper part of the cæcum, of the colon, and the mesosigmoid and sigmoid flexure to the peritonæum lining the adjacent abdominal wall. In a few cases the sigmoid flexure, instead of becoming shortened, atrophied, and fixed is elongated, hypertrophied, and abnormally movable. Rotation of this elongated, overloaded loop gives rise to complete intestinal obstruction—the so called spontaneous volvulus of the sigmoid flexure. A perfectly normal sigmoid, according to the author, cannot suddenly become twisted so as to form an immediate obstruction. The same applies to volvulus of the cæcum. Adhesions form between the appendix and the adjacent portion of the iliac fossa: when the cæcum is loaded it excites a strain on the proximal portion of the appendix and flexes it abruptly at the lower limit of its adhesions. Thus the appendix is occluded, its secretions are dammed up, and an inflammation of varying intensity is produced. The constant recurrence of appendiceal obstruction may lead to the formation of a calculus. Now the chief factor in all these changes is an overloading of the cæcum and ascending colon. The erect position habitually assumed during the greater part of the twenty-four hours is a great factor. Even in defecation, as usually practiced, the cæcum is driven downwards and forwards into the true pelvis; whereas in the squatting position enormous pressure is afforded by the forcible apposition of the thigh and abdomen. In many of these cases of chronic constipation the kidneys are immobile, from

the constant pull on them. A second factor in the displacement of the kidneys is the absorption of fat due to the toxæmia. The poisoning from absorption of toxic material also manifests itself by increasing staining of the skin, and by marked mental depression. As already mentioned obstruction of the appendix is a very common concomitant of the alteration in the form and mechanics of the cæcum. In the treatment of the condition the author has had considerable success in opening the abdomen and dividing all constricting bands and adhesions, and subsequent careful attention to the proper functioning of the bowel. But when the alterations have proceeded too far, he divides the ileum about five inches above the cæcum, and makes an anastomosis with either the sigmoid flexure or the rectum, thus throwing the cæcum and colon "out of circuit." In a very few cases subsequent excision of the cæcum and colon may be required. But usually the patients rapidly regain their lost flesh, strength, and health.

3. **Ethyl Chloride.**—Hilliard is strongly in favor of ethyl chloride as an anæsthetic, providing its dangers are recognized. It is portable, of stable composition if it is kept in the dark, easy of administration, acts rapidly, and provides a narcosis of several minutes after the removal of the inhaler, which narcosis is quiet and sleep-like. But if complete muscular flaccidity is required the anæsthetic must be pushed to the limit of safety. The writer prefers Braine's modification of Onnsby's inhaler. The same preparation of the patient is necessary as for ether narcosis. Almost any position of the patient is safe, but the recumbent posture is best for children. Do not have the head either too far backward or forward. A good average dose for an average adult is five cubic centimetres. It is better to give a full and rapidly induced anæsthesia than to admit air and economize the drug. Ethyl chloride should not be administered in the following conditions: diseases of the larynx; inflammatory lesions or tumors in, or adjacent to, the respiratory passages; goitre; all conditions giving rise to urgent dyspnoea; and in long operations.

4. **Acute Lymphocythæmia.**—Dudgeon reports the case of a man aged thirty-seven years, who when first seen was intensely anæmic: the spleen and liver were both enlarged, and there was a high degree of oral sepsis. There was no glandular enlargement. He had been ill about two months. Blood examination showed the red corpuscles to be about two million to the cubic centimetre, and the leucocytes 43,000: of the leucocytes 96 per cent. were lymphocytes. Two weeks later the red corpuscles had sunk to just under one million, and the leucocytes had risen to almost half a million. There was a marked relative increase in the number of the large lymphocytes. Cultures from the blood showed the presence of the staphylococcus albus.

6. **Congenital Hypertrophic Stenosis of the Pylorus in the Adult.**—Maylard reports the case of a man aged thirty-one years, upon whom the operation of posterior gastrojejunostomy was performed for a supposed simple stricture of the pylorus. The patient died eight months later and

at the autopsy the stricture was found to be due to hypertrophy of the muscular coat of the pylorus, which hypertrophy extended well out into the stomach. Taking into consideration the absence of any indication of old ulceration, the uniformity of the pyloric constriction, the gradual tapering off of the hypertrophied gastric wall from the pylorus toward the body of the stomach, the absence of any malignant element, and the age of the patient, the author classes the case among those rare examples of congenital hypertrophic stenosis occurring in the adult.

BRITISH MEDICAL JOURNAL.

December 17, 1904.

1. Remarks on the Indications for Operative Interference in Diseases of the Stomach, By R. SAUNDREY.
2. The Diagnosis and Surgical Treatment of Certain Cases of Chronic Indigestion, By G. BARLING.
3. Duodenal Ulcer and Its Treatment, By D'A. POWER.
4. The Germ Cell Theory of Cancer, By A. S. GRÜNBAUM.
5. Report No. LXXXIX to the Scientific Grants Committee of the British Medical Association. The Nature of the Malformations of the Rectum and Urogenital Passages, By F. WOOD-JONES.

1, 2, 3. **Surgery of the Stomach.**—Saundrey states that operative interference is imperative in: (a) Impermeable stricture of the œsophagus; (b) perforated gastric ulcer; (c) subphrenic abscess; (d) tumor in the region of the stomach with vomiting and other symptoms of pyloric obstruction. He admits the reasonableness of surgical interference in gastric hæmorrhage, but so far he has never found it necessary to operate, all of his cases having recovered in the end. In an uncomplicated case of gastric ulcer there should be no question of surgical assistance. It is very rare that gastric ulcer does not improve under treatment, and the author has never seen an uncomplicated case result fatally. In duodenal ulcer operative interference for repeated bleedings should be tried. In dilatation of the stomach a distinction must be made between primary or idiopathic, and secondary or obstructive dilatation, as it is in the latter only that surgical aid is required. Where obstruction exists, whether from external pressure, adhesions, growth, hypertrophy, or spasm, a cure can be effected only by surgical means. A physician should not persist in merely palliative treatment when gastroenterostomy will bring about a complete cure. The clinical indication for this operation is stasis, which is of more importance than the size of the stomach or the existence of dilatation. In idiopathic dilatation without stasis the balance of opinion is against operation. Operations upon neurasthenic subjects should be avoided as far as possible. Hour glass stomach is by some thought to be merely an exaggeration of the physiological division of the organ into fundus and antrum pylori, and calls for surgical treatment only when it gives rise to symptoms of obstruction and stasis. Hyperchlorhydria is not infrequently associated with stasis and pyloric stenosis or spasm. Wherever stasis is present gastroenterostomy is indicated: but if it is a pure neurosis surgical interference is uncalled for. Neither chronic gastritis, atonic dyspepsia, nor gastralgia in itself requires surgical treatment. The presence of cancer of the

stomach clearly indicates operation: the real difficulty is that of early diagnosis, the nature of the case being often only recognized too late. Barling tells us that there is a group of cases of digestive derangement which call for surgical treatment. Excluding perforation these are: 1. Chronic gastric ulcer, frequently relapsing despite proper dieting and rest. 2. Hæmorrhage from gastric ulcer, where the bleeding is profuse and quickly repeated, or where there is never a great loss but one which is often repeated. 3. Mechanical obstruction to the emptying of the stomach from pyloric stenosis, hour glass contraction or external adhesions. 4. Ulcer or stenosis of the duodenum. The operative measures required for the relief of these various conditions may be: 1. Excision of the ulcer. 2. Pylorodiosis or stretching of a narrowed pylorus. 3. Pyloroplasty or gastroplasty, division of the stricture, and its widening by a special method of suturing. 4. Gastroanastomosis, or the formation of a function between stomach and jejunum, stomach, and duodenum, or between the distal part of the stomach and the proximal in certain cases of hour glass contraction of the organ. The first three operations have only a very limited application: gastrojejunostomy is the operation of election in the large majority of cases. The death rate will be, in the hands of those accustomed to perform the operation, about five per cent. Power's paper on duodenal ulcer is based upon the observation of seven cases which he reports in tabular form. He tries to show that: (a) Duodenal ulcers are not very uncommon. (b) So far as he has seen them, duodenal ulcers are single and occur more often in men than in women. (c) Duodenal ulcers may perforate and cause acute symptoms or they may heal and by cicatrization lead to symptoms of chronic duodenal obstruction. (d) The sequelæ of a healed ulcer may be so remote that the symptoms are mistaken for those due to cancer of the pylorus, and the patient is allowed to drift from bad to worse under the erroneous notion that he is bound to die. (e) There is no means of recognizing the existence of a duodenal ulcer, in a great many cases, until it perforates or until the results of its cicatrization become manifest. (f) The treatment of duodenal ulceration consists (1) in the direct suture of a perforated ulcer, the prognosis being less favorable than in similar cases of perforation; (2) the performance of gastrojejunostomy in cases of dilated stomach due to duodenal constriction, the prognosis being the most favorable of all the conditions for which this operation is done at the present time.

4. **Cancer.**—Grünbaum states that the explanation of the genesis of malignant growths has been brought nearer by two notable investigations. They are (1) the proof by Beard, of the morphological continuity of the germ cells; and (2) the discovery by Farmer, of heterotype mitosis in malignant tumors. Given the cells of the potential growth, it seems not improbable that the toxine of a parasite, the short stimulus of a trauma, the long continued stimulus of chronic irritation, or the chemical conditions of disordered metabolism, might suffice to turn loose their energies, and thus one or all the alleged causes in turn have their share.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of Wednesday, December 14, 1904.

The President, Dr. ROLAND G. CURTIN, in the chair.

The Differential Diagnosis and Treatment of Acute Pelvic Peritonitis Associated With Gonorrhœal Salpingitis.—Dr. BROOKE M. ANSPACH, in this paper, drew attention to the fact that while pelvic peritonitis of gonorrhœal origin was best treated expectantly during the acute stage, it occasionally bore a close resemblance to acute inflammation of the vermiform appendix, in which the expectant plan of treatment would be dangerous. The diagnosis was based largely upon the mode of onset, the history of the patient, and the presence of gonorrhœa. Bimanual palpation in an initial attack of acute pelvic peritonitis due to the gonococcus must be negative. This was because of rigidity of the abdominal walls and the slight structural change found early in these cases. After rest in bed, the use of salines, and hot applications to the abdominal wall, the symptoms subsided in from three to ten days. At this time examination was painless, the structural lesions were plainly evident, and an operation should be performed. In case the expectant plan failed and the case progressively became worse, in view of the possibility of general peritonitis, no time should be lost in opening the abdomen. Several cases were given in detail.

Dr. CHARLES P. NOBLE considered Dr. Anspach's paper so sound that there was little to say in discussion. Increased experience led him to expect less from conservatism in gonorrhœal salpingitis than formerly. He agreed with Dr. Anspach in his views regarding an operation in acute gonorrhœal peritonitis. He recalled having operated twice in the acute stage. In one case the peritonitis was quite diffuse; the patient recovered. In the other there was a large abscess to the left of the sigmoid. This patient also recovered. One of the cases in which the result of conservatism had been good was that of a young woman who had acquired gonorrhœa, and peritonitis resulted in an extraperitoneal abscess. He had operated in the acute attack and drained per vaginam, and to his surprise the patient made an excellent recovery. The woman had since been married and borne children. Unless the patient was a young woman, it was Dr. Noble's rule to take out both tubes, the uterus, and the ovaries.

Dr. JOHN G. CLARK said that the reason why the gonococcus did not produce general peritonitis was because its chief habitat was the mucous membrane. As soon as the gonococcus left the Fallopian tubes and enters Douglas's cul-de-sac, the peritonitis was merely toxic, due to the toxins of the gonococcus. He believed it unwise to operate during an attack of gonorrhœal peritonitis. Illustrative of this, he cited a case in which

the symptoms had increased in severity and the question arose whether there was simply a gonorrhœal peritonitis or involvement of the tubes and ovaries. An operation was done, the tubes and uterus being removed and the ovaries left. Subsequently the woman had a large abscess involving the ovary. Opening of the incision and further drainage were necessary.

He emphasized the necessity of a close diagnosis and the importance of knowing when to wait until the acute attack had passed and when not to wait, but to operate for a more lethal type of infection. For the past few years it had been Dr. Clark's effort to conserve all tissue possible, because the usual individual who contracted gonorrhœa was a young woman. He felt that the conservative policy in some instances worked well, but in the majority of cases badly.

Dr. EDWARD MARTIN said that his experience in this class of cases in recent years had been only as long as was requisite to transfer the patient to the hands of a competent gynecologist, but that in earlier days he had seen a good many such cases which had ended in prompt recovery under conservative treatment of the acute attack.

Dr. NOBLE had never seen a patient die of gonorrhœal peritonitis.

Dr. ANSPACH called attention to the fact that in a good many of these cases of acute pelvic peritonitis due to gonorrhœa not much was gained by bimanual examination. While all the cases were correctly diagnosed, had he not had the history and seen the associated signs of the gonorrhœal infection, he could not have formed much of an opinion.

The Significance of Abulic Symptoms in Cases of Mental Disease.—Dr. ROBERT H. CHASE, superintendent of the Friends' Asylum for the Insane, Frankford, read a paper with this title (to be published).

Dr. CHARLES K. MILLS said he believed papers of this kind of great use, even to those not particularly interested in mental and nervous affections, and that if there were presented to the profession more frequently the methods of studying mental symptoms there would be given a better insight to the cases of insanity and cases not so regarded. He considered the subject a large one from the standpoint of the alienist.

On the Advisability of a National Department of Public Health and a Medical Cabinet Officer.

—Dr. T. H. EVANS said this subject had been suggested by the late Dr. William Pepper. The writer favored the move as a means to centralize and render more effective the many interests of the country that were medical. The supervision of education of children, so as to suit individual tastes, needs, and abilities, is indicated. Physicians ought to control all matters which concerned the physiological welfare of the citizen. The care of criminals, once apprehended by the law, belonged properly to medicine. Colonies for mental and moral degenerates, if established, would materially reduce crime. The physical defects of children should be understood as productive of later immorality or conducive to it, if suitable education did not intervene. The educa-

tion and licensing of practitioners of medicine and surgery, in the opinion of the author, belonged to a central office, whose executive head should have a place in the cabinet of the President.

Dr. EDWARD MARTIN felt that in the main all were in accord with the views of Dr. Evans. The question of education, however, he thought should be a matter of State control. In regard to criminals, he thought the matter of imprisonment not so much one of punishment as of protection for the rest of the community, and that too much leniency had been allowed on a basis of mental defect. The idea of centralization he thought was applicable to the subjects of sanitation and prophylaxis, particularly against contagious diseases and in regard to such general subjects as water pollution. The establishment of a national board he thought was hoped for by all physicians.

Dr. CHARLES K. MILLS believed that much could be accomplished by the establishment of a central health department of some description. It was, however, a question more difficult of solution than would seem to physicians, who had only the physician's side of the subject before them. Personally he would be very glad to see the medical profession represented in the cabinet, and believed much good might come from such a movement. It might, however, be better if a department of science were created with bureaus of different sorts, including a national bureau of health, which would take cognizance of matters of this sort. The great advantage of such an office would be the unifying of methods of procedure concerning matters of health in all parts of the country. With such a national organization much might be accomplished in matters of quarantine, the pollution of rivers, the registration and examination of physicians, and such questions as physicians had the first right to consider. Those who had committed crime should, if their mental and physical health was a matter of question, receive that attention which was often not given to them, both before and after trial and after conviction. Such questions as the care of the insane, the care of epileptics, and the commission of crime by the young would receive the more humane attention if there were some method of regulating their consideration and if that method were, in part at least, national and centralized.

Dr. WILLIAM S. WADSWORTH thought it appropriate that the Philadelphia County Medical Society should recognize the needs of the community for a larger, broader, and more intelligent handling of State medicine. He thought it not possible for men unversed in medical science to take care of the lives of human beings. Various questions which should come under the head of such a national executive department mentioned by Dr. Wadsworth were the adulteration of foods, the study of sewage, the protection of life on railroads and in factories, child labor, the importation of hides and such materials, and the quality of drugs and patent medicines. He regarded as highly desirable the presence of a medical man in the cabinet.

Book Notices.

Beiträge zur Behandlung putrider Zahnwurzeln unter spezieller Berücksichtigung der Anwendung schwacher galvanischer Ströme (Elektrosterilisation). Von FR. E. ZIERLER, an der kais. russ. Universität Dorpat appr. Zahnarzt, ehem. Assistent am zahnärztl. Institut und Klinik für Zahn- und Mundkrankheiten in Warschau. Würzburg: A. Stuber's Verlag (C. Kabitzsch), 1905. Pp. 53.

The author describes in this brochure his experience with the electric current in sterilizing infected pulp canals of teeth. The question of pulp sterilization is one of considerable importance in view of the local disturbances to the retentive apparatus of the tooth which may follow infections of the surrounding tissues by the invasion via the pulp canal of the root, and because of the more remote disturbance which these avenues of entrance for pathogenic bacteria may cause, as, for example, infection of the antrum of Highmore and the accessory sinuses of the face, tuberculosis of the cervical lymphatics, and many other suppurative processes, as well as alveolar necrosis, which have their origin from that source.

After discussing the usual methods of pulp canal sterilization the author reports that he has obtained the best results from the use of a five per cent. aqueous solution of iodine applied for thirty minutes, and by formaldehyde in a two per cent. aqueous solution, for fifteen minutes. He gives no account of the testing of sodium dioxide solution or of the efficiency of the Kalium Natrium method introduced some years ago by Schreier, of Vienna, both of which latter have a most satisfactory clinical record.

Believing many of the methods in use to be ineffectual in the destruction of certain bacteria of the putrid dental pulp, especially the spores of the *Bacillus gangrena pulpæ* discovered by Miller, of Berlin, and described at length by Arkövy, of Budapest, the author was led to study the efficiency of the electrical current as a means for securing sterilization of the pulp canal. For that purpose he tested the sterilizing effect of the current upon an infected Petri plate and found that a circular area of about one and one quarter inch in diameter around the anode was rendered completely sterile. Stab cultures made in the sterilized area showed subsequent growth, as also did cultures in bouillon made from particles of the same sterilized surface.

The principle upon which the electrical sterilization is effected is that of the electrolytic action of the current upon the sodium chloride contained in the fluid, whereby chlorine is liberated at the anode, and the sterilizing therefore depends upon the activity of chlorine as a germicidal agent.

The author uses a platinum-iridium needle as an anode and makes the cathode application upon the arm by means of a dishshaped terminal. He finds that a current pressure of from thirty-five to forty volts and a flow of three milliamperes should be kept up for about ten minutes. He describes certain necessary apparatus for the control of the current, which may be either the street current or that of a Leclanché battery of thirty-two cells. These are,

however, technical details not germane to the principle of the method under consideration.

Great stress is laid upon the necessity for gradually increasing the current to the maximum flow advised. The allegation made for the method by the author is the rapidity with which complete sterilization of a root canal can be effected.

The method as above outlined and described at length in Zierler's monograph is not new. Not less than eight years ago, when cataphoresis was suggested as a means for obtunding sensitive dentin, the possibility of effectually sterilizing a root canal and pyorrheal pockets about the teeth was generally discussed, and considerable experimentation resulted not only in the use of platinum-iridium anodes, but that of anodes of amalgamated zinc and of copper. These latter base metal anodes were suggested by Dr. Morton, of New York, for the reason that when they were used in saline solutions the electrolytic action of the current resulted in the formation of mercury, zinc, or copper salts respectively which were driven deep into the tissues cataphoretically and there exhibited their well known germicidal properties. The method has not received the attention which it deserves, and the present work of Zierler should serve to revive interest in its possibilities and develop its more general use.

The Art of Compounding. A Textbook for Students and a Reference Book for Pharmacists at the Prescription Counter. By WILBUR L. SCOVILLE, Ph. G., formerly Professor of Theory and Practice of Pharmacy in the Massachusetts College of Pharmacy; Member of the Committee of Revision of the United States Pharmacopoeia. Third Edition, Revised and Enlarged. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. 339. (\$2.50 net.)

In this new edition considerable fresh matter is to be found, as, for example, a chapter on tablets in which is treated the manufacture of compressed and triturate tablets. This will be found useful for reference by practising physicians as well as by dispensers. A new chapter on sterilization and disinfection treats the subject in a rather elementary fashion, but the author prepares us for this by explaining that it was arranged to meet the needs of pharmacists. The work has been improved and extended in other directions, so that it stands to-day as one of the best sources of information regarding a branch of the pharmacist's art with which physicians should be better acquainted.

Manual of Physiological and Clinical Chemistry. Second Edition, Revised and Enlarged. By ELIAS H. BARTLEY, B. S., M. D., Ph. G., Professor of Chemistry, Toxicology, and Pædiatrics in the Long Island College Hospital; Author of Medical and Pharmaceutical Chemistry. With 47 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. 181. (\$1.00.)

Intended chiefly as a textbook for the use of students, this handy little volume of Dr. Bartley's seems to us to amply fulfill its purpose. The author's many years of experience in the teaching of those branches of chemistry usually taught to

medical students have singularly qualified him for the preparation of a textbook concerned with the application of the science of chemistry to the diagnosis and treatment of diseased conditions. In the new edition much new matter and many new processes are included, some of the latter being original with the author. The manual is embellished with useful and well selected illustrations.

A Laboratory Guide in Elementary Bacteriology. By WILLIAM DODGE FROST, Ph. D., Assistant Professor of Bacteriology, University of Wisconsin. Third Revised Edition. New York: The Macmillan Company; London: Macmillan & Co., Limited, 1903. Pp. xiii-395. (\$1.60.)

The objective of this book is to give adequate directions to the student for the performance of certain fundamental exercises in bacteriology. The various bacteria are studied in groups, so as to emphasize the similarity between closely related forms as well as minute but important differences. Migula's system of classification is used. Opposite pages have been left blank for notes and drawings, so that a permanent record may be kept. The title page has the date of publication 1903, while the copyright states that it was published in October, 1904.

BOOK AND MAGAZINE NOTES.

The Century Company has in press a new novel by Dr. S. Weir Mitchell, the title and subject of which have not been announced. Dr. Mitchell will be 75 years old in February, but he is still actively engaged in literary work and considers his new novel the strongest story he has ever written.

Sherlock Holmes has been galvanized into activity again, so lovers of the adventurous will take new lease of life. Sir Arthur Conan Doyle's book will be called "The Return of Sherlock Holmes," and will be brought out early in February and illustrated by Charles Raymond Macaulay. In the thirteen new tales which the book contains, Sherlock is said to be even more astute, brilliant, and astounding than ever. The same mystery, the same impending perils, the same hairbreadth escapes that thrilled in former volumes are present in this one, and the reincarnated Sherlock offers even more complex problems than of yore and unravels them with even greater deftness.

BOOKS, PAMPHLETS, ETC., RECEIVED.

The Surgery of the Diseases of the Appendix Vermiformis and Their Complications. By WILLIAM HENRY BATTLE, F. R. C. S., Surgeon to St. Thomas's Hospital, Formerly Surgeon to the Royal Free Hospital, etc., and EDRED M. CORNER, M. B., B. C., F. R. C. S., Surgeon in Charge of Out Patients to St. Thomas's Hospital, Assistant Surgeon to the Great Ormond Street Hospital for Sick Children, etc. Chicago, 1905: W. T. Keener & Co. Pp. 208. [\$2.50 net.]

Manual of Antenatal Pathology and Hygiene; the Embryo. By J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S., Edin., Lecturer on Midwifery and Gynecology, Medical College for Women, and Surgeons' Hall, Edinburgh; Examiner in Midwifery in the University of Edinburgh. Edinburgh, 1904: William Green & Sons. Pp. xix-697. [21s. net.]

Bacteriology and the Public Health. By GEORGE NEWMAN, M. D., F. R. S. E., D. P. H., Formerly Demonstrator of Bacteriology in King's College, London; Medical Officer of Health of the Metropolitan Borough of Finsbury, etc. Third Edition, Illustrated. Philadelphia, 1904: P. Blakiston's Son & Co. Pp. xx-497.

The Chemical Synthesis of Vital Products and the Interrelations Between Organic Compounds. By RAPHAEL MELDOLA, F. R. S., V. P. C. S., F. I. C., etc., Professor of

Chemistry in the City and Guilds of London Technical College, Finsbury; Member of the Faculty of Science, University of London, and of the Teachers' Registration Council. Vol. I. Hydrocarbons, Alcohols, and Phenols, Aldehydes, Ketones, Carbohydrates, and Glucosides, Sulphur and Cyanogen Compounds, Camphor and Terpenes, Coloring Matters of the Flavone Group. London, 1904: Edward Arnold. Pp. xvi-338. [\$6.00 net; by mail, \$6.22.]

One Hundred Years of Publishing (1804-1904). A Brief Historical Account of the House of William Wood & Co. Illustrated. New York, 1904: William Wood & Co. Pp. 29.

Clinical Hematology. A Practical Guide to the Examination of the Blood with Reference to Diagnosis. By JOHN C. D'ACOSTA, JR., M. D., Demonstrator of Clinical Medicine, Jefferson Medical College; Chief of Medical Clinic and Assistant Visiting Physician, Jefferson Medical College Hospital, etc. Second Edition, Revised and Enlarged. Containing 9 full page Colored Plates, 3 Charts, and 64 Other Illustrations. Philadelphia, 1905: P. Blakiston's Son & Co. Pp. 501. [\$5.00 net.]

Miscellany

Officers of the American Physiological Society.

—The American Physiological Society has elected the following officers for the coming year: President, Professor W. H. Howell, Johns Hopkins University; secretary, Professor Lafayette Mendel, Yale; treasurer, Professor W. B. Cannon, Harvard.

American Society of Naturalists.—One of the largest audiences gathered to hear the discussion on The Mutation Theory of Organic Evolution, which was scheduled to be held in the Auditorium of Houston Hall, Philadelphia, at 3 p. m. on Wednesday, December 28, 1904, under the auspices of the American Society of Naturalists. The audience was so large that it was necessary to adjourn to the operating room in Dental Hall. The subject was discussed by D. T. MacDougal, of the New York Botanical Garden, from the standpoint of plant breeding; by W. E. Castle, of Harvard University, from the standpoint of animal breeding; by Dr. E. G. Conklin, of the University of Pennsylvania, from the standpoint of cytology; by W. B. Scott, of Princeton University, from the standpoint of palæontology; by Dr. Thomas Dwight, of the Harvard Medical School, from the standpoint of anatomy; by Liberty H. Bailey, of Cornell University, from the standpoint of taxonomy; and by W. M. Wheeler, of the American Museum of Natural History, from the standpoint of ethnology.

Report on Radiotherapy.—Kienbock, in *Archives of the Röntgen Ray*, for November, 1904, observes that every living tissue is subject to pathological change under the action of the Röntgen rays which is not due to a static electrical effect. It consists in degeneration and necrosis, and young and proliferating cells are especially affected. This degeneration can be detected by the microscope within a few hours after a single exposure of medium duration. A longer exposure causes inflammatory changes accompanied by lesions of the walls of the blood vessels, after a definite lapse of time. The intensity of

this dermatitis depends upon the dose of the radiation. The effects depend upon the penetration of the rays to different depths, which vary with the character of the tube employed, soft, medium, or hard. The action does not extend beyond the limits of the parts exposed to the rays. During the exposure there is no visible change in the tissue; the microscopical changes begin after a few hours, the clinical symptoms of dermatitis after one, two, or three weeks. In radiodermatitis five periods may be distinguished: those of latency, ascendance, acme, descendance, and after a period of many months, lesions may occur. The greater the dose of rays at one sitting the shorter the period of latency, the stronger the reaction, and the longer the duration of the dermatitis. There may be four degrees of exposure:

1. Latency of three weeks. No superficial inflammation of the skin, temporary loss of hair, shrinking of lupus nodules, exacerbation of pre-existing inflammation.
2. Latency of two weeks. Erythema, swelling lasting one or two weeks, loss of hair.
3. Latency of ten days. Redness, vesicles, excoriation and exudation, resolution in three or four weeks.
4. Latency of five to eight days. Discoloration, the commencement of necrosis, demarcation and ulceration, followed by scarring after six weeks or longer.

One year or eighteen months after a dermatitis of the second degree, the characteristic atrophy of the skin with telangiectases of the skin may occur. These late symptoms invariably follow an exposure of the third degree.

The author uses a coil which gives a spark of 15 or 20 inches, a mercurial or an electrolytic break, with a regulating tube maintained at a medium degree of hardness. The maximum light of the tube is used, the tube being brought as near to the affected spot as possible, the exposure being limited to a few minutes. The surrounding skin is protected by a lead shield 25 mm. in thickness, covered on both sides with india rubber.

The dosage depends on the intensity of the light, the quality of the tube, the distance of the tube, the frequency of the break intermission, and the length of the exposure. The dose should vary directly with the duration of the exposure.

The dosage may also be estimated by Holtznecht's chromoradiometer, the amount of radiation absorbed by its disc being estimated in Holtznecht's units. A small normal dose will produce a reaction of the first degree in five minutes, and an absorption of x rays of about three Holtznecht's units.

A normal dose will produce a slight reaction of the second degree in five to ten minutes and an absorption of three to five Holtznecht's units. A large normal dose produces a strong reaction of the second degree in ten minutes, intensity five Holtznecht's units. A double normal dose is followed by a reaction of the third degree, duration fifteen minutes, intensity eight Holtznecht's units. Certain diseases may be cured by a single exposure, producing an acute radiodermatitis of the

second degree. Dose, four Holtznecht's units, with seven minutes' exposure.

Some diseases require an acute inflammatory reaction every second month, others require a moderate exposure every week. Many diseases give better results if there is no inflammatory reaction. A degenerative action may be set up by a weak exposure once a fortnight. The healthy skin reaction is not the same for all portions of the body, and is influenced by age and sex. A diseased spot is more sensitive than normal skin. Idiosyncrasy is not a frequent cause of Röntgen burns.

The microscope appearances show that the Röntgen rays produce degeneration of the parenchymatous cells, and of the walls of the vessels, and acute or chronic degeneration with infiltration of the tissue, resulting in atrophy and scarring. There is also a stimulating effect on metabolism, as is seen in the cure of alopecia areata. There is also an arrest of itching and a suppression of pain.

The bactericidal power of x rays which has been recognized by experiments on cultures plays no part in Röntgen therapy, for the high intensity, twenty Holtznecht's units, which is necessary, is four times the normal dose.

The Association of American Anatomists.—The following was the programme of the meeting of the Association of American Anatomists held at Philadelphia last week:

Dr. Burt G. Wilder, A New Form of Brain Bequest; Dr. Burt G. Wilder, Some Current Terminological Inconsistencies That Are Apparently Needless; Dr. Edw. Anthony Spitzka, Report of a Study of the Brains of Six Eminent Scientists and Scholars Belonging to the American Anthropometric Society; Together with a Brief Description of the Skull of One of Them; Dr. R. B. Bean, On a Racial Peculiarity in the Brain of the Negro; Dr. J. S. Kingsley, The Mammalian Lower Jaw; Dr. Henry Fox, Notes on the Origin of the Carotid Gland and the Morphological Comparison of the Trigeminal and Facial Nerves in Mammalian Embryos (by invitation); Dr. William Keiller, Description of a Method of Making Wax Models for Teaching Purposes, with a Demonstration of the Anatomy of the Lymph Nodes of the Axilla as Illustrated by Such Models; Dr. William Keiller, Note on the Ligaments of the Mammary Gland; Dr. R. H. Whitehead, Results of a Study of the Development of the Oesophageal Epithelium; Mr. Charles F. Sylvester, Methods of Preparing the Salivary Glands for Study and Museum Purposes; Dr. Churchill Carmalt, Morphology of the Salivary Glands; Dr. C. M. Jackson, Topography of the Pancreas in the Human Fœtus; Dr. Lydia M. De Witt, Preliminary Report of Experimental Work and Observations on the Areas of Langerhans in Certain Mammals; Dr. J. L. Brenner, On the Anatomy of a 4.0 mm. Human Embryo from the Harvard Embryological Collection; Susanna Phelps Gage, The Total Folds of the Forebrain and Their Order of Appearance; Dr. John Warren, The Development of the Paraphysis and Pineal Regions in Necturus; Dr. Charles R. Bardeen, The Development of the Cutaneous Nerves in Man; Dr. Ewing Taylor, Normal Plates of the Development of the Rabbit; Dr. Arthur S. Vossburgh, The Inguinal and Femoral Fascia; Dr. Simon H. Gage, On Glycogen in Animal Tissues; Dr. George L. Streeter, On the Histogenesis of Spinal Ganglia in Mammals; Dr. Charles R. Bardeen (for Mr. A. O. Fisher), Marked Differences Between the Skin of Male and Female Frogs; Dr. William S. Miller, The Blood and Lymph Vessels of the Lung of Necturus; Dr. William S. Miller, The Mesentery in Amphibia and Reptilia; Dr. G. Carl Huber, On the Shape of the Uriniferous Tubules of Mammals; Dr. Ferdinand Schmitter, Cytological Changes in the Kidney Due to Different Strengths of Salt Solution; Dr. Charles S. Minot, Recent Additions to the Harvard Embryological Collection.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending December 30, 1904:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
Florida—Jacksonville	Dec. 17-24	1	
Illinois—Chicago	Dec. 17-24	20	1
Illinois—Springfield	Dec. 18-24	5	
Kentucky—Louisville	Dec. 15-22	1	
Louisiana—New Orleans	Dec. 18-24	7	
Michigan—At 70 localities	Dec. 10-17	4	Imported
Minnesota—Meeker County	Dec. 12-19	1	Present.
Minnesota—Otter Tail County	Dec. 12-19	1	
Minnesota—Rice County	Dec. 12-19	12	
Minnesota—Wilkin County	Dec. 17-24	1	
New Jersey—Camden	Dec. 18-24	1	
New York—New York	Dec. 18-24	1	
Ohio—Cincinnati	Dec. 16-23	2	
Pennsylvania—Johnstown	Dec. 17-24	1	
Pennsylvania—Philadelphia	Dec. 17-24	1	
South Carolina—Charleston	Dec. 10-17	2	
Tennessee—Nashville	Dec. 17-24	4	
Washington—Pierce County (Tacoma included)	Nov. 1-30	2	
Washington—Walla Walla Co.	Nov. 1-30	5	
Washington—Seattle	Nov. 1-30	1	
Wisconsin—Milwaukee	Dec. 10-24	40	
Smallpox—Foreign.			
Argentina—Bahia Blanca	Nov. 18		Present.
Argentina—Buenos Ayres	Nov. 18		
Austria—Prague	Nov. 26-Dec. 3	18	22
Brazil—Bahia	Nov. 12-26	1	28
Brazil—Rio de Janeiro	Nov. 6-27	373	160
Ecuador—Guayaquil	Nov. 30-Dec. 7	1	3
France—Lyons	Nov. 26-Dec. 3	1	
France—Paris	Nov. 3-10	9	
Great Britain—Glasgow	Dec. 8-16	2	
Great Britain—London	Nov. 26-Dec. 10	3	
Gt. Britain—Newcastle-on-Tyne	Dec. 3-10	21	
Great Britain—Nottingham	Dec. 3-10	3	
Great Britain—South Shields	Dec. 3-10	2	
India—Bombay	Nov. 22-29	2	2
India—Calcutta	Nov. 19-26	2	2
Italy—Palermo	Nov. 26-Dec. 10	33	15
Russia—Odessa	Nov. 26-Dec. 3	1	
Turkey—Constantinople	Nov. 27-Dec. 4	1	15

Yellow Fever.			
Ecuador—Guayaquil	Nov. 23-Dec. 7	3	
	One case on S. S. <i>Limari</i> at Puna from Panama.		
Mexico—Coatzacoalcas	Dec. 10-17	2	
Mexico—Yucatlan	Dec. 11-17	1	
Panama—Panama	Dec. 12-19	3	

Cholera.			
India—Bombay	Dec. 22-29	1	
Russian Empire—Erivan	Nov. 22-28	914	363
Russian Empire—Jelssavetpol	Nov. 16-22		Present.
Russian Empire—Tachken	Nov. 27	18	8
Russian Empire—Tiflis	Nov. 16-22		Present.
Turkey in Asia	Nov. 28	72	43

Plague.			
Africa—Cape Colony	Nov. 6-19	5	
Arabia—Aden	Nov. 18-25	19	12
Argentina—Tucuman Province	Nov. 18	1	
Brazil—Bahia	Nov. 12-26	6	
Brazil—Rio de Janeiro	Nov. 6-27	101	35
Egypt—Tukh district	Nov. 19-26	2	2
India—Bombay	Nov. 22-29		74
India—Calcutta	Nov. 19-26		8
India—Karachi	Nov. 19-27	14	14
Paraguay—Asuncion	Oct. 6	20 cases weekly estimated.	
Peru—Guadalupe	Dec. 7		Present.
Peru—Lima	Nov. 1-15	6	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending December 28, 1904:

BERRY, T. D., Assistant Surgeon. To proceed to Perth Amboy, N. J., and assume temporary charge of service during absence on leave of Passed Assistant Surgeon W. A. Korn. December 27, 1904.

KORN, W. A., Passed Assistant Surgeon. Granted leave of absence for seven days. December 27, 1904.

McCLINTIC, T. B., Passed Assistant Surgeon. Granted leave of absence for five days from December 27, 1904, under paragraph 191 of the regulations.

Births, Marriages, and Deaths

Born.

CHURCH.—In Fort Robinson, Nebraska, on Wednesday, December 21st, to Dr. James Robb Church, United States Army, and Mrs. Church, a daughter.

Married.

BARRINGER—DUNNING.—In New York, on Saturday, December 14th, Dr. Benjamin Stockwell Barringer and Dr. Emily Dunning.

HAVEN—HUMPHREY.—In Athol Centre, Massachusetts, on Wednesday, December 28th, Dr. Samuel Haven and Miss Helen M. Humphrey.

HAZELTINE—JOUBERT.—In Jamestown, N. Y., on Wednesday, December 21st, Dr. Laban Hazeltine and Miss Gertrude E. Joubert.

JOHNSTON—SMALL.—In Baltimore, Maryland, on Wednesday, December 21st, Dr. Richard Hall Johnston and Miss Mary Page Small.

LIST—WHITE.—In Stamping Ground, Kentucky, on Tuesday, December 20th, Dr. W. G. List and Miss Martha White.

PEPPER—GODFREY.—In Philadelphia, on Saturday, December 31st, Dr. William Pepper and Miss Mary Godfrey.

SHARP—OTIS.—In Kenton, Ohio, on Wednesday, December 21st, Dr. John R. Sharp and Miss Margaret E. Otis.

SHAWEN—BROWN.—In North Adams, Massachusetts, on Tuesday, December 20th, Dr. Charles Edwin Shawen and Miss Agnes Ora Brown.

Died.

BLAND.—In Baltimore, Maryland, on Sunday, December 25th, Dr. William F. Bland, in the seventy-eighth year of his age.

BOARMAN.—In Kansas City, Missouri, on Friday, December 16th, Dr. J. A. Boorman, Sr., in the eighty-fifth year of his age.

CAIRNCROSS.—In Wauwatosa, Wisconsin, on Wednesday, December 21st, Dr. J. W. Cairncross, in the fifty-fourth year of his age.

CLARK.—In Woodbury, New Jersey, on Monday, December 26th, Dr. Henry Clay Clark, in the seventy-fourth year of his age.

DOUCET.—In Philadelphia, on Thursday, December 22nd, Dr. Homer J. Doucet, in the eighty-fifth year of his age.

ECHENMENDIA.—In Havana, Cuba, on Monday, December 19th, Dr. M. D. Echenmendi.

GREENBANK.—In Ocean Grove, New Jersey, on Friday, December 30th, Dr. John B. Greenbank, in the seventy-sixth year of his age.

HAVEN.—In Coventry, Connecticut, on Monday, December 26th, Dr. William C. Haven, in the fifty-fourth year of his age.

HILL.—In Vincennes, Indiana, on Tuesday, December 27th, Dr. John Hill, in the sixty-third year of his age.

JURGENSOHN.—In Manawa, Wisconsin, on Monday, December 19th, Dr. B. G. Jurgensohn.

LILLISTON.—In Accomac, Virginia, on Tuesday, December 20th, Dr. A. Herbert Lilliston, in the thirtieth year of his age.

LOVETT.—In Carson City, Michigan, on Friday, December 16th, Dr. J. A. Lovett, in the fifty-first year of his age.

MALLORY.—In Hamilton, Ohio, on Wednesday, December 21st, Dr. Henry Mallory, in the eighty-third year of his age.

MCLEAN.—In Brooklyn, N. Y., on Friday, December 23rd, Dr. Henry C. McLean, in the fifty-fifth year of his age.

MCMONAGLE.—In Prescott, Ontario, on Tuesday, December 20th, Dr. Peter Reid McMonagle, in the seventy-second year of his age.

MILLAR.—In St. Louis, Missouri, on Monday, December 19th, Dr. William J. L. Millar, in the sixty-sixth year of his age.

NUTZEL.—In Comfort, Texas, on Friday, December 9th, Dr. O. L. Nutzel, in the twenty-fifth year of his age.

SMITH.—In Kansas City, Missouri, on Monday, December 19th, Dr. Thomas A. Smith, in the fifty-eighth year of his age.

TANTUM.—In Philadelphia, on Sunday, December 18th, Dr. James D. Tantum, in the forty-ninth year of his age.

WEST.—In Palestine, Texas, on Tuesday, December 27th, Dr. G. S. West, in the eighty-second year of his age.

ROSENAU, M. J., Passed Assistant Surgeon. Detailed to represent Service at Second Annual Mosquito Exterminating Convention, New York, N. Y., December 16 and 17, 1904. Detailed to represent Service at annual meeting of Society of American Bacteriologists at Philadelphia, Pa., December 27 and 28, 1904.

SALMON, T. W., Assistant Surgeon. To report at the Bureau, Washington, D. C., for special temporary duty. December 27, 1904.

SMITH, A. C., Surgeon. Detailed as inspector of unserviceable property at Camp Hutton, La. December 28, 1904.

VON EZDORF, R. H., Passed Assistant Surgeon. To report in person to Rear Admiral Walker, United States Navy, for duty in connection with quarantine in the Isthmian Canal Zone, Republic of Panama. December 27, 1904.

Board Convened.

Board convened to meet at the Hygienic Laboratory, Washington, D. C., on call of the chairman, for the examination and marking of applications for appointment as technical assistants in zoology, chemistry, and pharmacology. Detail for the board—Passed Assistant Surgeon M. J. ROSÉNAU, Director of Hygienic Laboratory, chairman; CHARLES WARDELL STILES, Chief of Division of Zoology; REID HUNT, Chief of Division of Pharmacology, recorder. December 22, 1904.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending December 31, 1904:

BUCK, CARROLL D., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence upon being relieved from duty with the First Battalion Philippine Scouts, World's Fair Grounds, St. Louis, Mo. Assignment to duty at Fort Des Moines, Iowa, changed to Fort Leavenworth, Kan.

HALL, JOHN D., Colonel and Assistant Surgeon General. Relieved from duty in the Division of the Philippines, and ordered to proceed to San Francisco, Cal., and report on arrival to the Military Secretary, for further orders.

JONES, PERCY L., First Lieutenant and Assistant Surgeon. Relieved from duty on the transport *Sumner* and ordered to report at the Medical Supply Depot, New York, N. Y., for temporary duty, to examine medical supplies now being delivered at that depot.

SHOOK, JAY R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kan., and ordered to Fort Des Moines, Iowa.

SMART, ROBERT, First Lieutenant and Assistant Surgeon. Leave of absence extended fourteen days.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 31, 1904:

BELL, W. L., Passed Assistant Surgeon. When discharged from treatment at the Naval Hospital, New York, N. Y., ordered home and granted sick leave for three months.

GROVE, W. B., Surgeon. Detached from the *Atlanta* and ordered home to await orders.

GRUNWELL, A. G., Surgeon. Detached from the *Dixie* and ordered to the Naval Hospital, New York, N. Y., for treatment.

JANNEY, W. H., Acting Assistant Surgeon. Detached from the *Marcellus* and ordered to the *Cesar*.

KENNEDY, J. T., Passed Assistant Surgeon. Ordered to the Naval Station, Guantanamo, Cuba, and to additional duty on the *Amphitrite*.

LEDBETTER, R. E., Passed Assistant Surgeon. Detached from the *Lancaster* and ordered to the *Dixie*.

MEANS, V. C. B., Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

PAGE, J. E., Passed Assistant Surgeon. Ordered to the *Lancaster*.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

VOL. LXXXI, No. 2.

SATURDAY, JANUARY 14, 1905

WHOLE NO. 1363.

Original Communications.

THE PRESENT STATUS OF RAILWAY EMERGENCY WORK.

By U. F. MARTIN, M. D.,

NEW YORK.

When a great deal of valuable material has been gathered concerning any subject, it would seem proper to limit introductory remarks simply to a statement of the purpose and scope of the article. An examination of the statistics of railroad accidents for the months of October, November, and December, 1903, as quoted in the *Railway Age*, for April 29, 1904, shows the following rather startling figures: Number of persons killed in train accidents, as shown in the reports made by railroad companies to the Interstate Commerce Commission. 446; number injured, 3,178; accidents of other kinds, including those sustained by employees at work and by passengers getting on or off cars, etc., bring the total number of casualties up to 14,485 (1,166 killed and 13,319 injured). The total number of collisions and derailments was 3,011 (1,832 collisions and 1,179 derailments), of which 287 collisions and 119 derailments affected passenger trains.

In our big cities every one is familiar with the methods pursued in taking care of injured people. The clanging of the ambulance bell shakes even the dullest out of his lethargy, and kindles interest in his mind for his fellows. Those who have travelled abroad remember the kindly ministrations of the ship's doctor. The ship's medicine chest is as old as the hills, and there is no division of opinion as to the proper solution of the medical problem in ocean carriers. Ships, as well as railroads, are built and manned primarily for the same object, the transportation of passengers and freight. When we turn to the contemplation of the medical problem of companies engaged in carrying people and freight on land, we find almost as many solutions as there are railroads, and in one large and growing branch, viz., the interborough trolley railroads, whose list of casualties

are in some respects greater than that of the steam railroads (see Table I), there has been, as far as could be learned, no systematic attempt to cope with the accident service.

TABLE I.

(*Railway Age*, January 22, 1904.)

Comparison of Casualties of Steam and Electric Railroads.

	Steam Road.	Electric Road.
Length of lines in miles.....	4,906	2,158
Passengers killed.....	7	16
Passengers injured.....	49	2,552
Number of employees.....	58,888	15,823
Employees killed.....	95	9
Employees injured.....	466	152
Others killed.....	161	59
Others injured.....	63	1,186
Total number killed.....	263	84
Total number injured.....	578	3,890

Without trying to present any ideal plan, an attempt is here made to compare the work being done on some of the leading railroads in this country, and, if possible, to gather together what seem to be the most practical lines of work as based upon the majority of opinions. The air is full of opposing convictions, full of contrary results, and this state of affairs may be traced, according to some well fitted to judge, to a certain lack of common sense in providing medical supplies, and to a visionary and theoretical attempt to utilize them. "Who is responsible," writes one surgeon, "for the wasteful follies in the medical service of railroads? Laymen own and operate the roads, and they alone are to blame for their own doings. If they employ theoretic lawyers, dreaming doctors, and blundering mechanics, they have none to censure but themselves. When a general manager expends \$7,000 for medical rubbish, when \$500 would equip his system with practical appliances, and does not know that he is dealing with a fine spun laboratory doctor, I do not blame the doctor, but the general manager."

This is the kind of medical chest which Dr. Howard Crutcher, of Chicago, declares is to be found on many railroads: "In the first place, it was of odd size, too large for a hand car and not large enough for a box car without some padding.

It was a veritable Pandora's box of compound pills and complicated powders, useless jars, antiquated mixtures, and grotesque absurdities. It cost, perhaps, more than a hundred dollars and was about as useful as an art gallery at the North Pole. How many thousands of dollars have been wasted in this sort of folly, it would be useless to conjecture; enough probably to relay many a mile of line with heavy steel and stone ballast."

In order to learn whether there was any systematic method employed, and commonly agreed upon by railroads, as being efficient in coping with the accident problem of medical service (for accidents form but one of the problems of the medical department), a series of questions was drafted and sent out to thirty-seven different railroads in all parts of the country. Answers of some nature were received from twenty-nine, three of which simply acknowledged the receipt of the letter. Eight failed to send any answer. The questions asked were as follows:

1. How many accidents occurred on your railroad lines last year, away from cities and medical aid?
2. How long in such instances did the injured have to wait for medical aid?
3. Do you consider it feasible to provide each passenger car and caboose with a small emergency box for first aid to the injured?
4. Have you any supplies at the present time on any of your trains for such emergency work?
5. Do you consider it practical to have trainmen receive a few lessons in first aid?
6. Have you a hospital car?
7. Would it be feasible to have a hospital car, at different points along the road, ready, like an ambulance in city work? Suppose it were a part of every wrecking train.

I did not expect much result from the first two questions and yet their importance is paramount, because, upon the question of delay in treating the injured, is based the whole subject of supplying trains with medicine chests, the need of instructions, etc. For, if the aid of physicians can be obtained within reasonable time, then question 5 is much simplified, if not done away with entirely. According to the statements of some surgeons question 3 can also be dismissed from consideration.

Considerable discussion gathers about the subject of supplying first aid packages, as reference to the tabulated answers, further on, will show. Here are two opinions, not quoted there. Dr. A. O. Williams remarks, "Now as to the emergency package on railroads, it has been tried and I doubt whether it has been adopted by many. In the last few years a great many roads have adopted the emergency package through the chief surgeon; but all have abandoned them. And why?"

Where do they put the emergency package in the ordinary caboose? No place in particular. It bumps around, and you can imagine the condition of it after bumping around for two, three, or six months. The great trouble is, railroad men do not know when accidents are going to happen. They come when they are least expected, and when they do happen, they may be a good way from the caboose, and when the caboose is found, the emergency package cannot be found, and is finally located on the floor where it has been kicked from one end of the caboose to the other, and is very little if any better than the handkerchief or road waste. And so, it has been found out, the emergency package is impracticable."

In contrast to this is the following quotation from an editorial in the February number of the *Railway Surgeon*: "We are not in accord with the enthusiastic advocates of first aid, who would arm the employees with hypodermic syringes, Esmarch tourniquets, and, we understand, even with the clinical thermometer. Nor do we believe, in common with some members of the profession, that instruction in first aid will do away with their means of livelihood, and hence discourage it. It seems to us that the true way lies midway between these extremes and that the matter is largely one of personal equation. It seems apparent also, that we must not expect the same degree of intelligence from the section hands that we do from train crews or skilled mechanics in the shops. The success of the movement on English railways is proverbial, and we should be loath to believe that the standard of intelligence in their employees is any higher than it is in the employees of roads in this country. Some one said that if the movement were beneficial, railroads would adopt it. Well, they are adopting it. The argument that it is suited only for roads traversing thinly settled parts of the country, loses much of its weight when we learn that it has been installed in the East, and, as before stated, in England, with the stations practically in sight of one another. As to the chest containing the supplies being knocked about and getting the contents filthy, this condition of affairs can be remedied as easily as can the use of impure ice and drinking water."

An examination of the answers received shows six railroads which do not consider the question practical, or having provided a first aid package once, subsequently discarded it; sixteen which considered it practical, four of these still having the matter under consideration, and one, the Boston and Albany Railroad, which seemed to find some objection to the system; four gave no answer to the question.

TABLE II.
Answers to Question 3.
Practical.

Bangor and Aroostook.
Boston and Albany.
New York, New Haven, and Hartford.
Pennsylvania.
Lehigh Valley.
Lake Shore and Michigan Southern.
New York Central and St. Louis.
Colorado Midland.
Rock Island.
Chicago and Alton.
Seaboard Air Line.
Atlantic Coast Line.
Chesapeake and Ohio.
Père Marquette.
St. Louis and San Francisco.
Grand Trunk.

Not Practical.

Boston and Maine.
Wabash.
Chicago and Great Western.
Chicago and North Western.
Missouri Pacific.
Missouri, Kansas, and Texas.

No Answer.

Chicago, Milwaukee, and St. Paul.
Chicago, Burlington, and Quincy.
Union Pacific.
Northern Pacific.

As a supplement to the above table, the following answers were printed in the February number of the *Railway Surgeon* to a letter sent by Mr. E. Hadra, of Dallas, Texas, to the railroad officials of that State. It has the value of being direct testimony. A part of Mr. Hadra's letter is here printed:

"In view of the many railroad accidents that have occurred in our State of late, some attended with loss of life, and nearly all with personal injuries more or less severe, it has occurred to me that it would be a good idea, and a great step in the direction of alleviating human suffering, if the various railway companies of the State would place in some convenient place in the train, say the baggage car, an emergency case of simple surgical appliances, such as bandages, cotton, adhesive plaster, liniments, antiseptics, etc., they being intended only to tide over the time between the accident and the arrival of surgical aid, and to prevent blood poisoning. This would cost but little. The railroads already have such things in their hospitals. They also have their carpenter shops and can easily make small wall cases or chests for same, and at very little cost, or get something very similar to the present army emergency package. This would suggest itself as about right."

Avery Turner, vice-president and general manager of the Pecos Valley lines, replied: "I quite

agree with you that it would be an excellent idea to carry an emergency case, or what is known in army circles as a first aid, in case of injury, in our baggage cars, shops, round houses, etc. I thank you for calling the matter to my attention."

D. B. Keeler, vice-president and traffic manager of the Fort Worth and Denver City Railroad, answered: "The idea you suggest is a very good one, and we may see fit later on to put it into effect."

W. T. Elbridge, vice-president and general manager of the Cane Belt Railway, said: "I consider your suggestion a good one and have referred your communication to our chief surgeon with a recommendation that we have our baggage cars equipped with a case of emergency supplies."

The reply of E. E. Shackford, vice-president and general manager of the San Antonio and Gulf Railroad, was: "In reply, I beg to say there is no doubt your idea is correct, and I believe the matter has for some time been under consideration by the larger lines, not only as it pertains to passenger and freight trains, but also to those in the work gangs where an extra number of men are engaged in repairs and construction, especially to those located at remote or isolated points."

C. H. Markham, vice-president of the Houston and Texas Central, answered: "In reply, I beg to say that this is a matter which our chief surgeon has had under consideration for some little time, and it is our intention to make such provision as may be necessary to give our patrons the benefit of every possible attention. Should we be so unfortunate as to have any wrecks on our lines. You may also consider this letter as applying to the Houston, East and West Texas, and other so called Southern Pacific lines in Texas."

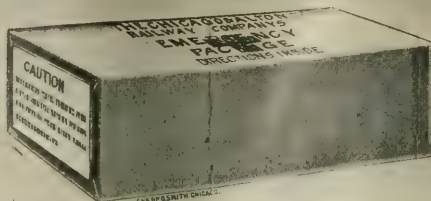
The *Railway Journal* has this to say of the effort to get first aid boxes on all freight and passenger trains in Texas: "This is a commendable move, and one that should be followed by every line in the country, irrespective of locality; these emergency boxes are to be equipped with such instruments and medicines as the chief surgeon of the road considers important. When this system has been adopted, the chief surgeon of the line gives lectures to trainmen at their terminal points, educating them in a brief way as to what to do, and how to handle dressings, etc., in case of emergency. Brief directions are also pasted in the boxes for ready reference."

So much for a statement of opinion. What has been done, and what is being done, is more to the point. The Pennsylvania Railroad has arranged to equip all baggage, mail, express, shops, and wrecking cars, terminals, yard office, shops, and important stations with first aid boxes. and in-

EMERGENCY PACKAGE

CONTENTS

One ounce Absorbent Cotton,
One ounce Antiseptic Powder
in wood box,
Three Safety Pins,
One 24 inch Roller Bandage,
One 1 inch Gauze Bandage.



Contained in tin box wrapped and hermetically sealed with full and complete instructions for use.

CAUTION.

Whenever this package is opened for any purpose it must be turned in at once, with its remaining contents, for inspection and refilling.
HOWARD CRUTCHER, M. D.
Consulting Surgeon.

(END LABEL)

THE CHICAGO & ALTON
RAILWAY COMPANY'S
**EMERGENCY
PACKAGE**
DIRECTIONS INSIDE

[FACSIMILE OF WRAPPER]

NOTICE.

This package is the property of THE CHICAGO & ALTON RAILWAY COMPANY, and its use by unauthorized persons is prohibited. Whenever a package is used the person who opens it must leave inside the box a slip of paper, giving his name, the date, the place where used, the name of the person for whose relief it was opened.
J. H. BARNETT,
Gen'l Superintendent.

(END LABEL)

FIG. 1.—The Chicago & Alton Railway Company's emergency package.

struction of employees in first aid will also be carried on. A stretcher is provided which, when not in use, may be taken apart; making a bundle, 3 feet, 6 inches, by 6 inches in diameter, ready for use either as a stretcher or as a cot. The first aid boxes consist of an outside wooden box with hinged lid, 8½ inches by 6 inches by 4 inches, permanently secured in locomotives and at other points where installed. Each wooden box contains a sealed tin box provided with six sterilized first aid packages. Each packet contains one large triangular bandage, one ordinary roller bandage, two compresses, two safety pins, but no drugs or liquors. When the seal of the tin box is broken, a new one is put in place and the one with a broken seal sent in and refilled. For convenience of inspection, the wooden boxes have a seal on the lid fastener.

A smaller package than this is employed by the Chicago and Alton Railroad, measuring 6 inches by 3 inches by 2 inches. A reproduction of the same is here shown, together with the label on the outside:

The leaflet which accompanies this small box, is admirable for its terseness and clearness, and is published as a type of sensible advice. On the

last page is an illustration, showing how to apply the Spanish windlass to stop bleeding:

THE CHICAGO & ALTON RAILWAY
COMPANY.

EMERGENCY PACKAGE.

DIRECTIONS FOR USE.

This package contains dressing powder for wounds, a narrow gauze bandage, absorbent cotton, a strong muslin bandage, and safety pins.

In ALL injuries where the skin is seriously broken, pour on the wound powder VERY FREELY, apply a pad made from the gauze bandage, and hold in place with the muslin bandage properly secured with safety pins. Where additional padding seems necessary, use the cotton, AFTER the gauze bandage has been applied next to the wound. Do NOT TOUCH THE WOUND WITH THE FINGERS or handle it beyond applying the dressings.

BLEEDING: If about the head or body, pour on wound powder freely, apply a snug pad of gauze, then cotton, and hold pad tightly in place with hands or bandage until the surgeon can be called.

For bleeding of an arm or leg, take a piece of the big bandage, about two feet long, tie the ends together, pass the loop thus made over the limb to a point slightly above the wound, pad it with the cotton, so that it will not cut into the flesh, and tighten with a stick or lead pencil by twisting, until the bleeding stops. (See cut on last page). KEEP THE WOUNDED LIMB HIGHER THAN THE HEAD. In ALL cases of

bleeding or injury, keep the patient QUIET and WARM, and the HEAD LOW.

STIMULANTS: By far the best stimulant is STRONG HOT COFFEE, without seasoning. It may be given ABUNDANTLY. When coffee cannot be had, plain HOT water is the best substitute, and may be given without limit.

CAUTION: Whenever this package is opened for any purpose, it must, IN ALL CASES, be turned in immediately for inspection and refilling. An unsealed package must not be used under any circumstances.

HOWARD CRUTCHER, M. D.,
CONSULTING SURGEON.

The firm supplying these has quoted the following prices: thirty cents apiece for emergency package in lots of one hundred or more; fifteen dollars for passenger chest for use of surgeon; three dollars for Chicago and Alton stretcher.

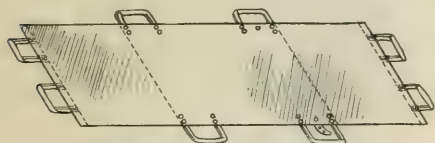


FIG. 2.—The Chicago & Alton stretcher.

Dr. D. C. Brockman, of Ottumwa, Ia., is of the opinion that most of the boxes supplied to railroads are absolutely worthless, and suggests the following, which the factories in his town have accepted, as well as the railroad with which he is connected. The pads are prepared as follows: Four thicknesses of gauze, 8 inches by 10 inches, are laid on a pad



FIG. 3.—The same, folded to carry.

of cotton a little larger, say, 10 inches by 12 inches; over the face of the gauze is spread 2 to 3 drachms of some non-toxic antiseptic powder. The pad is now folded together so as to hold the powder in the centre, wrapped in waxed paper, and closed in envelopes or cartons,

then packed in a suitable box. This is the smaller sized pad and is sufficient for an injured hand or foot, or small lacerated wounds on the extremities. A larger package is made in the same way, only three or four inches larger each way, to be used in compound fractures or dislocations, or in extensive injuries to head or trunk. One or two dozen of each size pads are packed together in a suitable box, with a dozen each of two, three, or four inch bandages, and three one yard rolls of picric acid gauze. On the lid of the box should be a cut of a Spanish windlass and very brief directions for its application to stop hæmorrhage; also directions like this on each package: "Cut the clothing from the wound, open package of dressing, and spread powdered surface over wound and apply bandage, to hold it in place."

On the picric acid gauze jars, should be printed: "For burns. Wrap the burned surface with the picric acid gauze, and apply bandage over it. Do not touch burn with anything else." Three dozen pads, bandages, and picric acid gauze, all in a neat box, can be retailed at about \$7.50.

Over the Chicago and Eastern Illinois Railroad and the Frisco System, the emergency case contains one tourniquet, $\frac{1}{2}$ inch by 3 inches; four ounces of antiseptic absorbent cotton in a sealed box; four packages of roller bandages; sterilized gauze, bichloride gauze, boric acid gauze, and three ounces of whiskey in a small flask. At the larger stations along the line, there are surgeons at hand, and a small case is provided, including a tourniquet; three boxes of absorbent cotton, one quarter of a pound in each; two packages each of sterilized, bichloride, and boric acid gauze; silk and catgut ligatures in glass tubes; forceps, needles, scalpel, and scissors; ether, morphine, and, perhaps, whiskey.

TABLE III.

Railroads Equipped with Supplies for Emergency Work.

Yes.

Pennsylvania.
Lehigh Valley.
Lake Shore and Michigan Southern.
Père Marquette.
Colorado Midland.
Rock Island.
Chicago and North Western (work trains).
Chicago and Alton.
Missouri Pacific (some trains).
Boston and Albany.
Frisco System.

No.

Atlantic Coast Lines.
Chesapeake and Ohio.
Wabash.
Chicago and Great Western.
Missouri, Kansas, and Texas.
New York, New Haven, and Hartford.

No Answer.

Boston and Maine.
Bangor and Arrostook.
Grand Trunk.
New York Central and St. Louis.
Chicago, Milwaukee and St. Paul.
Chicago, Burlington and Quincy.
Union Pacific.
Northern Pacific.
Seaboard Air Line.

(To be concluded.)

Philadelphia Physician Fined.—Dr. Charles M. Burk, who was arraigned before Magistrate Kochersperger for failure to report the case of William McGinty as one of smallpox, was fined five dollars and costs on January 4th. Dr. Burk was adjudged to have committed a technical, although not an intentional, violation of the law.

A CLINICAL STUDY OF MYOIDEMA WITH ESPECIAL REFERENCE TO ITS OCCURRENCE IN PULMON- ARY TUBERCULOSIS.*

By HENRY L. SHIVELY, M. D.,

NEW YORK.

VISITING PHYSICIAN TO ST. JOSEPH'S HOSPITAL, PHYSICIAN
TO THE PRESBYTERIAN HOSPITAL DISPENSARY, DEPART-
MENT OF HEART AND LUNGS.

A peculiar muscular contraction, very usually present in cases of tuberculosis of the lungs may be elicited by sharp percussion with the forefinger. The contraction occurs in the group of fibres near the point of impact, and appears as a well defined, hard ridge, tetanic in character, and raised in a direction at right angles to the course of the muscle fibres. This whipcord like elevation continues for a few seconds and then subsides. Sometimes a wave or ripple starting from the primary contraction may be seen rolling under the skin and gradually fading away on either side respectively, toward the origin and insertion of the muscle. Jeanselme and Lermoyez (1) where this wave is seen, have, in the majority of their cases, found it to be propagated only toward the insertion of the muscle. Where I have observed it there have usually been two distinct secondary waves transmitted in opposite directions. Occasionally there may be seen upon the crest of the ridge a tremulous, oscillating movement which disappears before the subsidence of the original elevation. When the nodule or ridge is of slight extent it can sometimes be best detected by running the finger lightly over the surface of the muscle, and thus feeling the elevated fibres. Some observers have remarked an initial pallor following the percussion blow of the finger, succeeded soon by a bright, red spot which persists for some time and resembles the *tache cérébrale* of meningitis. This appearance is inconstant and does not constitute any essential part of myoidema, but is rather to be considered a vasomotor reflex, affecting the small cutaneous vessels, causing first a slight contraction of their calibre and afterward a temporary paralysis of the local vasoconstrictors. Myoidema itself is a purely muscular phenomenon. It was described and named by Lawson Tait (2) in 1872, but was observed as long ago as 1830 by Dr. William Stokes (3) of Dublin. Cornet (4) mistakenly credits Maurice Schiff with priority in the discovery of myoidema. Schiff (5) described it under the name of idiomuscular action (*idiomuskuläre Bewegung*) in 1851 and made an elaborate physiological investigation of its occurrence in the

lower animals. He was preceded, however, not only by Stokes, who casually directed attention to it in 1830, but also by a New York physician, Bennett Dowler (6), who published a full and accurate description of the phenomenon as he observed it on the cadaver in 1846.

Dowler's experiments were limited apparently to the dead body, and this early observer deserves more recognition than he has received for the originality of his observations, many of which have been repeated independently and were published in 1885 by Jeanselme and Lermoyez. In Dowler's monograph myoidema is thus described: "Blows with the knuckles over the pectoral muscles caused them to heave up into knotty masses. Sometimes post mortem rigidity sets in during the paroxysm of contraction, producing a very singular phenomenon, a hard mass, which, continuing for hours, feels like bone. I have known this to be mistaken for a fracture badly set, or for a bony tumor." Again: "A third blow caused the biceps to be convulsed; it gathered up in a knotty heap, which, by forcible extensions and frictions, was at length removed temporarily, but in half an hour it returned and was unchanged as long as observed, being to the touch like a bony tumor."

Frequently associated with this nodular form, or true myoidema in its etymological sense of a swelling of the muscle (*μύων* and *οἰδήμα*), is a longitudinal furrow also elicited by tapping which, however, follows the direction of the muscular fibres and appears as a linear depression or sulcus of considerable length, often extending from the origin to the insertion of the muscle. To this appearance has been applied the name fascicular or fibrillary myoidema to distinguish it from the nodular variety, although it is evident that the word myoidema is somewhat of a misnomer, except when used in connection with the latter form. Fascicular myoidema is not to be confused with the quivering movements of muscle fibres or fibrillary contractions which are a feature of progressive muscular atrophy and other lesions of the central nervous system. Fibrillary contractions, occurring in degenerative lesions of the cord and brain, are usually clonic in character; in myoidema of both varieties, on the contrary, the appearance is invariably sustained and does not intermit while it lasts. Fascicular myoidema is always of much shorter duration than the nodular form, which, in the algid stage of cholera, has been observed by Jeanselme and Lermoyez (1) to be prolonged for more than half a minute. Usually, however, the duration on the living body of the nodular variety does not ex-

* Read before the West End Medical Society, February 27, 1904.



FIG. 1.—Nodular myoidema.

ceed from five to ten seconds. Nodular myoidema was first observed by Stokes in the pectoralis major. It is also usually well marked in the deltoid, latissimus dorsi, supraspinatus, infraspinatus, and biceps. In the cases which I have observed the nodular has been most perfectly seen in the biceps (Fig. 1) and the fascicular in the pectoralis major (Fig. 2). Either form of myoidema may occur alone or, as is more usually the case, both are associated in the same subject. Generally in cases where the nodular is present the fascicular may also be elicited. The latter, however, more frequently than the nodular occurs alone. In tuberculosis of the lungs the nodular variety is more marked in the moderately advanced and advanced cases. The fascicular form is very generally present even in the earliest cases, and usually persists through every stage of the disease.

The muscles in which myoidema may be obtained have not been found to exhibit any characteristic or constant variations in their electrical irritability. With both galvanic and faradaic currents, some cases show increased excitability, others diminished, and some only the response of the normal muscle. In no case has the reaction of degeneration been obtained.¹ The typi-

cal phenomenon of myoidema may usually be elicited ten or twelve times in quick succession. The muscular irritability then appears to be exhausted and the response is feeble or fails entirely. Sometimes a fresh group of fibres adjacent to the exhausted area will respond, although the stimulus is continued at the same point. In any case the exhausted fibres quickly recuperate and the phenomenon reappears in as marked a degree as at first. In a few instances I have been able to obtain myoidema of both kinds as many as twenty-five or thirty times before exhausting the muscle. The fascicular has been less carefully studied than the nodular variety, and has usually been described as analogous to it. My observations, however, have led me to the conclusion that fascicular myoidema is not a contraction at all, but is on the contrary actually a relaxation of a bundle of muscular fibres, due to a temporary loss of the normal muscular tonus caused by the impact of the percussion blow. This relaxation consists in a momentary collapse of the flaccid fibres affected, and there is thus produced a linear sulcus in striking contrast to the rigid, salient elevation of the nodular variety. In the healthy subject mechanical stimuli are usually uniformly transmitted to the entire muscle which responds with a contraction of the muscle as a whole; in the nodular form of myoidema there is a limited contraction of the fibres adjacent to the point where the stimulus is applied; in fascicular myoidema there is no contraction, the stimulus producing instead a relaxed state of the fibres at the point of impact greater than that normally present when the muscle is at rest.

No mention of the fascicular variety is made



FIG. 2.—Fascicular myoidema.

¹ I am indebted to Dr. M. G. Schlapp, of the Department of Nervous Diseases in the Presbyterian Hospital Dispensary, for assistance in making the electrical examinations in a number of these cases.

by Corriet in his admirable treatise on tuberculosis.

I have rarely been able to elicit either variety in the muscles of the lower trunk, or thigh, or leg in cases of tuberculosis of the lungs, and a careful search of the literature of the subject has disclosed no mention or attempted explanation of this very singular limitation of the phenomenon to the muscles of the chest and upper extremity. Rudolf Schmidt (7) invokes the anatomical relationship of the apex of the lung with the brachial plexus as a cause of the cutaneous paresthesias of the hand and arm, and the supraclavicular tenderness on deep pressure which he has observed in subjects of pulmonary tuberculosis. Luschka (8) in his *Anatomy* makes this relationship plainer than does either Gray or Quain.²

It has appeared that in this intimate anatomical relation of the cords of the brachial plexus to the lung apex may be found also a possible explanation of the occurrence of myoidema in cases of tuberculosis of the lungs with rare exceptions only in the muscles supplied by branches of the brachial plexus. The apices of the lungs are almost invariably first affected by tubercle, and even slight pathological changes in this situation could readily affect the adjacent nerve trunks, either mechanically, through injurious pressure effects, or possibly also by the absorption of toxins, the products of the vital processes of the tubercle bacillus. Dowler's early researches and the later investigations of Jeanselme and Lermoyez show that myoidema can always be obtained after death. It is probable that in the healthy, living state an inhibitory influence is usually exerted through the nerve supply of the muscle, and this would account for the rarity of the phenomenon during life except in diseased conditions. In pulmonary tuberculosis this inhibitory function of the nerve is restrained or interfered with by mechanical pressure or toxic irritation due to tuberculous infiltration of the contiguous lung apex, and we thus have myoidema present in the muscles of the chest and upper extremity and usually only in these situations.

In other conditions myoidema is found in other situations. Jeanselme and Lermoyez report its occurrence in the adductors and quadriceps of the thigh and in the muscles of the calf in cases of

Asiatic cholera, and in typhoid fever and lobar pneumonia I have found it as well developed in the muscles of the trunk and lower extremity as in the chest and shoulder muscles. Jeanselme and Lermoyez direct attention to the unique concurrence of favorable conditions met with in cholera for the production of myoidema. The flaccid, inelastic skin, made tense by loss of interstitial fluids and closely adapted to the underlying muscle, which through loss of subcutaneous fat is thus almost directly exposed to the blow of the percussing finger, the great susceptibility of the voluntary muscles to cramps in cholera, the profound prostration, subnormal temperature, and loss of body fluids are all conducive to the phenomenon, and it is in cholera that it is seen in its most exaggerated form except upon the cadaver. Some extreme cases are reported wherein the nodular variety attained the volume of a good sized nut and could only be made to disappear by vigorously kneading and rubbing the affected muscle. Post mortem myoidema may persist for many hours.

It is somewhat extraordinary that the clinical significance and real nature of a phenomenon which has been known so long should be so little understood. The most contradictory views are expressed regarding it. Tait in his monograph declared that myoidema was one of the most certain signs of phthisis; that it was an absolutely certain indication of softening deposits, so that in exact proportion to its intensity was the amount or rapidity of lung destruction and the consequent gravity of the case; that increase of softening, increase of muscular irritability, and loss of weight always went together; and that he had been able by this symptom to diagnosticate between typhoid fever or acute bronchitis on the one hand and softening tubercle on the other. Sir William Broadbent, quoted by Walsham (9), regarded the sign of great value in early phthisis, placing it with the apical rale as of first importance. J. W. Moore (10) states that "myotatic irritability of the pectoral muscles and of the platysma myoides (myoidema) is a valuable sign." It is unusual to have well developed myoidema in the platysma and Moore is the only observer who has especially noted it in this situation. Vincent D. Harris (11), of the City of London Hospital for Diseases of the Chest, considers myoidema a sign of pathological import, but attaches to it little diagnostic value. Hugh Walsham (9) says "I have never been able to obtain this sign in a perfectly healthy person," but declares he "never found it in an early case." Also, "I think that myoidema is nearly valueless as an early sign of pulmonary tuberculosis. It

² "Durch Vermittlung der Pleura parietalis steht jenes von einer directen knorpelig-knöchernen Einhüllung freie Segment der Lunge mit mancherlei Gebilden in naher räumlicher Beziehung. Auf ihm ruht mit seiner Concavität ein Stück der Arteria subclavia, der Anfang der Arteria vertebralis und Mammaria Interna, sowie der Plexus brachialis." Again: "Es ist auch sehr wohl denkbar, dass mit Erschlaffung der Rippenhalter die Lungenspitze zwischen Scalenus internus und medius vorgedrückt wird, wobei sie die Arteria subclavia und den Plexus brachialis auseinanderwirft." Luschka, quoted by Schmidt.

only becomes well marked when other physical signs leave no doubt about the diagnosis of pulmonary tubercle." Jeanselme and Lermoyez (1) and Labbé (12) go so far as to deny that myoidema is in any sense pathological, declaring it to be a physiological appearance which can always be detected in health, and which is merely increased in disease. The truth amid these conflicting statements will probably be found to lie in a middle opinion. Samuel West (13) in 1879 pointed out that the contention of Tait was untenable in that the sign was by no means limited to phthisis, but could be obtained in other exhausting diseases, being almost constantly present in enteric fever. In a series of 275 general medical and surgical cases he found myoidema present in one out of every three, and that it was twice as common in the medical as in the surgical wards, one out of every two in the former, one out of every four in the latter. The surgical conditions in which he detected it included simple and compound fractures, diseases of the hip and spine, necrosis, and amputations. The medical cases included besides phthisis, hemiplegia, paraplegia, cerebral abscess, locomotor ataxia, muscular atrophy, valvular heart disease, cirrhosis of the liver, nephritis, diabetes, jaundice, rheumatic fever, pleurisy, pneumonia, pneumothorax, and empyema. He observed that it is usually absent in children. This does not agree with my own experience, as I have generally found it present and well marked in children, in conditions in which I would expect it in adults. Jeanselme and Lermoyez have detected well defined myoidema in persons abstaining from food or on a milk diet, and in four cases of "disease of the stomach" (nature of disease not specified). In a number of instances I have seen it in acute and chronic bronchitis, in three cases of carcinoma of the breast, in aneurysm of the arch of the aorta, and in secondary syphilis in addition to the diseases enumerated by West, and I have also observed it in the perfectly healthy individual, contrary to the experience of Walsham. It is unusual, however, to find the sign in an appreciable degree in health. In the negro race myoidema appears to be more exaggerated than among whites.

In a series of 750 consecutive cases of tuberculosis of the lungs myoidema was found to be present in 703. Of these 750 cases, 630 were under observation at the Presbyterian Hospital Dispensary, 63 at St. Joseph's Hospital, and 57 were seen in private practice. Of the entire number 196 could be classed as incipient, 475 as moderately advanced, and 79 as advanced cases. Of the 196 incipient cases both varieties of myoidema could be obtained in 135, the nodular alone in 19,

the fibrillary alone in 24, and neither form in 18 cases. Of the 475 moderately advanced cases both kinds were present in 379, the nodular alone in 30, the fibrillary alone in 37, and neither form in 29 cases. Of the 79 advanced cases both varieties were to be obtained in 74, the nodular alone was found four times, the fibrillary alone was elicited in one case, and in no case was the sign not present at all. In this classification the cases have been considered incipient in which physical signs are limited to one apex and the patient's general condition is good; moderately advanced those wherein there is some involvement of both lungs with considerable loss of flesh and strength; and advanced those generally recognized as incurable with extensive lesions in both lungs. In a number of instances where myoidema was present and in which physical signs were wanting or doubtful, the patient has been kept under observation and later unmistakable signs of pulmonary tuberculosis have developed, or bacilli have appeared in the sputum. In other cases of incipient or moderately advanced tuberculosis in which there has been marked improvement in nutrition under treatment, it has been noted that as the patient gained in weight and strength myoidema became less marked or might even completely disappear.

It would seem that a phenomenon found in such widely different conditions, and which is not even constant in tuberculosis of the lungs could have but little diagnostic significance, and yet it cannot be dismissed as being entirely without value. From the 750 cases here reported it will be apparent that it is present in the great majority of all cases of tuberculosis of the lungs observed, it is usually obtained even in the incipient stages of the disease, and it is thus not without some importance as an addition to the syndrome of signs and symptoms which makes the early diagnosis less difficult. It is such a striking and conspicuous objective sign that it can never be overlooked when properly sought for, and should make the person presenting it a subject of suspicion until tuberculosis can be definitely excluded. When it is remembered that the earliest diagnosis of beginning pulmonary tuberculosis is only made possible by the careful observation and skilful weighing of little signs and slight deviations from the normal, it would appear that myoidema, which in itself is not in any sense pathognomonic, is yet one of the indications of departure from health which should receive some consideration.

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303 AMSTERDAM AVENUE.

RADIUM; A REVIEW OF THE LITERATURE.

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The action of the x rays in rendering bodies transparent was first described by Röntgen in 1895. This was followed by the discovery of certain rays given off from the metal uranium, by Becquerel in 1896. This discovery was much talked of by scientific investigators, and Mme. Curie in Paris became especially interested and began her investigations. She found that pitchblende, composed mainly of thorium and uranium, gave off rays similar to those described by Becquerel. She separated the uranium and found that the *remaining mass* was more radioactive than the uranium. Then with the aid of her husband, Professor Curie, she continued to analyze the remaining mass by a very complicated and tedious method, each time selecting the portion that was most radioactive, until they finally obtained a substance in the form of a "chloride," to which they gave the name *Radium*. The element radium itself has not been isolated. Mme. Curie, however, determined its atomic weight to be 225, thus showing it to be one of the heaviest metals known and putting it in the group with magnesium, calcium, strontium, and barium according to the periodic law. Mme. Curie took two tons of pitchblende, and after several months of repeated precipitation, filtration, crystallization, and decantation, obtained $\frac{1}{10}$ grain of radium; just $\frac{1}{10}$ grain from 4,000 pounds!

Occurrence.—Radium occurs chiefly in the pitchblende found in Bohemia, which is used in the manufacture of Bohemian glass. The Austrian government has now forbidden the exportation of this pitchblende for fear of its interference with the glass manufacture. This accounts for the very high price of radium. A specimen which originally cost \$80.00 is now sold for \$300.00. Some medicinal springs and baths are reported to contain radium salts or radioactive substances, but these reports have not been very well substantiated. If it is present it must be in very minute quantities. Careful search is now being made in various parts of the United States for radium-bearing substances.

Physical and Chemical Properties.—The bromide of radium is the salt generally used. It occurs in small white crystals, is soluble in water. Its chemical properties are very similar to those of the barium salts. It gives a carmine color to a Bunsen flame. It has a characteristic spectrum. Radium chloride gives off heat continuously for several years without any appreciable diminution; 10.8 grains would cause a thermometer to rise 3° C. Radium salts in solution will after a short time give out the same quantity of heat as the dry salt. The most interesting property of radium is the spontaneous giving off of rays. These are known respectively as the α , β , and γ rays:

α rays are *very minute particles of matter* about twice the weight of a hydrogen atom and traveling at the rate of 20,000,000 metres a second. They are only very slightly penetrating, being stopped by glass or thin mica plates. The particles are positively charged electrically as determined by an electroscope. These rays can be deflected by a magnet toward the negative pole.

β rays are *still more minute particles of matter*, being only $\frac{1}{1000}$ the weight of a hydrogen atom. They travel 200,000,000 metres a second, about the same velocity that light has. The particles are negatively charged with electricity, and are deflected by a magnet, but in the opposite direction from and more strongly than the x rays. They are probably the most valuable rays therapeutically. They are moderately penetrating, being said to penetrate the skin for about one half inch. They are considered by some to be identical with the cathode rays of a Crookes's tube, and are converted into x rays when deflected by a solid body (Pusey). McKenzie attributes burning of the skin to these rays.

γ rays are *not particles of matter at all*, but are undulations of ether. They travel with enormous velocity. They resemble very closely the x rays from a "hard" or high vacuum tube, in that they are *very penetrating*. They will pass through 5 cm. of cast iron: they lose only one half their value in

passing through 8 cm. of aluminum. Bones offer practically no resistance to these rays.

They do not discharge an electroscope, and are not deflected by a magnet.

99 per cent. of radiant energy is found in the α rays.
0.9 per cent. of radiant energy is found in the β rays.
0.1 per cent. of radiant energy is found in the γ rays.

The α rays, which are in the largest quantity, have practically no actinic or chemical properties. The α rays are in such minute quantity that it is thought that the β rays produce the bulk of the effect upon living tissues.

When we consider what minute quantities of radium are used in experimentation, usually a fraction of a grain mixed with some inert material like white sand, it is easy to let the imagination play. It has been suggested that with a pound the house could be heated and cooking done for a large family for generations; or with a sufficient quantity a transatlantic steamer could be driven back and forth across the ocean indefinitely.

The combined effects of these radiations are:

1. *Fluorescence and Luminosity.*—This is beautifully illustrated in the little instrument invented by Crookes and known as the Spinharscope. This consists of a cylindrical brass tube about one and one half inches in diameter, by three inches long. At one end is a circular fluorescent screen of calcium fluoride, and in front of this is a little movable arrow. On the under surface of the tip of the arrow, that is just opposite the screen, is a minute particle of radium. At the opposite end of the tube is an adjustable lens. Upon going into a dark room and adjusting the lens to one's eye, one can see minute particles of light flying off from the screen in every direction, and dancing around at a rapid rate, suggesting a shower of shooting stars. It makes a beautiful little demonstration. Slight phosphorescence is also produced by radium, but it is not nearly so marked as with the Finsen rays.

2. *Coloration of Bodies.*—Diamonds, glass, quartz, and similar substances are variously colored in the presence of radium rays. Jewelers sometimes take advantage of this in giving deeper coloring to slightly "off-color" diamonds.

3. *Chemical and Photographic Effects.*—Paper becomes brittle after prolonged exposure. Ozone is formed in the air about radium. Rays are not affected by extreme heat or cold. A photographic plate is affected when covered with black paper. Images of various objects can be reproduced, as with the x rays. A photograph of a mouse shows the outline, but the bones do not show.

4. *Physiological and Pathological Effects.*—Seeds exposed to radium for a short time are stunted in

growth; after longer exposures they fail to germinate. Small mice and young guinea pigs are killed by a few hours' exposure. Living skin is burned, and hair will fall out just as after exposure to x rays. Many pathological growths and skin lesions can be affected by radium rays; this will be discussed later.

Besides giving off heat and three different kinds of rays, radium possesses another remarkable property. It gives off a *gaseous emanation*. This can be collected by putting some radium in the lower bulb of an hour glass shaped tube, and after several hours sealing the connection between the two bulbs and separating them. The upper bulb will contain the emanations. This gas is found to be temporarily radioactive and causes phosphorescence. It acts like other gases and can be condensed in liquid air. After the lapse of several weeks a most wonderful and unheard of transformation occurs. It has been shown by the noted chemist, Ramsay, that this gas is spontaneously transmuted into the element helium, and gives the characteristic spectrum of that element. If the above conclusion proves true this is the only instance known to man where one element is converted into another. This makes the hope of the old alchemists seem a real possibility.

The intensity of radioactivity of a specimen of radium is based upon the activity of an equal mass of uranium used as a unit. Specimens vary in strength from 240 to 1,000,000 units. This activity can be determined by several methods:

1. The rapidity with which it discharges a gold leaf electroscope due to the ionization of the surrounding air.

2. The effect upon a photographic plate enclosed in dark paper.

3. The way it illuminates a piece of willemite or sulphide of zinc.

Luminosity in the dark is *not* a test of radioactivity.

Certain bodies under the influence of radium become temporarily radioactive. There seems to be some difference of opinion as to whether solutions in which a tube of radium has been left become radioactive. Many claim wonderful healing properties and certain cancer cures for these so called radioactive solutions, but these views have not been substantiated. A radium salt in solution does after a time become radioactive, but the mere placing of a sealed tube of radium in a solution probably does not render it very active.

The source of the continued energy of radium, which does not seem to diminish in the slightest, is unknown. Some say it is due to the movement of its atoms or electric currents around the atoms. Others say it absorbs energy from the surrounding

medium. Some conjecture that the sun must contain radium in large quantities to account at least in part for its heat and energy.

ACTION OF RADIUM UPON LIVING TISSUES.

Gross Effects.—Take, for example, some Curie radium of 300,000 activity and place it upon the healthy skin on one spot for one hour, on another spot for two hours, and on a third for five hours. No change will be observed immediately except perhaps under the five hour spot, where a slight hyperæmia will be observed, quickly followed by a hard wheal resembling urticaria. After two or three weeks, however, the one hour spot will show a tender inflamed area which will slowly fade away in one to two months. The two hour spot will show still greater reaction, may go on to vesiculation, and will require a still longer time to heal. The five hour spot will probably go on to ulceration and form a sore which will require three to six months to heal, as was the case in a burn sustained by Professor Curie. So we get, according to the length of exposure, first erythema and congestion, then dermatitis, vesiculation, and finally necrosis and ulceration. If any hair is present it will fall out, but will return unless the burn has been too deep. After healing there may be pigmentation or cicatrization. So the results on living tissue resemble very closely those of the x rays.

Radium produces a sensation of light to eyes which are partially blind, but no effect upon the totally blind. This gave rise at one time to the report that radium would cause the blind to see.

The nervous system of young animals, as mice and guinea pigs, are especially susceptible to the rays, but the same effect is not produced upon full grown animals. A full grown rabbit in St. Luke's Hospital, New York, carried a tube of radium under his skin near the spinal cord for a week or more with no ill effects.

Microscopical Effects.—Dr. Abbe, in a patient to be operated upon for carcinoma of the breast, applied radium to the sound skin, to the cancerous area, and in one place buried the radium within the tumor for several hours. After amputating the breast it was given to Dr. F. C. Wood for examination, and he reports the following effects:

1. On the skin: A superficial necrosis of the cuticle always takes place; the longer the application, the deeper the devitalization of cells.

2. Leucocyte infiltration shows around all vessels and nerves—this accounts for the painful sores.

3. Where an area of cancer underlies the skin, a softening and devitalization of the central cells of "nests" nearest the radium takes place.

4. Where the radium was thrust into the cancer an area of complete destruction of cancer cells for not more than one quarter inch takes place.

A recurrent nodule of cancer was exposed to strong radium twenty times during three months and diminished to one third its former size. It was then excised and upon examination showed marked fibrous hyperplasia among the cancer cells.

Abbe sums up the effect of radium upon cancerous growths as follows: "Those malignant cells which have escaped destruction or retrograde change show a striking *quiescence* which may mean death of the vital force which makes them malignant. In this connection we cannot fail to be reminded of the seeds which fail to grow after exposure to radium.

Radium has been found to be bactericidal, killing *B. typhosus*, *B. of cholera*, and *B. prodigiosus*. It has to be applied very close [$\frac{1}{2}$ mm.] and exposed about twenty-four hours.

Various physiological effects are reported: e. g., oxyhæmoglobin is converted into methæmoglobin. Red cells give up their hæmoglobin to solutions more readily. Emulsin and trypsin are rendered inert (*British Medical Journal*, July 9, 1904). Vaccine is also said to become inert. Seeds produce stunted plants or fail to germinate. It seems that young and rapidly growing cells are most susceptible to radium rays.

Therapeutical Value.—Radium has been found to be of value chiefly along the same line of cases as the x rays. This was to be expected since we notice the similarity of effect upon the healthy skin. It has been used chiefly in the treatment of lupus, superficial and deep cancerous growths, and various skin lesions. I have collected from various sources the following cases and results of radium treatment:

Williams, in the *Medical News*, reports:

Mammary cancers.... 0 cured; 3 improved; 1 unimproved.
Epidermoid cancers...11 cured; 12 improved.
Rodent ulcers..... 2 cured; 3 improved.
Lupus vulgaris..... 4 cured.

Williams also reports 1 keloid improved, 1 psoriasis, 2 chronic eczemas, 9 acne vulgaris, improved or cured.

McLeod, in *British Medical Journal*, reports:

1 Lupus vulgaris cured after 18 exposures.
1 Lupus vulgaris cured after 70 exposures.
1 Lupus verrucosa improved.
1 Rodent ulcer cured after 46 exposures.

In the *Lancet* for April 23, 1904, we find 17 cases of well advanced and secondary carcinoma treated *without* any satisfactory results.

Exner, of Vienna, reports marked improvement in a melanosarcoma, and Abbe reports marked diminution in size of a sarcoma of the lower jaw, and apparent arrest of growth. Exner also reports temporary improvement of symptoms and increase in the calibre of the stricture in three cases of cancer of the œsophagus.

Max Einhorn, of New York, reports nine cases of cancer of the œsophagus treated by radium. The radium was introduced in a capsule on the end of a flexible bougie and kept in contact with the stricture. He calls his instrument a Radiodiaphane. Of nine cases so treated six showed increase in calibre of the stricture and greater ease in taking food. One patient improved markedly in weight. In three cases no improvement was noted, due to irregularity of treatment or to insufficient time having elapsed. Einhorn does not claim to cure, but any relief to these hopeless inoperable cases is to be welcomed as a step forward in treatment.

Lassar, of Berlin, is very enthusiastic over radium in the cure of certain skin lesions; but Bulckley, of New York, says it does not possess any advantages over x rays. Ordinary warts can be cured by one to four exposures of one hour each. "Port wine mark" has been known to become whiter after exposures.

Abbe reports treatment of thirty to forty cases with radium and reports cures in lupus, rodent ulcer, epithelioma, verruca; improvement in symptoms and diminution in size of recurrent carcinomata; some alleviation of symptoms in two cases of carcinoma of cervix uteri; and diminution in size of one giant celled sarcoma of jaw. He says the judicious use of x rays is often more beneficial, but radium is often a valuable adjuvant.

Pusey, of Chicago, says the results of radium are almost if not identical with x rays. The indications for radium are:

1. Inflammatory diseases of the skin: Eczema, psoriasis, lichen planus.
2. Bacterial diseases of skin: Acne, sycosis, lupus vulgaris, blastomyces.
3. To cause destruction of tissue of low resistance, as: Lupus, carcinoma, and sarcoma.

In the *Lancet* for March 26, 1904, are reported two cures of tuberculous ulcers of the throat by twenty minute exposures twice a day. It is also recommended for tuberculosis of superficial bones, as in hand, foot, sternum, and ribs. Radioactive bismuth has been given internally for carcinoma of the œsophagus and stomach; one case of reported improvement. Max Einhorn has been using his radiodiaphane as an aid in diagnosis. He takes the patient into a dark room and inserts the radium into œsophagus and locates it by a fluorescent screen, thus detecting the location of the stricture, or locating the lower border of stomach in dilatation or gastroptosis. He also inserts it per rectum and locates the sigmoid flexure.

CONCLUSIONS.

In radium we have an element of extreme interest to both scientists and the medical profession. Its

action resembles closely that of the x rays: its main advantages being in the ease with which it can be carried around and used, especially in inaccessible mucous cavities, such as the nose, throat, œsophagus, stomach, vagina, and rectum, and its bactericidal power. It is of undoubted value in lupus, rodent ulcer, epitheliomata, some sarcomata, and certain chronic skin diseases. If larger quantities can be produced and the cost diminished, it will surely be of great use to mankind.

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- The *Scientific American* has had a number of very interesting articles.

The Southside Medical Society, of Virginia, at its meeting in Wakefield on January 3rd, elected officers as follows: President, Dr. W. H. Wallace, of Disputanta, Va.; first vice-president, Dr. Joel Crawford, of Yale, Va.; second vice-president, Dr. W. L. Devany, of Dendron, Va.; third vice-president, Dr. H. B. Mahood, of Emporia, Va.; fourth vice-president, Dr. J. F. Bryant, of Franklin, Va.; treasurer, Dr. R. H. Sims, of Powellton, Va.; recording secretary, Dr. J. E. White, of Wakefield, Va.; corresponding secretary, Dr. R. T. McNair, of Emporia, Va.

The Wyandotte County, Kan., Medical Society, at its meeting in Kansas City, Kan., on January 2nd, elected officers as follows: Dr. John Troutman, president; Dr. C. A. Folks, vice-president; Dr. J. W. May, secretary; Dr. Anna K. Master-son, treasurer.

DIFFERENTIATION IN THE DIAGNOSIS OF NON-DEFORMING CLUB FOOT.

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The orthopedist has fairly well impressed upon the general surgeon and the family physician the importance of early diagnosis in diseases of the hip joint. Diseases of the knee are frequently, though not as frequently as they should be, referred to the specialist soon after symptoms appear. Diseases of the ankle or tarsal joint, however, may be the cause of the patient seeking many physicians and surgeons before the correct diagnosis is made and proper treatment prescribed. The equinovalgus of the ordinary flat foot is not a difficult matter to diagnosticate, but the frequency with which the patient suffering from non-deforming club foot has been treated persistently for an irresponsible and usually non-existing disease, to be cured speedily upon the correct diagnosis being made, leads to the recognition of the fact that a wider knowledge of the differentiation between other conditions and that of non-deforming club foot are needed throughout the profession.

For the benefit of those who may not be familiar with this condition, I cannot do better than to quote from the surgeon who was the first to describe it: "In non-deforming club foot all the conditions found in certain forms of talipes exist, with the exception of the exaggerated deformity. That is, there is a loss of normal relation between the articulation at the ankle and the muscles which act upon it, involving also in many instances the tarsus, producing a condition which prevents normal flexion at the ankle joint and modified mobility, with slight deformity at the tarsal, metatarsal, and phalangeal articulations." This interference with normal flexion is due to a shortened gastrocnemius, but, as he explains, it is usual to find also some changes in the plantar tissues.

This condition has been treated by the chiropodist, is frequently the cause of the purchase of rubber heels, cork and felt inner soles, arch plates, and elastic stockings, and it has done its full share in increasing the sales of liniments and powders. The failure of physicians to recognize this disease and, therefore, the natural failure of the treatment, is highly responsible for these patients seeking relief wherever relief is promised. Peripheral neuritis, rheumatism, gout, lumbago, sciatica,

neuralgia, and flat foot are among the wrong diagnoses usually made. Peripheral neuritis, rheumatism, gout, and sciatica are the most frequent mistakes. As the anteroposterior arch is preserved, there is no excuse for mistaking it for flat foot, and yet this error is made.

The diagnosis of metatarsalgia, of inflammation of the ankle joint, and more frequently of the mediotarsal joint, as well as osteitis of one or more of the tarsal bones are among the mistakes made.

Under "previous treatment" the histories of these cases treated at the Cornell Dispensary not infrequently read; "Plaster of paris for—weeks without any improvement." "Cast taken of foot and insoles provided, no improvement." "Strapping applied, no improvement." "Treated for disease of the nerves, no improvement." We find articular rheumatism, muscular rheumatism, lumbago, gout, and sciatica in this list of previous diagnosis and treatment. The importance of an early diagnosis of non-deforming club foot is better appreciated when one recalls that not a few of these conditions result in flat foot, to which fact attention was drawn in an article in the *New York Medical Journal*, for May 29, 1897, by Dr. Newton M. Shaffer. The mechanical disadvantage under which the foot is placed by this condition is responsible in many cases for hallux valgus, flattening of the anterior arch, metatarsalgia, corns, bunions, and ingrowing nails. Although in all probability the cause of this disease is some remote trophic lesion with reflex irritability, as has been pointed out by Shaffer and by Sayre in some forms of flat foot, yet the pathological data which have so far been published are not sufficient to establish scientifically the cause of this well known phenomenon. Whatever the prime ætiological factor may be, the condition of the parts is known and easily demonstrable: the gastrocnemius is shortened, the movements at the ankle joint are limited, the relation between the tarsal bones is normal or nearly so and the plantar fascia is dense and always more or less shortened.

Non-deforming club foot may exist for years without any further structural changes taking place. It is usual, however, for one of two results to follow. With a considerable shortening of the gastrocnemius, the plantar fascia likewise is shortened, and an equinus with slight cavus exists; or, if the gastrocnemius is shortened but slightly, the plantar tissue yields to the undue strain, lengthens, and, the mediotarsal joint, thus deprived of this bow string protection, gives way, and flat foot is present. It would seem an easy

matter to differentiate between a non-deforming club foot and a flat foot, and well marked cases do not present any difficulties; but there are instances where mistakes can readily be made. In by far the greater number of flat feet the gastrocnemius is shortened and it is as a result of this that the plantar fascia has become strained and weakened, and the mediotarsal joint has become more and more movable, until in the extreme cases the scaphoid reaches the plantar plane and the calcaneum has been drawn up and the astragalus down.

Where motion has become abnormal at the mediotarsal joint, but the scaphoid has not been subluxated, it is a common mistake to attribute this mediotarsal motion to the ankle joint, and, in measuring dorsal flexion, to diagnosticate the gastrocnemius as of normal length and the foot as flat. Therefore great care is needed in the examination, to distinguish where motion takes place. The calcaneum and the astragalus are so closely bound together that movement in one is almost invariably in the other. Therefore, by tightly grasping the calcaneum, distinction can be made between true and false ankle movements. In both of these conditions a support for the weakened arch is indicated, but if a shortened gastrocnemius is not recognized and therefore not overcome, a cure cannot be expected.

The pain may be of value in this diagnosis. In non-deforming club foot it is usual for the pain to increase by continued use and, frequently, it is not confined to the foot and ankle, but is felt as much or more in the calf of the leg, or back of the knee and thigh, and even as high as the buttocks. In flat foot the pain is usually worse after rest and is generally lessened by use. Sometimes it is so severe upon arising in the morning, that walking or even standing is impossible until passive and gentle exercises have been undergone for one half hour or more.

Anterior metatarsalgia: Morton's neuralgia. Examinations of a sufficient number have not yet been made to permit the offering of any statistics, but it certainly happens very frequently that a shortened gastrocnemius with its attendant evils exists with this disease. The shortened gastrocnemius, and the shortened plantar fascia, would tend to dislocate the metatarsal bones, and this tendency would be increased by the strain placed upon the extensor longus digitorum. It is not so much the confounding of these two diseases, as the neglect to examine for the changed muscular conditions which may exist with metatarsalgia. If both are present, as is often the

case, the treatment of the former brings relief to the latter.

In strain upon the tendo Achillis, full dorsal flexion will be impossible without pain at the point of the lesion, where, also, pressure will produce the maximum pain, and should be easily diagnosticated from non-deforming club foot, as in uncomplicated cases of the latter condition the attempt at full manual dorsal flexion does not cause pain.

Inflammatory diseases of the ankle and mediotarsal joint should be excluded before a diagnosis is made. Mistakes are not likely to happen if ordinary care is observed. In inflammatory disease of the mediotarsal joint, the spasm of muscles, and complete or nearly complete ankylosis may be present. The spasm will be of those muscles which act directly upon the affected articulation or articulations, but there will not be spasm of the soleus or gastrocnemius. Full dorsal flexion of the ankle is usually possible in uncomplicated osteitis of the mediotarsal joint. In an inflammatory disease of the ankle joint, a mistake in the diagnosis could not be made after the disease becomes well defined. The history is of value both in this and disease of the mediotarsal joint, and in inflammations of the tarsal bones. In non-deforming club foot the history dates back to an uncertain period and pain with callosities are the chief, usually the only symptoms. In these inflammatory conditions of the joints and bones, the beginning of the trouble is most frequently asserted to be due to some injury, and the pain is often of less moment to the patient than the lameness.

The most ridiculous mistakes have been made in diagnosing non-deforming club foot as rheumatism, lumbago, sciatica, gout, and neuralgia. There is no excuse for these errors, as they are always due to slipshod methods; no diagnosis having been attempted. It would be well for physicians and surgeons to bear in mind that this disease should be considered in every obscure or unexplained pain in the lower extremity or in the buttocks or small of the back.

The anteroposterior traction shoe of Shaffer must exert some force upon the internal popliteal nerve and part of the relief from pain, due to stretching of the gastrocnemius, may be from the action of the machine upon the nerve fibres, and especially upon the peripheral nerves.

The great variance in the situations of the pain in non-deforming club foot may be accounted for by the fact that the shortened gastrocnemius will be compensated for in one way by one patient, and in another by a second patient.

It is only by the scientific application of a remedy or remedial agent, that results can be obtained which will encourage its further use. The results from the treatment of non-deforming club foot are among the most satisfactory that the surgeon ever encounters, but the careful study of the diagnosis needs much more attention from both physician and surgeon. One may be most faithful and conscientious in stretching a gastrocnemius, but if the pain is due to rheumatism, anti-rheumatic treatment and not the traction shoe is indicated. Rheumatism, lumbago, gout, or sciatica may be present together with a non-deforming club foot, and when the improvement at the ankle joint becomes marked, and these symptoms still persist, other treatment must be added. Never, however, deny a patient with a non-deforming club foot and with a coexisting pain of even probably rheumatic origin, the possibility of being entirely cured by the removal of the former condition.

SIXTY-NINTH STREET AND BROADWAY.

TIC DOULOUREUX AND OTHER NEURALGIAS FROM INTRANASAL AND ACCESSORY SINUS PRESSURES.

By SARGENT F. SNOW, M. D.,

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The miserable existence of people suffering with tic douloureux, buffeted about as they have been by the dentist, who has extracted all teeth from that half of their face, and the nerve specialist, who has put them through all kinds of hair-standing electrical treatments, not to mention the general practitioner with his array of analgetics, is sufficient to impress us all, and gives me courage to present a brief résumé of my further observations on neuralgic affections of the head.

I say further observations, because, in 1894, under the title of Hemicrania and Other Neuralgic Affections of the Head relieved by Intranasal Surgery,¹ I called attention to the great frequency of painful conditions arising from pressure in the middle turbinate regions. Again, in 1897, under the title of Headaches from Nasal Causes,² thirty cases were reported, giving percentages, etc., of improvement from purely intranasal operations.

I also had the honor, in 1899, to present a paper to the American Laryngological, Rhinological, and Otological Society on Cephalagra and Tic Douloureux from Accessory Sinus Affections. In that paper attention was called to internal sinus pressures as a cause for that dreaded and agonizing

disease known as tic douloureux. Much to my regret, a European trip prevented my being present personally, so the paper was read by title and was soon buried in the *Transactions* of the society.

Time will not permit me to go into detail as to the literature and ætiology of tic douloureux, further than to say that seven have been reported as coming from intranasal sources.

While it is not my intention to deny that there may be cases caused by dental caries, pressure on nerve trunks, etc., in the twenty chronic cases that I have observed and treated, I have seen none that came from such causes, or that required an excision of the nerve to obtain relief. Each and every one had well marked intranasal pressure or a collection within some of the accessory sinuses, more frequently the latter.

Tic douloureux, with its paroxysms, exists in the acute, subacute, and chronic forms, varying from sharp twinges to the three to five minute seizures of supreme agony.

The acute form, as seen by myself, frequently accompanies a cold with sinus accumulation and passes away with abatement of the inflammation or by securing proper nasal drainage.

The subacute form may present an equal degree of pain, but does not clear up with the removal of nasal obstruction; it starts anew upon slight provocation, showing us that a proper outlet must be made from an affected sinus or some nasal pressure demands relief.

With the chronic cases, any or all internal sinus morbid states from pus, granulations and polyps to diseased bone may be expected, and in these chronic cases a most patient, thorough clearing out is our only hope. Local sprays or systemic remedies aid only as they reduce congestion of nasal membranes, prevent bone softening, or improve the general health.

From my experience it would seem that a pain shooting from the bridge of the nose outward and upward indicates an involvement of the anterior ethmoids. A deeper and more intense pain under or behind the eye, and sometimes apparently in the ear or temple, points to the middle and posterior ethmoids; while a still deeper, splitting pain, radiating outward from the centre, sometimes reflected around the anterior third of the lower jaw, is relieved by opening the sphenoid. Accumulations within the maxillary antrum are diognosticated by the localized pain, with sometimes intense muscular tremor and successions of spasms, shaking the head from side to side.

As stated before, it has been my good fortune to see and relieve twenty chronic cases of tic douloureux in the past seven years, by such methods as described, and no line of work has made me feel

¹ New York Medical Journal, March 31, 1894.

² Medical News, July 10, 1897.

more personal gratification. To see the strong and the feeble racked by pains so intense that they stop, clutch their face, moan, and cry out in agony, will excite the sympathy of the most callous surgeon, and I feel like urging a renewal of effort on the part of all, and a most thorough investigation of the upper air passages for aetiological factors.

Another class of neuralgias characterized by steady pains reflected to some portion of the head instead of the face, commonly known as migraine, or sick headache, often arises from nasal pressure.

Within the past three years men have brought forth proofs of the nasal origin that are incontrovertible. While some have probably been disappointed that the removal of a sæptal spur, deviation or enlarged middle turbinate did not clear up all the trouble, it should not be forgotten that, even after such removals, there can still remain a very sensitive state of the membranes; these sensitive membrane lives may come from exposures, constipation, clogged liver, overeating, autointoxication, etc., any or all of them sufficient to cause enough intranasal pressure to bring on again a neuralgic attack.

While we must admit that hemicrania is sometimes caused by eye strain and cerebral tumors, it would not be surprising if the future showed that a large majority of all headaches depended upon an intermediate nasal pressure, which pressure had to be removed before complete relief could be obtained from any plan of treatment. These intermediate nasal pressures may be from only a temporary engorgement of the middle turbinate that at the time of the rhinologist's examination may be absent, but when the engorgement does again come on it is sufficient to throw people of a high nervous organization into an attack of sick headache.

The middle turbinate may seem an innocent body with plenty of room between it and the sæptum or external wall when the patient has just been exercising, but when he is quiet or lies down it becomes enlarged and crowded and then may effectually block all drainage from, and ventilation to, the anterior, middle, and posterior ethmoids, bringing as a consequence varying morbid states and accumulations with attendant neuralgic symptoms. Further than this, while the middle turbinate may present no appearance of enlargement or of being pressed anteriorly, deep probing will show much crowding, against either the sæptum or the outer nasal wall. Pressure on nerve filaments elsewhere in the body causes reflected pain, why not here? In fact, gentlemen, a close observation of the results of intranasal operative work for headaches and neuralgias during the past twelve years has proved the great frequency with which morbid conditions within the upper respiratory tract act as determining factors.

The intense, aggravated forms of headaches char-

acterized by convulsions, rigidity of muscles, etc., as mentioned in the previous paper spoken of, may be termed "cephalagras," and all the cases that I have observed have been in females where a combination of both marked nasal and uterine factors existed.

That many cases of tic douloureux arise from intranasal and sinus pressures is without question. What exact percentage arises from such causes the author cannot state. Statistics for arriving at a definite figure seem hard to obtain. Personally I believe that 80 per cent. would be a modest estimate.

In any event, we have good cause for suspecting and removing either intranasal or sinus pressure in all cases of facial or cranial neuralgia.

BILIARY COLIC WITHOUT GALLSTONES.

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Biliary colic, sufficiently typical in character to admit of no mistake in its recognition, does not necessarily mean the presence of a stone or other foreign body in the biliary apparatus.

At this time, we cannot say positively that biliary colic is the result, in all cases, of a well known mechanism.

The cases reported and the statements quoted in this paper are presented in support of the theory that biliary colic may be due to contractions of the gall bladder resulting from an occlusion of the cystic duct—either by foreign bodies, inflammatory swellings, flexions, or displacements; and that it is not necessary that a foreign body should be in transit through a duct for the occurrence of biliary colic. It is admitted that a foreign body moving in the cystic or common ducts may produce biliary colic; but the position taken is that typical biliary colic can, and does, occur as the result of other conditions, and that, in these cases, we cannot from the symptoms say that a foreign body is, or is not present.

I.

John B. Murphy (1) says that biliary colic "occurs when a foreign body is being transmitted through a canal the lumen of which is normally smaller than the diameter of the foreign body. It is never due to overdistention and never due to the retention of bile or mucus under pressure. If the foreign body becomes stationary beyond a few hours, the colic ceases so long as the stone does not advance. It is, therefore, due to a foreign body in transit through the ducts."

This positive statement is as positively contradicted by John F. Erdmann (2) in writing on *Surgery of the Gall Bladder and Ducts*. Erdmann states that "it is necessary to eliminate from

our minds the old idea that attacks of pain and periods of inflammation of this viscus are due to the presence of stones, as, not only has this been proved in an experimental sense, but we are meeting constantly cases of marked inflammatory conditions with all the symptoms of stone in which no stones are present upon operating. Naturally for a period of time this practical demonstration was clouded by the haze of the question of presence of calculi at a former time, and that they were expelled before operative interference was undertaken. In more recent years experimental research with controls showed that pain typical of that supposed to be produced by expulsion of stones was or could be due to efforts at expulsion of the contents of an inflamed, or distended and inflamed gall bladder, no matter whether these contents were bile, mucus or pus, stones, or a mixture of all these."

John H. Musser (3) describes symptoms due to acute cholecystitis without the presence of stones, that correspond to typical attacks of biliary colic with infection. Riedel (4) believes that biliary colic is due to inflammatory occlusion of the bile ducts which results in intermittent contractions of the biliary apparatus to overcome the increased tension resulting from the obstruction.

II.

I have found in the literature the reports of 37 cases of biliary colic in which no stones were found at operation or autopsy and in which it was very improbable, from the symptoms and course of the cases, that stones were passed into the intestine. The pain in these cases occurred in paroxysms and could not be distinguished from true gallstone colic. In all of these cases the colic came on suddenly, was very severe, and corresponded to biliary colic caused by gallstones, in the location of the pain and intensity of the attacks. Some of the patients had suffered from repeated attacks. Case IV, reported by Lilienthal (5) had suffered from 16 paroxysms. In a few of the reports mention is made of the pain radiating to the right scapular region, but the majority of the writers make no statements regarding the radiation of the pain. Tenderness over the gall bladder was present in most of the cases suffering from acute cholecystitis, but many times the occurrence of local tenderness was not mentioned. Jaundice occurred in only two of the 37 cases—those reported by Kehr (6) and Lilienthal (5). One of these jaundiced cases showed cicatricial narrowing of the cystic duct with cholangitis; in the other case jaundice resulted from the pressure of an aneurysm of the hepatic artery.

In 32, out of the 37 cases, the condition found at operation or autopsy was acute inflammation of the gall bladder with distention. In these cases no stones were found. In some of them ulcerations and

adhesions were present; and gangrene was occasionally found. In no case did the colic recur after the gall bladder had either been drained or removed.

The 5 cases of biliary colic without gallstones or cholecystitis were as follows: Two cases reported by Krukenberg (7) in which the gall bladders were very movable and somewhat dilated. No stones were found and no acute inflammatory condition was present. Krukenberg thought that the colic was due to the extreme mobility and anchored the gall bladders into the wounds and drained them. Both cases had no further attacks after the operations. Cabot (8) reports two cases of severe biliary colic due to acute flexion of the cystic duct and displacement of the gall bladder. No stones were found. Fixation of the gall bladder and cholecystostomy gave complete relief. H. Kehr (6) reports a case of biliary colic, jaundice, and abdominal tenderness that showed an aneurysm of the hepatic artery compressing the cystic and common ducts. Ligation of the aneurysm and incision of the cystic duct gave complete relief.

The probable cause of the colic in these cases was closure of the cystic duct by inflammatory swelling in 32, closure of the cystic duct by compression in one, and closure of the cystic duct by flexion and displacement of the gall bladder in four.

The clinical histories and the operative and post mortem findings in these cases do not prove anything. They do show, however, that in all probability biliary colic is not always dependent on a stone or other foreign body for its occurrence. They also support the theory that the symptoms of biliary colic result from resistance to the muscular contractions of the gall bladder or bile ducts; and that the contents of the gall bladder, prevented from escaping by closure of the cystic duct, may offer sufficient resistance to the contractions of the gall bladder to produce severe biliary colic.

Reference to Reported Cases.

1. H. Lilienthal, *Annals of Surgery*, July, 1904, page 44. Reports four cases.
2. H. Krukenberg, *Berliner klin. Woch.*, July 20, 1903. Reports two cases of movable gall bladder with colic. No stones.
3. A. Vanderveer, *American Medicine*, August 27, 1904. Reports two cases. Flexion of the gall bladder; colic. No stones.
4. A. T. Cabot, *Boston Med. and Surgical Journal*, December 31, 1903. Reports one case of biliary colic without stones.
5. H. Kehr, *Munch. med. Woch.*, LI, No. 13. Case of biliary colic caused by an aneurysm of the hepatic artery.
6. M. Richardson, *American Journal of the Med. Sciences*, June, 1898. Two cases of cholecystitis, without gallstones, with biliary colic.
7. W. A. Lane, *Lancet*, 1903, page 411, Vol. I. One case of acute cholecystitis with biliary colic. No stones.

8. E. M. Pond, *Medical Record*, January 23, 1904. One case of acute cholecystitis with biliary colic. No stones.
9. A. J. Ocshner, *Annals of Surgery*, June, 1902. One case of cholecystitis with biliary colic. No stones.
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Lectures and Addresses.

THE PROPER SCOPE OF SCIENTIFIC (SO CALLED EXPERT) TESTIMONY IN TRIALS INVOLVING PHARMACOLOGICAL QUESTIONS.

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(Concluded from page 4.)

So much for the one position. Now for the other. To confine ourselves to a chemical illustration, which may have toxicological bearing, let us take Gautier's observation of the presence of arsenic in the normal human body. If this bare statement should be permitted to be made in court in a case in which the presence of arsenic in a given body is the basis of a murder trial, one can see that justice might easily be defeated. If Gautier himself was testifying he would say, as he has written, that arsenic could be found in normal human bodies only by the use of a certain very delicate technique, which I need not here describe; that he had found it only in the ectodermic structures, and chiefly in the thyroid gland; that he had never found it in the normal liver or normal stomach or normal muscles. He would add that even in the thyroid gland, he had found it only in minute quantity—about $\frac{1}{100}$ of a milligramme in the average human thyroid; that is to say, in the proportion of about $\frac{1}{4000000000}$ of the average body weight; so that if by any inconceivable post mortem diffusion the thyroid arsenic should escape into all the tissues it would be in a proportion absolutely beyond detection, the least that he has been able to detect being $\frac{1}{2010000000}$; that

is to say, $\frac{1}{200}$ of a milligramme in 100 grammes of tissue. To translate this into grains, it would take 100 thyroids—or, if diffused, 100 entire human bodies—to yield $\frac{1}{4}$ grain of normal arsenic to Gautier's test; or to follow Gautier's fair statement to the letter, even doubling the assumed quantity of normal arsenic in a cadaver to $\frac{2}{100}$ of a milligramme to allow for possible traces in the skin and its appendages, we should need a mass equal to 50 bodies to give us the $\frac{1}{4}$ grain. A simple arithmetic calculation therefore shows that this observation, whatever may be its physiological importance, has little medicolegal bearing. But the partial expert witness, that is, one who is telling only part of the truth in order to serve one side of the case—might say that Gautier had found arsenic in the normal human body in recognizable quantity and omit to say anything further. Or he might be ignorant of the details, even if the attorney for the prosecution was sufficiently well posted to inquire concerning them on cross-examination; and the whole truth thus failing to be brought out, a partial and therefore false impression would be left on the minds of the jurymen. Again, the widespread distribution of arsenic in nature and art might be testified to by expert witnesses, truthfully in a sense, and yet partially, and therefore untruthfully in the large sense. By such testimony a jury might easily be misled as to the real significance of the facts. For this is all matter of fact, not of opinion, whether or not it be matter of personal observation. While, therefore, the mere circumstance that a witness has not personally observed the fact of science concerning which he is questioned should not bar his testimony, it does seem that courts should exercise considerable caution as to the admission of such testimony, and might rightfully insist, first, that its relevancy to the special cause at trial be established; secondly, that the witness should be required to affirm his familiarity with all the pertinent details of the special facts to be testified to, and furthermore be required to state them, even in the absence of cross-examination. Failure on the part of a witness to make such full statement should then be considered sufficient, if shown, to throw out all his testimony. This rule would at least tend to discourage witnesses from giving partial and misleading testimony.

Another order of testimony given by experts relates to matters purely of opinion. Here the position becomes more difficult both for court and witness.

A pharmacist testifying as a matter of chemical fact that he has found a certain quantity of arsenic or strychnine in a human body, may be asked whether it is sufficient to kill or indicates that there

has been in the body at any time sufficient to kill? The least quantity of arsenic or any other poison necessary to kill a human being should be a matter of fact; it is, however, for many reasons, one of opinion. In the first place, the experiment has never been made under rigorous conditions. In the second place, in most, if not all of the recorded cases of poisoning, alike in those attended with recovery and those ending fatally, either the exact quantity taken is unknown, or it is so large that no estimate of a minimum lethal dose can be based upon it—while in cases of recovery from large doses there has often been evacuant, antidotal, or other treatment. In the third place the individual variations in response to drugs of all kinds are great. Moreover the hearsay element must be large in such opinions. A pharmacist has knowledge of the doses ordinarily prescribed, and from his reading has some knowledge of the symptomatology of drug poisoning; but his observation has not been, like the physician's, of a character that such reading may be assimilated therewith; and there thus seems to be a valid objection to the admission of his answer. Similarly he may be questioned as to the harmfulness of adulterants or preservatives of food. Here again his observation is not of such a character that his answer can be anything more than opinion; and the line of his studies does not ordinarily lend authoritative weight to his opinion on such topics. But the physician occupies a different position in respect to these questions. They form an important part of his studies and are integrated with the whole mass of his knowledge. He is therefore entitled to express an opinion concerning them; and although he may never have deliberately or accidentally poisoned any one with boric acid or salicylic acid, or may never have recognized impure benzoic acid as the cause of stomach and kidney disease in his patients, his opinion that such substances can and do injure the human stomach and kidneys should be accepted in evidence. *Absence of knowledge* on these subjects, should not, moreover, be twisted by an expert witness into *knowledge of absence* of injurious effects.

Other cases, however, present difficulties to a physician asked to give an expert opinion. Thus, on matters of chemistry and pharmacy outside his experience, his opinions are ordinarily of very limited value. But let us also consider cases that may be within his experience.

A physician who has observed a patient during life and has not suspected poisoning may after the death of the patient have his suspicion aroused, and in reflecting upon the symptoms he may see a new significance in them; this suspicion may be confirmed by the post mortem examination and

the chemical analysis. His honest opinion based upon all the facts may then be different from one previously expressed upon partial knowledge or even embodied in a death certificate. Yet unfortunately he is exposed to animadversion because of his change of view. Still more difficult is the question presented in a case of suspected poisoning to a physician who has not seen the living person or the corpse, but is asked to express an opinion on facts described by others as to the nature of symptoms during life, and as to the cause of death. Here the question is one of pure opinion, for the facts are all beyond his knowledge. It is evident that in the absence of complete and careful observation the facts may so be manipulated as to give apparent basis for discrepant opinions. One set of circumstances is made prominent by witnesses for defense, another by witnesses for prosecution. Few, if any, scientifically accurate observations have been made of symptoms. The autopsy may have been defective in various ways. The testimony of witnesses not only on opposite sides, but on the same side may be contradictory or even in certain particulars self-destructive from a scientific viewpoint. The physician may thus be inclined to minimize in his own mind certain testimony, which nevertheless he is called upon in his sworn opinion to give credence to. Evidently when he cannot form a positive opinion, it is his duty to say so, and not to attempt to twist and force dubious or insufficient evidence into the support of a partizan, because partial, view. Again, an expert is forbidden to formulate questions which he is to be called upon to answer, and yet some error in the formulation may apparently color his testimony otherwise than he desires. He must avoid this by formulating his answer so that it shall tell its own story independently of the question, and by limiting his answer so that it may be positive only so far as the facts are positive; and qualified as to uncertainty or probability when the facts so demand.

Many other orders of difficulties affecting expert testimony on pharmacological questions might be stated, but those discussed seem to be the main ones, and perhaps if they can be averted the others will to a large extent disappear.

In addition to the practice of controlled examinations and exhibition of results already alluded to, I have elsewhere suggested a method that would do away with our main difficulties, but this method is not likely to be adopted for many years, if at all. It is too simple and direct. That method is the submission of purely scientific questions to a commission of experts, who shall, in advance

of the jury trial, hear the relevant testimony as to matters of fact, including the methods and results of any scientific examinations, but no mere opinions from witnesses; opinions being put forth by experts frankly appearing as advocates, and arguing upon the testimony submitted. Such a commission could submit to the court a report or reports, which would thus become part of the evidence heard by the jury that has to find the verdict, and before whom no expert should appear as witness.

In the absence of this simple and direct way out of present difficulties, is there any other? Yes, if we, physicians, chemists, and pharmacists, choose to take it. When we are called upon to consider the facts in a given case in order to determine their significance, and what testimony we can give concerning them, we should make certain stipulations, and I may add that there is little difficulty in securing the assent of attorneys to reasonable conditions. An attorney who should refuse his assent, would I judge, be a first class attorney *not* to be associated with. These stipulations are:

1. That there is no obligation to testify or to give counsel involved in the acceptance of a fee to examine papers or otherwise look into the facts. This is, I believe, usually understood.

2. That the nature of the testimony to be given, in case the preliminary examination permits an agreement to testify at all, is subject to modification by the subsequent disclosure of new facts at the trial or otherwise; and that the attorney must then decide for himself whether or not to call one as a witness.

3. That one is to be asked only simple and direct questions permitting the framing of answers that will bring out the whole truth as one sees it, and not merely fragments of the truth.

4. That one is not to be expected to be positive upon uncertain matters, or to throw doubt upon those that are not doubtful.

5. That one is not to be asked questions to which correct answers must be highly technical, and which can therefore only obscure the issue. That, indeed, one is not to be asked such questions for the very purpose of obscuring the issue.

6. That one must be expected to answer frankly all questions by opposing counsel, without reservation or evasion, regardless of the effect of such answers upon the theory of either side.

7. That one is not to be asked irrelevant questions, for the purpose of consuming time or raising clouds of dust; or to be asked to make captious criticisms of the testimony or methods of others; or in any way to be made a party to methods of presentation of facts and opinions, which, however admirable from the viewpoint of an attorney's efforts to serve his client, are opposed to the spirit of truth-seeking science.

It is not to be expected that one can alter the badgering, hectoring, and efforts at confusion

which present juridical standards permit and even applaud in cross-examination. But one can at least refuse to supply ammunition for such practices, to support them, or to countenance them.

A more difficult ethical question than we have yet considered is that presented to a chemist who is called upon to make an analysis of suspected substances. Suppose his analysis reveals the presence of that which the attorney consulting him wishes absent, or *vice versa*. Is he to insist upon being called as a witness? It is no longer a question of testifying—for the attorney will not wish him to do so—but of not testifying. An analogous question is sometimes presented to pathologists. How shall it be decided? Suppose a chemist or a pathologist has been asked to examine the tissues of a person supposed to have been poisoned, for evidences of the poison or its effects? This is not a mere matter of opinion, but of fact. He fails to find such evidence. Or take a somewhat simpler case: suppose a chemist is asked to examine suspected powders or liquids or foodstuffs for the presence of poison and fails to find it. It is possible that his negative testimony might help the accused person. If the public prosecutor nevertheless proceeds to trial, being satisfied upon other grounds that such is his duty, and fails to call the chemist or pathologist who has made the negative finding, is it the latter's duty to volunteer his evidence? The answer to that question is beyond the scope of this paper, but, nevertheless, the question needs to be stated.

SUMMARY OF CONCLUSIONS.

First. The difficulties attending expert evidence upon pharmacological questions could be in large part obviated (*a*) by adopting the principle of *controlled examinations*, with *preservation of portions of materials examined* and *exhibition of material results*; (*b*) by submitting scientific questions to the judgment of a jury or commission of experts who should report to the court and whose unanimous report or discrepant reports should be submitted to the trial jury as part of the evidence in the case. Before such a commission scientific experts might be allowed to appear frankly as advocates arguing upon evidence submitted, but no mere opinions should be given as evidence; it being the function of the commission to formulate opinions for the guidance of the court and jury having final decision of the case.

Second. As the plan suggested in the foregoing paragraph is not likely to be adopted for many years, if ever, the duty devolves upon physicians and pharmacists called as expert witnesses under the present system to guard their own actions and evidence so that the reproach of partizanship and venal interest which now justly or unjustly attaches to the testimony of experts upon pharmacological questions may be removed from the

honest and competent majority and a sharp line of distinction be manifest between them and others.

Third. The chief difficulties that honest, sincere, and competent expert witnesses have to meet are of three orders:

(a) *The necessity to state technical matters in untechnical terms.* There is no way of avoiding this and the expert can only meet it as best he may, deliberately using technical terms when necessary to make the record complete, and afterward explaining them as well as possible in untechnical language.

(b) *The combination of witness and advocate in one person.* This tends to the presentation of partial and therefore partizan testimony, which in the attempt to draw conclusions from insufficient evidence may lead to undue magnification or minimization of certain facts, to the slurring or suppression of material data, to the introduction of irrelevant matters and especially to capricious criticism of the investigations or opinions of others. This can be remedied only by the expert himself.

(c) *The confusion of judgments of fact, the result of scientific research and analysis, with opinions, and like confusion concerning statements of facts of general scientific knowledge.* This can be remedied only by calling the attention of courts and lawyers to the principles involved and thus educating them to a better method.

(d) *The request for formulation of an opinion addressed to one whose studies have not qualified him to speak authoritatively upon the special question involved.* The remedy for this lies exclusively with the expert himself.

Fourth. It is not fair to condemn lawyers for the abuse and misuse of expert evidence, seeing that lawyers can use an expert witness for no purpose which the witness refuses to be used for. Courts may, however—from the viewpoint of scientific investigation—err both in the admission and in the exclusion of expert testimony.

Fifth. Newspapers and the public in general usually do grave injustice to the members of our professions, inasmuch as they do not know how often physicians, chemists, and pharmacists, after examination of the facts in special cases, refuse to testify on behalf of the interests that have consulted them.

Sixth. Physicians and pharmacists asked to give expert testimony should stipulate that they are to tell the whole truth and to answer frankly and fully the questions of counsel on the other side; that they are not to be asked to lend themselves to pettifoggery or obscurity of any kind; that their opinions are to be held subject to modification by any additional facts that may be disclosed; that they are not to become advocates on or off the witness stand.

Seventh. The expert or scientific advocate has an honorable and useful field of work as assistant and adviser to counsel; but his place in court is by the side of counsel, not on the witness stand.

1525 WALNUT STREET.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXV.—What is your experience in the therapeutical use of yeast? (Answers due not later than January 16, 1905.)

XXXVI.—How do you treat bunions? (Answers due not later than February 16, 1905.)

XXXVII.—What diet do you prescribe in typhoid fever? (Answers due not later than March 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXIV has been awarded to Dr. Lucien Lofton, of Emporia, Va., whose article appeared on page 26.

PRIZE QUESTION NO. XXXIV.

THE NON-OPERATIVE TREATMENT OF INTERNAL HÆMORRHOIDS.*

Dr. George S. Eveleth, of Little Falls, N. Y., writes:

Patients are prone to group fissures, polypi, fistule, and a prolapsed gut together under the common name of piles; hence the great need of inspection. The non-operative treatment of hæmorrhoids naturally divides itself into two parts, first, the treatment of the acute, and, second, the treatment of the chronic condition. When a patient presents himself for treatment of the acute condition, he is usually suffering much pain, and owing to this fact a proper movement of the bowels has been discouraged. This being so, the first thing indicated is a mild laxative; castor oil, a glass of Friedrichshall, or a dose of sulphur mixed with glycerin will answer. If necessary its laxative action may be aided by a carefully administered enema. If the piles are protruding, as internal hæmorrhoids are likely to at any time, they should be carefully cleansed by cotton wet in a saturated solution of boric acid, lubricated with adrenalin ointment 1 to 1,000, and gentle taxis tried, endeavoring to return first, the last

* Our contributors are correct in supposing that the expression, "without an operation," does not bar out injections.

portion of the gut to come out. If taxis is successful a suppository containing two grains of subsulphate of iron, to which half a grain of opium and extract of belladonna each may be added if there is much pain and tenesmus, should be inserted into the rectum and repeated when necessary; the patient should avoid all muscular effort, be made to use the bed pan, keep his bowels regular, and be cautioned to keep quiet until all pain and soreness are relieved and the tendency to prolapse has passed.

Failing in taxis, the patient should be put to bed, his hips elevated, and a pledget of cotton soaked in a one per cent. solution of cocaine applied to the parts and kept in place by a bag of powdered ice. The ice acts as a sedative and allays the inflammation if used early enough; after the acuteness of the attack is past, an ointment containing one drachm of subsulphate of iron and half a drachm of extract of opium and belladonna each to an ounce of vaseline may be applied. If the case is not seen till later, compresses wrung out in hot water, or a flaxseed poultice to which laudanum and lead water have been added will give more relief than cold applications. If sloughing takes place, more or less of a cure may be expected. A hypodermic injection of morphine may be given at any time if the suffering is not controlled by the measures mentioned. The patient should be kept in bed and made to use a bed pan. A saturated solution of boric acid on cotton should be used as a detergent, and the diet should be restricted.

Bleeding piles may be cured by touching the hæmorrhagic spot with nitric acid. After the subsidence of the acute symptoms, use a suppository containing three grains of extract of *pinus canadensis* and a grain and a half each of hamamelin and hydrastinin. One of these suppositories used morning and night will cure a very large percentage of mild cases and palliate the severe cases.

The very best possible treatment of hæmorrhoids is the preventive treatment. This applies to acute conditions in a degree, but more especially to chronic cases, and in order to best understand and best apply this treatment it is necessary to briefly call to mind a few of the chief causes which make this trouble so common.

Hæmorrhoids are merely varicose veins, whether they are internal or external; whether they are inflamed, infected, or bleeding depends on an added cause besides the mere dilatation of the involved blood vessels.

That the standing posture is operative will be seen in the increased susceptibility of certain oc-

cupations, namely, those of barkeepers, street car conductors, printers, dentists, and the like. Anything that interferes with the return circulation, such as the pressure of tumors or the gravid uterus or anything that renders the circulation sluggish or anything that causes a congested portal circulation, such as overindulgence in alcohol or the excessive use of meats, will bring on piles.

Straining, whether from heavy labor or from coughing or from chronic constipation or from chronic cystitis, an enlarged prostate, a stricture of the urethra, or a stone in the bladder, often brings on hæmorrhoids.

Neglect of local cleanliness and the use of improper detergents also play an important part in causing piles, and especially in aggravating the condition when it already exists.

We know that prolapsed piles become infected readily and that in certain forms of diarrhœa and in dysentery the rectal mucous membrane becomes infected and infiltrated with an inflammatory exudate, which blocks the venous circulation, and that, together with the straining and frequent irritating discharges, causes some of the most troublesome cases we have to deal with. It is not beyond the province of this essay, I assume, to advise surgical treatment of pathological conditions which may cause hæmorrhoids, provided the piles themselves are spared. This being so, tumors, urethral stricture, stone in the bladder, and chronic cystitis, should receive their appropriate surgical treatment.

Alcohol in all forms must be avoided, and tea, coffee, and tobacco used very sparingly or, better, not at all. Meat should only be eaten once a day. Fewer varieties of food should be eaten at each meal and, generally speaking, a less quantity, especially by people of sedentary life.

A cold morning bath, either plunge, sponge, or shower, according to the patient, is helpful as a good general tonic. It equalizes and strengthens the circulation, relieves local congestions, and stimulates peristalsis. Exercise for that class of patients who need it should be light, but systematic, and taken out of doors if possible. Exercises that call the abdominal muscles into action are indicated.

Keep the bowels regular both in regard to the number of movements and in regard to their proper consistence, for it is the lack of this regularity that causes more cases of hæmorrhoids than all other causes combined. Diarrhœa and dysentery should be treated by intestinal antiseptics and astringents and by regulation of diet. Regulation of diet is all important in the treatment of that opposite condition, the greatest single causa-

tive factor in the disease, constipation. The patient should be made to eat less meat and more of the sea foods, less pastry and fine bread, and more of the cereals and rice and coarse bread, more vegetables, and fresh fruits and dried fruits, like figs, dates, and raisins and fruits stewed with little sugar, especially prunes. English walnuts with plenty of salt may take the place of a dessert, and a glass of cold water with half a teaspoonful of table salt before breakfast and at bedtime is a valuable aid.

If the bowels need further help, the natural laxative mineral waters or compounds containing sulphur are valuable. The old Allingham pill always acts well. Cathartics should never be given. There should be a regular time for going to stool and plenty of time to devote to this important function. Just before going to bed is a good time, for there need be no undue haste and then there is plenty of time for an enema if needed, either hot or cold. The hot has the greater decongestive action, and then, too, the recumbent position in bed favors the reduction of the swelling of the piles, which always accompanies defecation.

Dr. Harriett Hooper, of Johnstown, Pa., writes:

Internal hæmorrhoids are very insidious in growth, and often bleeding after defecation is the first sign of their presence that the patient notices. We all know that hæmorrhoids are simply an enlargement of the blood vessels of the rectum, and involve the mucous and submucous tissues. To cure this, relieve the pressure. Therefore dilate the lower rectum, relieve all urinary irritation and in the female all womb pressure, and keep the portal circulation free from all impediment.

In the earlier stages a single dilatation is often sufficient to effect a cure. A steel dilator may be used in the office daily, increasing the widening, but it is better practice to dilate manually at the home of the patient. Give the patient a few drops of chloroform, then insert slowly, one at a time, both thumbs well coated with vaseline into the anus; grasp the buttocks firmly and separate the thumbs. If the patient objects, and he usually does, and will not consent to undergo this, then give him a set of three smooth glass dilators for self-treatment at home. Direct him to use the smallest size, the first day five minutes, the next day ten, and the third day fifteen. Continue the fifteen minutes for five to seven days, then use No. 1 for five minutes, remove and use No. 2 for five minutes, using No. 2 for ten minutes the next day, and then continue as with No. 1. Use No. 3 in the same manner. Usually after

the second week No. 2 can be placed without first using No. 1. By the end of the third week No. 3, which is over two inches and a half in diameter, can be easily retained for fifteen minutes. This will cure unless we have an ulcerative or bleeding mass to deal with. Then follow the use of the dilator daily by the pile pipe. The pile pipe I use is of hard rubber, perforated by numerous small holes through which, as the bottom is screwed up, a healing, astringent ointment is expelled on to all parts of the rectum equally. Zinc ointment has healed many cases. Use opium in the salve for pain. I give sodium phosphate daily for the three weeks of this treatment. When the patient says he cannot use the pipe, I allow him to use an enema of tannic and boracic acids after the dilator. In office treatment, after dilatation, I touch the tumors with fluid extract of hydrastis.

Patients will often consult a physician for inflamed and strangulated hæmorrhoids, which they have been working at unsuccessfully themselves for days. To relieve this condition, place the patient in the knee chest position, cover the protruding mass with cotton soaked in a ten per cent. cocaine solution, then, when they are insensible, cover them with vaseline and insert the finger in the rectum. With the fingers of the other hand press out all the blood possible and rapidly replace the hæmorrhoids in the rectum. If unsuccessful at the first trial, give a hot water enema and repeat. If sloughing has occurred, or is about to take place, use charcoal poultice, followed by touching up with tincture of myrrh or carbolic acid. When the masses are large and the patient will not take home treatment I inject the tumors. I never think of doing this when the tumor is in a state of inflammation, but use hot douches, enemas, sitz baths, and soothing ointments till the congestion subsides. To inject, place the patient on the side, so that the mass is pendent and hangs away from its base; then the fluid will tend not to go upward as readily into the other tissues. Insert the needle midway between apex and middle and inject drop by drop, watching after each to see if the color changes. Use a fifty per cent. carbolic acid solution in oil or distilled water. Never use a weaker solution, for it is painful, and there is danger of its spreading into the surrounding tissues. The strong solution acts as a caustic and anæsthetic, and the resulting slough will end the tumor. A fifty to sixty per cent. solution will coagulate the albumin, forming a firm clot, so that there is no danger of embolism. Withdraw the needle carefully and notice if blood follows; if it does, not enough fluid was injected, so replace it and inject

again. Cover the tumor with vaseline, use an opium suppository, and there will be no pain.

Dr. Samuel D. Rumrill, of Springfield, Mass., writes:

With as little inconvenience to the patient as possible, I get all the previous history, so that I may find the cause, and therefore be better able to correct the morbid process as well as influence or cure associated diseases, which are pre-disposing factors of hæmorrhoids. Examination of the rectum, digitally and through a speculum in a good light, is necessary to ascertain the exact nature of the hæmorrhoids, the presence or absence of fissures, and the extent of proctitis that usually exists. I examine the urine in this class of cases. If in the history evidence of pelvic, hepatic, or cardiac disease is found, an examination of the organ in question should be made.

The first thing we are called upon to do is to alleviate the pain and sometimes to stop the hæmorrhage. A simple formula containing opium or cocaine in the form of an ointment usually is all that is required for the pain. If these fail, the newer analgetic preparations may be tried. Sometimes it is necessary to use hypodermic injections of morphine. A piece of gauze wet with thirty minims of adrenalin chloride, 1:1,000 solution, put into the rectum in apposition with the bleeding surface and allowed to remain there about two hours, is useful to stop the hæmorrhage, and I have noticed in some cases that it alleviated the pain also. When the hæmorrhage is from a small vein or artery, the bleeding point should be caught with forceps and tied with silk.

To correct the morbid process by local applications, it is necessary to put into the hands of the patient or attendant instruments and remedies, all of which must be kept sterile. I give very clear instructions regarding the care and use of these articles, so that there will be no resulting injuries to the anus and rectum. An enema of two ounces of olive oil should be given before every movement and retained as long as possible. After the movement a cleansing enema of soap suds should be given. The external parts should be cleansed with cold water, unless the patient objects very much to cold, when hot may be used. If any piles protrude, they should be anointed with some analgetic astringent ointment and pushed gently back. More of the ointment should be spread on gauze, placed against the anus, and retained with a T bandage. The cleansing and anointing of the external parts should be done three times a day, and after every movement.

For anointing I have used most often the following:

R	Powdered opium.....	20 grains;
	Powdered galls.....	30 grains;
	Lead acetate }	
	Ichthyol.....	½ drachm;
	Petrolatum.....	1 ounce.

M.

During the acute stage the patient should be kept in bed on a light diet. The bowels must be kept open and one or two movements obtained every day. To do this, I begin with twenty minims of fluid extract of rhamnus purshiana every four hours till a result occurs, then continue as often as necessary. If this does not accomplish the desired result, I try sulphur lotum, thirty grains, in a dessertspoonful of syrup or molasses night and morning. I am very careful not to purge my patient, and have seldom had to give anything more active than the above mentioned drugs. When I do I prescribe the phosphate or sulphate of sodium or the sulphate of magnesium. Salol, in five grain doses, three times a day, is useful to render the stools as non-irritating as possible. The diet should be light, nutritious, and of easy digestion. Alcoholic liquors must be prohibited. As soon as the inflammation and pain have subsided the patient may be up and about, the oil enemas and cleansing enemas discontinued, but the cleansing and anointing of the external parts, as well as the salol and cathartic, should be continued for several days. If constipation is the habit, the patient should be carefully instructed in every detail how to avoid this most troublesome condition. If there are any associated diseases, the patient should be warned not to aggravate them, and whenever possible they should be cured.

Bellevue Hospital Training School for Nurses.

—The following young women graduated from this school on January 10th: Sara Agnew, of Florida; Lillian Anderson, of New Jersey; Emily Burns, of Ohio; Margaret Connors, of New York; Edith Feit, of New Jersey; Katherine French, of New York; Mary Kearin, of Massachusetts; Mabel Light, of Wisconsin; Mary McConville, of New York; Gertrude McCutcheon, of Pennsylvania; Elizabeth McConnell, of Pennsylvania; Maud Metcalf, of New York; Jeannette Metzger, of Pennsylvania; Emma Pritchard, of Florida; Charlotte Underhill, Sadie Zetterstorm, of New York.

Wisconsin Medical Union.—Dr. F. X. Schaeffer, of Milwaukee, has been appointed secretary of this union to fill the unexpired term of Dr. R. P. Hansen, of Oshkosh, who has resigned. The office will be moved to Milwaukee.

Correspondence.

LETTER FROM LONDON.

Medical Matters in the Newspapers.—Laxity as to the Incarceration of the Alleged Insane.—An Outbreak of Anthrax.—The Campaign Against Consumption.—The Reported Scarcity of Medicinal Plants.—English and American Hospitals in Continental Europe.—Homes for Aged Nurses.—Hospital Funds and the Medical Schools.—A Tropical Expedition.—Poverty and Distress.—Quack Advertisements.—The Lavoisier Medal.

LONDON, January 2, 1905.

The amount of information in a London newspaper astonishes the visitor. The information is, moreover, condensed, for an American "display head" or a full page "comic" would only impress the English editor as a reckless waste of valuable space. Accuracy is a characteristic, and even the silliest of the London "yellows" would attain a sedate reputation in New York. What surprises me most of all is the abundant medical comment. This is, no doubt, supplied because of a greater and more intelligent interest in medical things than prevails in other places.

The lunacy law is far from perfect. Doubting some recent assertions in the press, I took the trouble to make some inquiries. I discovered, however, that as things stand, a bald assertion as to a person's mental state is all that is necessary to justify a relieving officer in taking such a person for confinement in an insane ward while awaiting examination. A practical joker may thus have any one sequestered for a time at least, after which, here as elsewhere, the unfortunate tendency is to presume the worse until it is disproved.

Recently there have been several cases of anthrax in the Mile End quarter. The centre of infection lay in a horse hair and fibre wareroom. In one case the brother of a horse hair worker became ill and died. A post mortem demonstrated the disease, and subsequent microscopical examination confirmed the diagnosis. The coroner concluded that the germs were conveyed on the person of the worker to his home, where they infected the bedclothing and displayed their virulence on opportunity.

The National Association for the Prevention of Consumption has written to the steamship companies pointing out the great danger of the spread of phthisis from diseased persons to healthy folk on board. The society suggests that the companies, in contracts with passengers, should reserve power to remove consumptives

from cabins to accommodations designed for their special segregation. The idea is good, but it seems to the writer that the general campaign of education in this matter is not being pushed to the same extent in London as is the case in the chief American cities. In New York there is hardly a schoolboy but can give at request all important phases of this question. In Chicago, in San Francisco, much is being done. In Washington, D. C., Charles F. Weller, of the Associated Charities, and Dr. Jesse Ramsburg are giving, year in and year out, two or three free lectures a week throughout the town.

Some sage—name not given—"bursts out of his cell, with a terrible yell" and puts into print the assertion that medicinal herbs are not cultivated as they were a century ago. Beyond parsley, sage, mint, and thyme, the average housewife seems not to care. This is scarcely news, but I am surprised to note that a few old fashioned gardens still contain basil, balm, borage, chamomile, fennel, hyssop, lavender, marjoram, rosemary, rue, and tarragon.

On December 15th the foundation stone of an English hospital was laid in Rome. The hospital is to be erected by the nursing sisters of The Little Company of Mary. This should interest Americans. The English have a hospital in Paris and one in Berlin, while the proposed American hospital in Paris seems to be as far off as ever from realization; unless, indeed, things have changed since my last information.

On December 9th Princess Christian, of Schleswig Holstein, opened in Clapton Square a new settlement for aged nurses. This, it is to be hoped, will be the first of a series of homes for aged nurses who are past work and have a small pension.

At the recent annual meeting of the Metropolitan Hospital Sunday Fund, which was held at the Mansion House, there was a heated controversy over the question of assistance to medical schools. The Honorable Stephen Coleridge moved that no money be assigned to any hospital that contributed to the support of the medical schools or laboratories from its general fund for the relief of patients. The London Hospital, in particular, was adversely commented upon by another speaker for having spent £7,000 on a recreation ground for students. The fact that the land is now worth £10,000 was ignored. The lay governing board is fully as preposterous in England as it is in the United States.

An expedition fitted out by Liverpool merchants is being sent out by the Liverpool School of Tropical Medicine. Professor Boyce, Dr

Evans, Dr. Clarke, Dr. Giles, and Dr. MacConnell are among those on the expedition. Sierra Leone, Gambia, Lagos, the Gold Coast, and Nigeria are fields to be explored. Particular attention, of course, will be given to yellow fever and malaria.

There is fearful distress among the working classes in some of the poorer quarters. In West Ham, in particular, there are 12,000 adult males, of whom 2,000 are unmarried, and 3,000 single women, out of work. In all, 30,000 sufferers are without food. The most pitiable among these are the infants. They are doubly to be pitied because of the appalling ignorance of the low grade British mother. All principles of hygiene are ignored, and cleanliness is uncommon. I have recently made note of a small lodging house in which the street dirt had accumulated on the floors to such an extent as to require, not a broom, but a shovel for its removal. The kitchen floor was covered with sewage. One hundred people lived in the house. Bad food—stale fish, contaminated milk, and half rotten vegetables—are the rule. The costermongers who vend these edibles (?) are haled to court with commendable frequency, though the usual "one month at hard labor" does not seem to be very effective as a preventive of further offenses. Unfortunately, however, one month is the limit of the law.

The English are too fond of hooting to stand for such nonsense as Dowieism, but I shall quote an advertisement: "W——'s Gripe Water. Administered according to directions, the child will be enabled to properly assimilate its food. Should be in every mother's hand."

The Lavoisier gold medal has been awarded to Professor Dewar for his researches in the liquefaction of gases. This medal is awarded by the French Academy of Science.

Therapeutical Notes

Malignant Syphilis.—Sir Alfred Cooper, in the *Practitioner*, for July, 1904, advocates the Zitmann treatment in cases where other methods have failed. It is said to be indicated in cases of severe and rapid ulceration causing much destruction of tissue and general exhaustion. In many cases two weeks' treatment is said to arrest the progress of the disease and bring about rapid healing. The evening before treatment is begun the patient takes 2 grains of calomel, 5 grains of colocynth, and 2 grains of hyoscyamus. The medicine consists of two decoctions. The first contains sarsaparilla root, 4 ounces; aniseed and fennel seed, of each 500 grains; senna leaves, 1 ounce; and liquorice root, 4 ounces. These are bruised and added to 4 gallons of water, together

with 80 grains each of white sugar, alum, and calomel, and 20 grains of red mercury sulphide, enclosed in a linen bag. The water is then boiled down to 1 gallon. The dregs of this are then put into 3 gallons of water with 2 ounces of sarsaparilla root and 1 ounce each of lemon peel, cardamom seed, and liquorice root, and boiled down to 1 gallon. This is decoction No. 2. In the morning the patient drinks one half pint of hot decoction No. 1 at nine, ten, eleven, and twelve o'clock, and in the evening one half pint of cold decoction No. 2 at three, four, five, and six. The patient is kept in bed in a warm room, and the treatment is repeated for four days. On the fifth day the patient gets up and takes a hot bath. In the evening he takes two pills, as at first, and the decoctions are continued on the next day. The treatment lasts fifteen days.

Use of Podophyllin.—Podophyllin, according to *Revue française de médecine et de chirurgie*, for November 21, 1904, is a drug that has very different effects on different subjects, so that its administration should be guarded. One excellent prescription is:

R Podophyllin } of each.....3 centigrammes
Powdered ginger } ($\frac{1}{30}$ grain);
Honey.....a sufficient quantity.

M. For one pill.

Belladonna tends to diminish the irritating action of podophyllin:

R Podophyllin } of each.....2 centigrammes
Extract of belladonna } ($\frac{1}{30}$ grain).
Powdered belladonna root }

M. For one pill; one or two pills daily.

Fluorescent Light in Skin Diseases.—Jesionek, in *Münchener Medizinische Wochenschrift*, for May 10, 31, and June 7, 1904, gives an account of Tapeiner's treatment of skin diseases by means of fluorescent bodies under the action of light. The part to be treated is painted with the fluorescent solution and exposed to light. Sunlight is used when possible; if not, an arc lamp of 220 volts and 25 ampère capacity is used at a distance of 4 to 6 feet. The light is concentrated and the heat rays are intercepted. For eosin, which is the chief fluorescent substance used, a mixture of copper sulphate and picric acid is best. The solution of eosin used is from 0.01 to 0.1 per cent. Jesionek has treated nine cases of rodent ulcer and epithelioma. All cases but one improved; one was cured after two and a half months. Three cases relapsed after improvement.

Cascara Sagrada.—*Revue française de médecine et de chirurgie*, for November 21, 1904, states of this drug that it should be generally taken fasting. It is especially valuable in chronic constipation, its prolonged use does not seem to establish a habit, and it causes no diarrhoea, colic, or nausea. It may be taken as a powder in capsules containing from $3\frac{3}{4}$ to $11\frac{1}{4}$ grains; in the fluid extract, in 20 to 40 drop doses daily by an adult; in compressed tablets from 3 to 6 grains in weight; or in the following pill:

R Extract of cascara sagrada } of each.....10 centigrammes
Powdered cascara } ($1\frac{1}{2}$ grain).

M. For one pill, to be silver coated.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

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NEW YORK, SATURDAY, JANUARY 14, 1905.

THE DEFECTIVENESS OF WATER WHEN TOO PURE.

The admirable natural fitness of the elements for the purposes which Nature intended then to serve is forcibly illustrated by certain facts going to show the inferiority, indeed the actual harmfulness, of water as a medium for fresh water animals to be surrounded by when it has been rendered as nearly pure as it is possible to make it. For a number of years there have been before the profession accounts of experiments by competent observers tending to establish as a fact the noxiousness of distilled water to certain crustaceans and other fresh water or amphibious animals. But there has been a weak point in these observations, that of the possibility that the effects noted were not merely those of the purity of the water, but those of its contamination by some poisonous substance in the process of distillation. Mr. G. Bullo, of the Rudolph Spreckels Physiological Laboratory of the University of California (*University of California Publications, Physiology*, vol. i, No. 22) has therefore rendered a tangible service to our knowledge by going over the ground again in a very thorough manner.

Mr. Bullo's experiments were made on fresh water crustaceans. He finds distilled water highly prejudicial to these animals under all circumstances,

but particularly when, as a result of the distillation having been conducted in copper vessels, it contains copper even in so minute a proportion as one part in 77,000,000—a fact worth noting in view of the recent proposal to employ copper as an addition to drinking water for bactericidal purposes. This idea of the noxiousness of copper in such experiments had been suggested before, but none the less Mr. Bullo has done well to investigate it anew. Even from glass vessels water takes up a certain amount of the constituents of that material, but Mr. Bullo shows that it is not to such contamination that the noxiousness of the water is attributable; at least he has distilled water in vessels of quartz and platinum, thereby rendering it presumably free of discoverable foreign matter, and has found it still toxic. It seems justifiable to speak of it as actually toxic, and not merely inadequate to its life-giving functions, for Mr. Bullo finds that the greater the amount of distilled water in which his crustaceans are placed the sooner they die. The bearing of such findings on medicine may not be immediate, but it would be foolhardy to say that they will not at some time be felt. All exact knowledge is desirable, and sooner or later most of it is likely to prove useful.

DECHLORINIZATION IN EPILEPSY.

Much attention has been paid of late, particularly in France, to the withholding of sodium chloride as an adjunct to the bromine treatment of epilepsy, as we have before remarked. An important contribution to our knowledge of the subject was made at a recent meeting of the Paris Hospitals Medical Society by M. Jules Voisin, M. Roger Voisin, and M. L. Krantz (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, December 22nd).

These gentlemen had experimented upon thirty epileptics, including both adults and children, allowing them an ordinary diet for a month and dechlorinizing the diet for the following month, alternating the two systems of feeding. During the first month, ordinary diet being allowed, there were among the thirty patients 290 pronounced epileptic attacks and 365 attacks of vertigo; during the second month (without salt) the numbers were 170 and 114; in the third month

(with salt) they were 261 and 216; in the fourth month (without salt) they were 262 and 195; in the fifth month (with salt) they were 213 and 222. It will be seen that there was a notable reduction during the second month, but that the decrease was not maintained in the fourth month.

Dechlorinization in itself, the experimenters find, has no effect on the number of seizures; it simply acts to facilitate the operation of the bromides. But it has a very prejudicial effect on the patients. It so reduces the appetite as practically to lead them to starve themselves, and the result of this is a form of melancholia. During the second month of the experiment they bore up bravely, forcing themselves to take food in the thought that the course pursued was likely to prove of benefit to them, but in the fourth month they broke down and became the prey of mental confusion and various hallucinations of sight, taste, and general sensation and of the delusion that they were being poisoned. In addition, they had dyspepsia, great fatigue, disinclination to work, lumbar pains, and muscular cramps. All this, it is pointed out, is neither the depression of bromism nor the mental impairment produced by epilepsy. Some of the patients were so averse to taking food that they had to be fed forcibly. So far as these experiments go, they certainly seem to show that any advantage as regards the frequency of paroxysms that may be gained by dechlorinization in epilepsy is more than offset by a falling off in the general condition.

THE FREQUENCY OF DIPHThERITIC PARALYSIS.

It is seldom that any subject receives in a periodical such encyclopædic treatment as is given to that of diphtheritic paralysis in an article published in the November and December numbers of the *Practitioner*, by Dr. J. D. Rolleston, of the Grove Fever Hospital of the Metropolitan Asylums Board. From this monograph, which not only reflects the author's observation, but also embodies a digest of many of the more important publications on diphtheria, one may learn much concerning the various features of the disease, but of course it is with the consequent paralysis that the author chiefly deals. In

his consideration of this sequela there is a great deal that is of value to the practitioner, but we can here give attention to only one of its points, that of the frequency with which the paralysis occurs.

There is a want of agreement among writers as to the connection between the severity of the angina and the probability that paralysis will follow. Many eminent observers have thought that paralytic sequelæ were more likely to follow a mild than a severe attack. Rolleston ranges himself with those who maintain the opposite opinion, and he accounts for the discrepancy in a measure by the remark that in the severe cases many of the patients die before the paralysis has had time to declare itself. At least this was the case before the antitoxine treatment came into general use, and the changed results as to life and death that that treatment has brought about account for the apparent greater prevalence of diphtheritic paralysis at the present time. Furthermore, he says that before the days of antitoxine treatment many patients withdrew themselves from medical observation when convalescence was established, and any subsequent paralysis that developed was often too slight to attract the notice of the patient or his friends. It is probable, too, that in many instances definite paralysis was regarded merely as asthenia supervening on a severe illness. Even now, when the whole course of the disease is more closely studied than it formerly was, slight instances of the affection are easily overlooked.

INFECTION OF THE UMBILICUS IN THE NEWLY BORN.

Dr. Audion, in his thesis (Paris, 1901), has contributed greatly to our knowledge of the important subject of umbilical infections of newly born babies, and points out in particular that certain obscure cases of infection, ending in death, may be explained by a very simple inflammation of the umbilicus which perhaps has been cured several days before the death of the child. From long anatomical and physiological studies he establishes a most important fact, which explains the ease with which umbilical infections can arise, namely, that the long and complicated cicatrization of the um-

bilicus requires a variable time according to the individual and the attending circumstances. Until two or three weeks, or even more, have elapsed, it is impossible to be sure that an umbilicus is completely cicatrized, and Audion has frequently found post mortem an incomplete cicatrization in an infant whose umbilicus had appeared to be completely closed for several days. He has also noted in living babies a drop of blood or cloudy serum in the navel several days after an apparent complete closure. After complete cicatrization most careful precautions should be continued, because histological studies have shown that at this time there still remains much friable young tissue which is eminently disposed to become infected and to suppurate. While we may not attribute all diseases of newly born infants to umbilical infection, it is nevertheless true that, pathologically and ætiologically, more attention should be given to it than has been given in the past, and that its study with the microscope may greatly aid the physician in the pathology of disease occurring during the first few weeks of life, thus leading to an efficacious prophylaxis.

The various infections manifest themselves by a group of more or less serious symptoms, according to the severity of the septic process, the ensemble of which, if not characteristic, is at least quite constant. The following forms are met with: Primary putrefaction, or moist gangrene, of the cord gives rise to a peculiar aspect of the organ, which, instead of drying up, or if it has begun to do so, at its free end, remains partly or wholly soft, grayish in color, and moist, and at length becomes fœtid. This phenomenon appears from the second to the fourth day after birth and continues until the cord is surgically removed or until it falls off. This, however, is usually delayed on account of the abnormal moisture of the umbilicus, and many cases of tardy detachment of the cord are merely due to a slight degree of putrefaction arising from a careless dressing, or the vessels, having ruptured at the base, give rise to an extravasation of blood which hinders the process of drying in the stump. The objective phenomena are nearly always accompanied by a more or less considerable rise in temperature. Moist antiseptic dressings are to be employed in the first place, and then dry ones, as this treatment appears to be followed by the best

results. The process, if left to itself, exposes the infant to serious complications from infection of the deeper structures of the umbilical apparatus.

Fungus is occasionally met with, and is formed by the production of a vast amount of inflammatory granulation tissue, the surface of which becomes covered by a purulent exudate, generally fœtid. The friction of the clothing and the inflammatory process prevent cicatrization from taking place. Infection of the umbilical wound may also result in tetanus, a disease which has become infrequent in infants at the present time, but which formerly was common. The same may be said of umbilical erysipelas, or phlegmonous omphalitis, and of gangrene of the umbilicus. One still meets with umbilical blennorrhœa, simple ulceration of the umbilicus, and small subumbilical abscesses, all of which are not usually serious, but may be the source of deeper infection. Phlebitis and arteritis of the umbilicus are the lesions most prone to produce septic processes, and they often pass unnoticed. There are, however, certain accidents arising from the changes in the vessels, such as late umbilical hæmorrhage, which, so often due to hæmophilia, to hereditary syphilis, and to a kind of hereditary family predisposition, have been recently observed by Boissard.

Démelin, in his excellent article on umbilical hæmorrhages, classifies those occurring secondarily or spontaneously into: 1. Hæmorrhage due to arteritis arising at about the time the cord falls off. 2. Those occurring in acute degeneration of the infant, with icterus of infective origin. 3. Those in the septicæmia of the newly born, which are produced by the same mechanism as in cases of congenital syphilis following umbilical inflammation, then periphlebitis and endophlebitis, with septic foci in the liver, spleen, etc. Certain infectious foci, such as osteomyelitis, may be attributed to this type of septicæmia.

The researches of Lesage, Démelin, and Boissard on the infectious origin of icterus in infants have shown that the umbilical wound is one of the open doors for the reception of the bacteria, while, according to Durante and Audion, hepatic infection of umbilical origin may, in a weak infant, only present the mildest symptoms and simply mark a step in the slow course of a latent but fatal septicæmia the nature of which is as yet unknown and its symp-

tomatology vague. This septicæmia may perhaps explain the bronchopneumonia, the intestinal lesions, and slight pericarditis, characterized by the presence of a small amount of light yellow liquid in the pericardium and a few lesions of the endocardium, the origin of which is frequently unknown. Microscopic pathological anatomy, aided by well conducted bacteriological investigations, can alone solve the problem.

The therapeutic conclusion from all this means a most careful antiseptis in the treatment of the umbilicus, both before and after the cord has fallen off, and it should be continued for some time after cicatrization has appeared to have become complete. In order to facilitate the dressings and do away with the ligature, which is a frequent source of infection, Porak has devised an omphalotribe, a kind of clamp which crushes the cord, instead of ligating it. Desiccation takes place more rapidly, but this procedure does not enable us to dispense with antiseptic precautions.

CHARLES GREENE CUMSTON.

LARYNGEAL NEURITIS.

Neuritis laryngea is the name given by Boenninghaus (*Deutsche medizinische Wochenschrift*, 1904, No. 46; *Berliner klinische Wochenschrift*, December 12th) to a painful affection of the neck associated by him with laryngeal catarrh. It is characterized by two points of tenderness on pressure. One of them is situated between the hyoid bone and the thyroid cartilage, and the other immediately above the clavicle, close to the trachea, points corresponding to the emergence of a branch of the superior laryngeal nerve through the thyrohyoid membrane and to that of the inferior laryngeal nerve. The catarrh, though probably the starting point of the neuralgia, seems to be trifling in comparison with the severity of the external pain. Massage of the neck has proved very helpful in this affection, but the catarrh also calls for treatment.

AN ALLEGED DANGER IN SEALING WAX.

A Russian physician, Dr. Flaczynski (*Petersburger medizinische Wochenschrift*, 1904, No. 32; *Berliner klinische Wochenschrift*, December 12th), thinks that the continuous use of sealing wax in such places as post offices and express offices is fraught with danger to the health of the employees, since the materials with which it is colored

are often poisonous and to some extent they are vaporized by the flame employed.

ONCOLOGY.

A hospital devoted to the study and treatment of tumors—especially the malignant tumors, we infer—has recently been opened in Philadelphia. The medical staff includes Dr. Boardman Reed, Dr. Addinell Hewson, Dr. G. Betton Massey, and Dr. Howard R. Swayne. This personnel seems to warrant the prediction that the new institution will do good work in the field to which it is devoted.

Obituary.

CHURCHILL CARMALT, M. D.,
OF NEW YORK.

In the recent death of Dr. Carmalt, as the result of a brief illness, the career of a very promising practitioner has been cut short comparatively early in its course. We cannot well spare such men from the ranks of the profession, and the loss of Dr. Carmalt will be seriously felt by his colleagues.

Concerning the Results Which Attend the Leaving of Gauze Compresses in the Abdominal Cavity.—Riese, in *Fortschritte der Medizin*, for October 1, 1904, reports two cases which illustrate the outcome of such accidents as are mentioned in the above title. In the first case the compress penetrated the small intestine and induced phenomena of ileus from obstruction. An operation was performed and the remarkable situation was at once revealed. In the second case there was cystic encapsulation of the compress in the mesentery of the sigmoid flexure. The symptoms were diarrhoea and the sensation of the presence of a foreign body in the peritoneal cavity. The evidence of an abdominal tumor led to the erroneous diagnosis of intraligamentous cyst of the ovary, the abdomen was opened, and the true condition revealed.

The author has been able to collect from the literature of the subject 41 cases in which this accident has occurred, and in which there have been four varieties of results. Peritonitis has occurred with least frequency if the operation was an aseptic one. A more frequent outcome has been the formation of an abscess of the abdominal wall through which or through the vagina the compress has been extended. The third variety was encapsulation of the foreign body, and the fourth the penetration of the intestine by the compress from which it was expelled through the anus, or was retained within the intestine. There are various reports in regard to the frequency of this accident. At the Warsaw Hospital it occurred ten times in 1,000 abdominal sections. To the author it has occurred twice in 900 abdominal operations.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 16th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, January 17th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y. (annual); Baltimore Academy of Medicine.

WEDNESDAY, January 18th.—New York Academy of Medicine (Section in Genitourinary Diseases); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, January 19th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, January 20th.—New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); New York Academy of Medicine (Section in Orthopedic Surgery); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

Change of Address.—Dr. R. Harcourt Anderson, to 252 Madison Avenue; telephone, 1832 38th Street.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 7, 1905:

	December 31.	January 7.
Cases.	Deaths.	Cases. Deaths.
Measles	126	6
Diphtheria and croup	292	45
Scarlet fever	206	16
Smallpox .....	..	..
Chickenpox	87	138
Tuberculosis	434	282
Typhoid fever	32	7
Cerebrospinal meningitis	18	..
	1,207	226
		1,116
		281

City Hospital, New York.—At the annual meeting of the medical board of the City Hospital, Blackwell's Island, Dr. Edward S. Peck resigned the position of visiting surgeon to the eye division, after an uninterrupted service of over twenty-five years. Dr. Peck has been appointed consulting surgeon to the same division.

The Society of Medical Jurisprudence.—At a meeting of this society, held at the Academy of Medicine, on January 6th, the papers were: The Society of Medical Jurisprudence, Its Progress, Prospects, and Importance, by the retiring president, Mr. Theodore Sutro; The Importance of Medical Jurisprudence for the Physician, by the president elect, Dr. Carl Beck.

Many Pneumonia Cases in Bellevue.—It is stated that Bellevue Hospital is crowded to overflowing with cases of pneumonia, bronchitis, and influenza. About fifty patients have to sleep on spring mattresses on the floor. Some relief is ex-

pected to be had on January 25th for this overcrowded condition, when four portable buildings, each holding thirty patients, will be erected.

Nursery and Child's Hospital.—The annual charity ball in behalf of the Nursery and Child's Hospital takes place on February 2nd at the Waldorf-Astoria. Owing to the loss sustained through the burning of the administration building at the country branch on Staten Island, there will be an unusual need of funds this year by the hospital. Boxes and tickets for the ball may be purchased of Mrs. F. N. Goddard, No. 33 East Fiftieth Street, daily, from 11 to 1 o'clock.

Two New Fakirs "Working" the Profession.—We have been requested to warn physicians against "Dr. Gustave Alexander," who is collecting money under false pretences. There is also "Mr. Litke," whose specialty is representing himself as the agent of a benefit organization, engaging his professional victim as medical officer of his society, and then attempting to collect a proposition fee. Telephoning to the nearest police station is a good measure when approached by these persons.

The Society of the New York Hospital.—Several additional physicians are needed in the class of genitourinary diseases in the male, which meets at the House of Relief, 67 Hudson Street, every Tuesday and Friday night at 8 o'clock. The number of patients averages over 75 each night, and constitutes a very instructive clinic for the study of this specialty. Physicians who are interested in venereal diseases, and who are willing to attend faithfully, will receive regular, but unofficial, appointment upon application to Victor C. Pedersen, M. D., 16 West Sixty-first Street.

The New York Academy of Medicine.—The section in medicine will meet on Tuesday, January 17th, at 8.15 p. m. Order: Presentation of Cases and Specimens; Clinical Reports: (a) Case of Muscular Insufficiency of the Heart with Gross and Microscopical Findings, by Bond Stow, M. D.; (b) Four Cases of Exophthalmic Goitre in One Family, by John J. Cotter, M. D.; paper: The Treatment of High Bloodpressure, by George B. Wallace, M. D. Discussion. Charles H. Lewis, M. D., chairman. E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

Medicolegal Society.—The Medicolegal Society will give a complimentary dinner for ex-Justice D. Cady Herrick and ex-Justice John J. Freedman on January 18th on the occasion of the annual dinner and installation of officers of the society. A large number of prominent guests will be invited. Members of the bar who are not members of the society desiring to unite in this tribute to the justices may send their names and addresses to Clark Bell, president of the society, or Dr. A. P. Grinnell, chairman of the committee of arrangements, No. 500 Fifth Avenue.

New York State Medical Association.—This association will hold a stated meeting on Monday, January 16th, at 8 p. m. Programme: Executive session; Scientific session; presentation of clin-

ical cases or reports, pathological specimens, new instruments, etc. Papers: Health of the Nation, by Walter Wyman, M. D.; Health of the State, by Daniel Lewis, M. D.; Health of the City, by Thomas Darlington, M. D.; Health of the Port, by Alvah H. Doty, M. D.; discussion by Dr. George P. Fowler, Dr. Edward Janeway, Dr. A. Jacobi, Dr. J. B. Cosby, Dr. Hermann Biggs, Dr. Ernst Lederle.

PHILADELPHIA.

Pathological Society.—The annual exhibition meeting of the Pathological Society of Philadelphia was held in the Mutter Museum of the College of Physicians on January 11th and 12th.

St. Mary's Hospital, Philadelphia.—The annual meeting of the staff of St. Mary's Hospital was held in the hospital building, Frankford Avenue and Palmer Street, on January 3rd.

Marriage.—Dr. William Pepper and Miss Mary Godfrey were married in St. James's Episcopal Church on December 31, 1904, at noon. Dr. and Mrs. Pepper will reside at 1813 Spruce Street.

Report of Mary J. Drexel Home.—The annual report of the Children's Hospital of the Mary J. Drexel Home shows that 573 patients were treated during 1904. There were 340 free patients and 381 surgical operations.

Personal.—Miss Margaret Pridham, for the past two years directress of nurses in the Medico-Chirurgical Hospital, has resigned, the resignation to take effect on February 1st. On that date Miss Pridham will enter upon the duties of directress of nurses in the Jewish Hospital.

Dr. Benjamin Lee, secretary of the Pennsylvania State Board of Health, sailed for Havana on January 5th to attend the thirty-second annual meeting of the American Public Health Association.

Dr. Horace Jayne has resigned as director of the Wistar Institute of Anatomy and Biology of the University of Pennsylvania.

Obstetrical Society.—At the meeting of the Philadelphia Obstetrical Society, held January 5th, Dr. J. Clarence Webster, professor of obstetrics in the University of Chicago, delivered an address on A Consideration of Fibroid Tumors of the Uterus, Based Upon a Study of a Series of Cases Treated Surgically. The discussion was opened by Dr. E. E. Montgomery, and continued by Dr. John B. Deaver, Dr. Barton Cooke Hirst, Dr. Charles P. Noble, Dr. J. M. Baldy, Dr. John G. Clark, and Dr. W. Easterly Ashton.

Hospital Trustees Elected.—Contributors to the Episcopal Hospital met in the Church House on January 4th and elected these managers: The Reverend Dr. J. D. Newlin, the Reverend J. B. Harding, the Reverend Dr. William B. Bodine, William Platt Pepper, James Logan Fisher, Dr. Wharton Sinkler, H. B. Coxé, Jr., and C. S. W. Packard.

Alfred Moore, a lawyer and a member of the Board of City Trusts, was elected a trustee of the Jefferson Hospital, vice Judge Michael Arnold, deceased, on January 4th.

Section in General Medicine, College of Physicians.—The following was the programme of the section in general medicine of the College of Physicians, Monday, January 9th: Dr. Herman B. Allyn, The Use of Theosin and Theosin Sodium Acetate as Diuretics; Dr. J. H. W. Rhein, The Pathological Study of Acute Myelitis; Report of Two Cases; Dr. J. Alison Scott, A Study of Fifty Cases of Perforation in Typhoid Fever, with Conclusions Based on Ten or More Cases Supposed to be Perforative, but Proved Otherwise; Dr. John M. Cruice, Sarcoma of the Liver.

Hospital for the Study of Malignant Disease.—The Oncologic Hospital opened its new hospital and dispensary, for the study and treatment of cancer, at Forty-fifth and Chestnut Streets, on January 4th. The dispensary service will be held at 2 o'clock daily. The hospital can accommodate 24 patients at present. Dr. Boardman Reed is the attending physician. Dr. Addinell Hewson, Dr. G. Betton Massey, and Dr. Howard R. Swayne are the attending surgeons. Dr. William S. Newcomet is in charge of the x ray department.

Scientific Society Meetings for the Week Ending January 21, 1905.—Monday, January 16th, Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, January 17th, Section on Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences. Wednesday, January 18th, Philadelphia County Medical Society (business meeting, private); Section in Otology and Laryngology, College of Physicians. Friday, January 20th, University of Pennsylvania Medical Society; American Philosophical Society.

Charitable Bequests.—By the will of William McFarrick, a liquor dealer, who died December 14th, the residuary estate, on the death of the widow and her sister-in-law, will be divided among the Presbyterian, Episcopal, Methodist, and Howard Hospitals for the establishment of free beds. The will requests the widow to give a sufficient amount to St. Agnes's Hospital to establish a free bed.

In the Orphan's Court on January 5th, Judge Ashman awarded a balance of \$52,629.23 for distribution. From this amount the Presbyterian Hospital receives \$5,000 for the maintenance of a free bed.

The Southern Dispensary, Philadelphia.—At the annual meeting of the Southern Dispensary, 318 Bainbridge Street, held January 4th, the following officers and managers were elected: President, John L. Thompson; secretary, Clement R. Bowen; treasurer, Paul J. Field; resident apothecary, W. W. Seary; managers, George W. Prile, John L. Thompson, Dr. N. Hickman, David Jameson, Dr. W. Joseph Hearn, Clement R. Brown, John Middleton, Paul J. Field, Dr. E. Filson Ward, Joseph A. Robbins, George May, and Charles J. Thomson. In the last year 8,092 cases were treated and 14,474 prescriptions compounded.

College of Physicians.—At the meeting of the College of Physicians held January 4th the honorary librarian reported sixty-eight volumes added to the library during December. Dr. James M. Anders read a memoir of the late Dr. F. Savary Pearce. The following officers and committees were elected for 1905:

President, Dr. Arthur V. Meigs; vice-president, Dr. James Tyson; censors, Dr. Richard A. Cleemann, Dr. S. Weir Mitchell, Dr. Horace Y. Evans, Dr. Louis Starr; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councillor, to serve until January, 1908, Dr. De Forest Willard; committee of publication, Dr. G. G. Davis, Dr. Thompson S. Westcott, Dr. William Zentmayer; library committee, Dr. George C. Harlan, Dr. Francis X. Dercum, Dr. Charles A. Oliver, Dr. William J. Taylor, Dr. S. Weir Mitchell; committee on Mütter Museum, Dr. John H. Brinton, Dr. George McClellan, Dr. J. Alison Scott; hall committee, Dr. John K. Mitchell, Dr. Thomas H. Fenton, Dr. B. Alex. Randall, Dr. E. Hollingsworth Siter, Dr. A. O. J. Kelly; committee on directory for nurses, Dr. Wharton Sinkler, Dr. James C. Wilson, Dr. James V. Ingham.

The Health of the City.—During the week ending December 31, 1904, the following cases of transmissible diseases were reported to the bureau of health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	73	11
Scarlet fever.....	64	2
Chickenpox.....	30	0
Diphtheria.....	86	10
Cerebrospinal meningitis.....	2	1
Measles.....	14	0
Whooping cough.....	8	2
Tuberculosis of the lungs.....	31	40
Pneumonia.....	71	69
Erysipelas.....	11	2
Puerperal fever.....	1	1

The total death rate for the week was 497, in an estimated population of 1,408,154, corresponding to an annual death rate of 18.36 per 1,000 population. The total infant mortality was 112; 97 under one year and 15 between one and two years of age. There were 36 still births; 25 males and 11 females. The following deaths from other transmissible diseases were reported: tuberculosis, other than tuberculosis of the lungs, 9; dysentery, 2; diarrhoea and enteritis under two years, 14. The temperature for the week was variable; on the 25th the thermometer registered from 18° to 24°; on the 28th, from 54° to 24°; on the 31st, from 53° to 32°. The humidity was high, as a rule. Snow fell on the 25th, and rain fell on the 26th and 27th.

Activity of the Coroner's Office for 1904.—

During 1904, 3,467 inquests were held by the coroner of Philadelphia county; 1,065 of the victims were killed by railroad accidents, injuries by falls, being run over by vehicles, caught in machinery, crushed by elevators, etc. Of the remaining cases investigated by the coroner 448 were victims of heart disease, 209 were suicides, 148 died of burns or scalds, 99 were drowned, 43 homicides, 52 were victims of gunshot wounds, 156 were asphyxiated, 38 died from malpractice, 21 were poisoned, 9 died from tetanus, 6 from electric shock, 2 from heat stroke, and one was struck by lightning.

Northern Medical Association.—The following was the programme of the Northern Medical Association at its meeting held January 13th: Dr.

John K. Knorr, Jr., The Treatment of Adenoids; Dr. T. R. Currie, Address of the Retiring President. The following officers were elected: President, Dr. Albert Bernheim; vice-president, Dr. Howard D. Geisler; recording secretary, Dr. B. L. Singer; corresponding secretary, Dr. Thomas Shriner; treasurer, Dr. John W. Millick; librarian, Dr. R. J. Hess; censor, Dr. I. P. Strittmatter.

Deaths.—Dr. Martin L. Yost, of Allentown, Pa., was struck by a trolley car, while driving, on the afternoon of December 3rd, and almost instantly killed.

Dr. Lyman Leavitt, a graduate of the Pennsylvania Medical College in 1856, died on December 30, 1904, at Trenton, N. J., aged 74 years.

Dr. Henry Clay Clark died at his home in Woodbury, N. J., on December 27th, aged 74 years. Dr. Clark graduated from the medical department of the University of Pennsylvania in 1853. Dr. Clark was appointed assistant surgeon of the Second Regiment, New Jersey Volunteers, in 1861, and was taken prisoner at the second battle of Bull Run.

Dr. Homer J. Doucet was buried from 2604 North Eleventh Street on December 24th. Dr. Doucet was born in France, and received his medical education in that country. He was the author of several books on socialism. He was 84 years of age.

Dr. Frederick H. Griffin died from inhaling illuminating gas on January 1st. Dr. Griffin graduated from the medical department of the University of Pennsylvania. He was about 47 years old.

Dr. Jacob P. Bixler died at his home in Carlisle, Pa., on December 3rd from cerebral hemorrhage, at the age of 65 years. Dr. Bixler graduated from the Jefferson Medical College in 1866, and has been an active practitioner ever since. He was a member of the Medical Society of the State of Pennsylvania and of the Cumberland County Medical Society.

Dr. Samuel K. Barndt died at his home in Alburtis, Pa., on December 7th, aged 62 years. Dr. Barndt graduated from the Jefferson Medical College in 1863.

Dr. Edith Barker, for five years pathologist to the State Asylum for the Insane at Norristown, died recently. Dr. Barker graduated from the Woman's Medical College of Pennsylvania in 1897.

GENERAL

Dr. John Frick, of Memphis, has been placed in charge of the Public Health and Marine Hospital Service at Laredo, Tex. He has been connected with the service for nearly six years.

Dr. C. N. Raymond, of Rehoboth, Mass., was assaulted on the evening of December 31st and severely injured. It is believed that his assailant has been apprehended.

Dr. G. E. Seaman has resigned his position as assistant health commissioner of Milwaukee. It is believed that Dr. Louis Tuldner will succeed Dr. Seaman.

Emergency Hospital, Milwaukee.—Dr. W. F. Darling has resigned his position as senior interne of this hospital, and will probably be succeeded by Dr. C. E. Oberton, whose place will be filled by Dr. Ralph Pearis.

Corning, N. Y., Medical Association.—The annual meeting of this association was held at the St. James Hotel, Corning, N. Y., January 9th. Regular meetings are held on the second Monday of every month. Edward H. Hutton, M. D., secretary.

Requests to Paterson, N. J., Charities.—The will of Mary E. Rile, which was filed on January 5th, gives \$20,000 to the Paterson General Hospital, \$10,000 to the Paterson Orphan Asylum, and \$5,000 each to the Old Ladies' Home and Children's Day Nursery.

Maryland State Board of Health.—Dr. John S. Fulton, secretary of this board, was recently presented with a handsome silver tea service in recognition of his work in the cause of public health. Dr. Fulton is expected to attend the meeting of the American Public Health Association, at Havana, Cuba.

The New Health Board of Middletown, N. Y.—This new board, which was organized on January 3rd, proceeded to elect the following officers: President, Mayor Hornbeck; vice-president, C. C. Lutes; health officer, Dr. J. L. Hanmer; sanitary inspector, Z. K. Greene; registrar of vital statistics, John G. Gray.

El Paso County, Colo., Medical Society.—The officers of this society elected for the year 1905 are as follows: Dr. James A. Patterson, president; Dr. H. W. Hoagland, vice-president; Dr. M. P. Reynolds, secretary; Dr. Daniel J. Scully, treasurer; and Dr. W. H. Swan and Dr. R. K. Hutchings, delegates to the State society.

The Teller County, Colo., Medical Society has elected the following officers to serve until July, 1905: President, Dr. W. P. Pennock, of Cripple Creek; vice-presidents, Dr. W. A. Latimer, of Victor; Dr. B. F. Jones, of Goldfield, and Dr. J. A. McIntyre, of Florissant; secretary, Dr. H. G. Thomas, of Victor; and treasurer, Dr. J. A. Dunwoody.

Graduate Nurses' Association of the State of Pennsylvania.—A special meeting of this association was held in Pittsburgh, Pa., December 17, 1904. The bill for registration, which was read by the committee to the members present, was adopted, and will be presented to the legislature during the present session.

The Western Surgical and Gynecological Association elected the following officers at Milwaukee on December 29th: President, Dr. H. D. Niles, of Salt Lake City; first vice-president, Dr. E. W. Andrews, of Chicago; second vice-president, Dr. R. Grant, of Denver; secretary treasurer, Dr. B. B. Davis, of Omaha; executive council, Dr. C. H. Mayo, Dr. J. E. Moore, Dr. C. W. Oviatt, Dr. Van Buren Knott, and Dr. A. H. Ferguson. The next meeting will be at Kansas City.

Statement of Mortality in Chicago for the Week Ending December 31, 1904, compared with the preceding week and with the corresponding week of 1903:

	Dec. 31, 1904.	Dec. 24, 1904.	Jan. 2, 1904.
Total deaths, all causes.....	654	548	1,165
Annual death rate per 1,000.....	17.68	14.83	32.41
By sexes—			
Males.....	364	293	325
Females.....	290	252	279
By ages—			
Under 1 year.....	119	94	97
Between 1 and 5 years.....	48	55	54
Over 60 years.....	133	126	148
Important causes of death—			
Acute intestinal diseases.....	20	21	15
Apoplexy.....	12	23	13
Bright's disease.....	42	37	52
Bronchitis.....	31	21	28
Consumption.....	68	63	56
Cancer.....	23	31	16
Convulsions.....	14	11	15
Diphtheria.....	15	14	11
Heart diseases.....	48	40	42
Influenza.....	15	1	5
Measles.....	5	0	0
Nervous diseases.....	31	22	23
Pneumonia.....	144	114	146
Scarlet fever.....	2	0	3
Suicide.....	6	8	8
Smallpox.....	3	4	0
Typhoid fever.....	15	6	8
Violence (other than suicide).....	32	26	59
Whooping cough.....	9	7	1
All other causes.....	120	101	127

Statement of mortality for the week ending January 7, 1905, compared with the preceding week and with the corresponding week of 1904:

	Jan. 7, 1905.	Dec. 31, 1904.	Jan. 9, 1904.
Total deaths, all causes.....	542	654	516
Annual death rate per 1,000.....	14.19	17.68	13.95
By sexes—			
Males.....	303	364	270
Females.....	239	290	246
By ages—			
Under 1 year.....	110	119	109
Between 1 and 5 years.....	48	48	36
Over 60 years.....	121	153	110
Important causes of death—			
Acute intestinal diseases.....	13	20	17
Apoplexy.....	12	12	16
Bright's disease.....	36	32	38
Bronchitis.....	24	21	20
Consumption.....	41	68	44
Cancer.....	18	23	22
Convulsions.....	6	14	20
Diphtheria.....	14	15	10
Heart diseases.....	47	48	33
Influenza.....	8	13	3
Measles.....	2	5	1
Nervous diseases.....	22	31	20
Pneumonia.....	135	144	114
Scarlet fever.....	3	2	2
Smallpox.....	0	3	0
Suicide.....	6	8	9
Typhoid fever.....	4	15	7
Violence (other than suicide).....	32	32	30
Whooping cough.....	11	7	6
All other causes.....	111	120	110

Pneumonia and Influenza in Chicago.—The infections of pneumonia and influenza are everywhere prevalent in Chicago, intensified in virulence by the arid state of the atmosphere and by the deficiency of sunshine in December. To a great extent this is also true of the germs of all the infectious and contagious diseases. But the health department is powerless to obtain belief in its predictions or to induce effort to avert the impending—nay, to check the present storm. Mothers continue to expose their offspring to the contagion of diphtheria, measles, scarlet fever, and whooping cough. Adults continue to ignore the warnings of a "chill," try to "fight off" an attack of grippe, and commit excesses of various kinds inciting to serious disease, and too many physicians themselves still ignore the repeated offers of the department to assist in their diagnosis of the bacterial diseases. A striking instance of the evil resulting from this neglect of bacterial diagnosis is seen in the increasing number of reported

deaths from typhoid fever. This is the season of steadily decreasing deaths from this disease and for many weeks the average number has been less than 7 per week. But between December 25th and 31st, there were 15 deaths reported from typhoid. There is good ground for belief that one half the deaths so reported were caused by intestinal influenza and not by typhoid fever. A number of cases have come under the observation of the medical men of the department which were being treated for typhoid fever, but a bacterial examination showed an entire absence of the typhoid bacillus and an abundant growth of the influenza organism. A change of treatment from that for typhoid to that for influenza resulted in prompt improvement and ultimate recovery. The department renews its proffer of the services of the laboratory to all Chicago physicians in the diagnosis of the bacterial diseases by the test tube and the microscope.

Health in Michigan During December, 1904.—Reports to the State Board of Health, by representative physicians in active general practice in different parts of the State, show the diseases which caused the most sickness in Michigan during the month of December (four weeks ending December 31st), 1904, to be as follows:

Diseases arranged in order of greatest prevalence in this month.	Number of reports received for this month.		Per cent. of reports stating presence of disease.		Average for ten years, 1894-1903.	
	Dec., 1904.	Nov., 1904.	Dec., 1904.	Nov., 1904.	Dec., 1904.	Nov., 1904.
Rheumatism	56	36	64	59	64	59
Neuralgia	56	53	59	58	59	58
Bronchitis	56	49	58	53	58	53
Angeles	51	33	53	53	53	53
Influenza	49	36	53	53	53	53
Gonorrhea	33	34	34	34	34	34
Syphilis	24	27	27	27	27	27
Consumption	23	23	23	23	23	23
Inflammation of kidney	20	18	18	18	18	18
Diarrhea	19	13	13	13	13	13
Cancer	19	23	23	23	23	23
Typhoid fever	12	17	17	17	17	17
Phomalarial	3	6	6	6	6	6
Smallpox	13	14	14	14	14	14
Scarlet fever	12	10	10	10	10	10
Pleuritis	12	16	16	16	16	16
Pneumonia	10	11	11	11	11	11
Inflammation of bowels	9	6	6	6	6	6
Intermittent fever	9	8	8	8	8	8
Erysipelas	8	6	6	6	6	6
Diphtheria	6	6	6	6	6	6
Measles	5	5	5	5	5	5
Dysentery	4	6	6	6	6	6
Whooping cough	3	2	2	2	2	2
Remittent fever	3	2	2	2	2	2
Inflammation of brain	2	2	2	2	2	2
Cholera morbus	1	3	3	3	3	3
Puerperal fever	1	3	3	3	3	3
Meningitis	0.7	0.3	0.3	0.3	0.3	0.3
Cholera infantum	0.7	0.3	0.3	0.3	0.3	0.3
Membranous croup	0.4	0.3	0.3	0.3	0.3	0.3

At the State Capitol for the month of December, 1904, compared with the average for December in the ten years, 1894-1903, tri-daily observations show the prevailing direction of the wind to have been the same (southwest), the velocity .3 of a mile per hour greater, the average temperature 4.41 degrees lower, the average daily range of temperature 2.1 degrees greater, the average daily range of atmospheric pressure .027 of an inch greater, the precipitation .77 of an inch less, the absolute humidity less, the relative humidity more, the day and night ozone much less, and the depth of water in the observation well 2 inches less. For the month of December, 1904, compared with the average for December in the ten years, 1894-1903, smallpox, dysentery, and in-

flammation of brain were more than usually prevalent; and pleuritis, pneumonia, intermittent fever, erysipelas, diphtheria, whooping cough, remittent fever, cholera morbus, puerperal fever, and meningitis were less than usually prevalent. In every month of 1904, six of the diseases which were less prevalent than usual in December—pneumonia, intermittent fever, erysipelas, whooping cough, remittent fever, and cholera morbus—caused considerably less sickness than the average of corresponding months in preceding years. Also, excepting July and August, this was true of pleuritis. Ten diseases caused less sickness in December, 1904, than the average for the ten preceding Decembers.

THE MOST DANGEROUS COMMUNICABLE DISEASES.

Including reports by regular observers and others, meningitis was reported present in Michigan during the month of December, 1904, at 5 places; whooping cough, at 19 places; measles, at 51 places; pneumonia, at 82 places; diphtheria, at 91 places; smallpox, at 101 places; typhoid fever, at 105 places; scarlet fever, at 126 places; and consumption, at 241 places. Reports from all sources show meningitis reported present at 1 place less; whooping cough, at 1 place more; measles, at 16 places more; pneumonia, at 23 places more; diphtheria, at 4 places more; smallpox, at 2 places more; typhoid fever, at 56 places less; scarlet fever, at 21 places more; and consumption, at 6 places less, in the month of December, 1904, when compared with the preceding month. Henry B. Baker, secretary.

The National Association for the Study and Prevention of Tuberculosis.—The first annual meeting of this national association will be held in Washington, D. C., at the New Willard Hotel on Thursday and Friday, May 18 and 19, 1905. There will be general sessions, and division of the work into the following three sections:

1. *Sociological:* Chairman, Mr. Homer Folks; secretary, Miss Lillian Brandt, United Charities Building, 105 East Twenty-second Street, New York. Executive committee, Dr. H. M. Bracken, of St. Paul; Dr. J. W. Brannan, of New York; Mr. E. P. Bicknell, of Chicago; Mr. Ed. T. Devine, of New York; Mr. Christopher Easton, of Newport; Professor Irving Fisher, of New Haven; Dr. John S. Fulton, of Baltimore; Mr. F. L. Hoffman, of Newark; Dr. J. N. Hurty, of Indianapolis; Dr. S. A. Knopf, of New York; Dr. Ernest Wende, of Buffalo; Mr. A. M. Wilson, of Boston.

2. *Pathological and Bacteriological:* Chairman, Dr. Mazyck P. Ravenel; secretary, Dr. D. J. McCarthy, Phipps Institute, Philadelphia. Executive committee, Dr. Ed. R. Baldwin, of Saranac Lake; Dr. William T. Councilman, of Boston; Dr. William T. Howard, Jr., of Cleveland; Dr. Hugh M. Kinghorn, of Saranac Lake; Dr. William G. MacCallum, of Baltimore; Dr. Roswell Park, of Buffalo; Dr. William H. Welch, of Baltimore.

3. *Clinical and Climatological:* Chairman, Dr. Norman Bridge; secretary, Dr. S. G. Bonney, Stedman Building, Denver, Colo. Executive committee, Dr. Robert H. Babcock, of Chicago; Dr. Frank Billings, of Chicago; Dr. Vincent Y. Bowditch, of Boston; Dr. Lawrance Brown, of Saranac Lake; Dr. J. P. C. Foster, of New Haven; Dr. Charles L. Greene, of St. Paul; Dr. Ed. G. Janeway, of New York; Dr. H. M. King, of Liberty, N. Y.; Dr. Arnold C. Klebs, of Chicago; Dr. H. R. M. Landis, of Philadelphia; Dr. Charles L. Minor, of Asheville; Dr. J. H. M. Minor, of Philadelphia; Dr. Ed. O. Otis, of Boston; Dr. William B. Stanton, of Philadelphia; Dr. A. Stengel, of Philadelphia; Dr. Joseph Walsh, of Philadelphia; Dr. James C. Wilson, of Philadelphia.

Pith of Current Literature.

PRESSE MEDICALE.

November 19, 1904.

Lecture at the Beginning of the Course on Experimental and Comparative Pathology, By ROGER.

History of Pathology.—Roger reviewed the history of experimental and comparative pathology with special laudation of Rayer, the first occupant of the chair instituted in 1862 in the Faculty of Medicine of Paris. He also pointed out the progress that has been made, the difficulties which have to be overcome, the sources whence the experimenter draws his inspiration, and finally the causes of the errors into which he is so easily led.

November 23, 1904.

Variations in Virulence, and Urinary Surgery, By GUYON.

Intervention in Urinary Surgery.—Guyon considers the important factors in increasing the toxic action of microbes to be the retention of normal secretion in an organ and an increase in the tension of its walls, modified in individual cases by the variations in the power of resistance. In urinary surgery intervention should be avoided when possible at the time when the increase of virulence renders the action dangerous. Intervention between attacks is one of the best guarantees of success. The only exceptions to this rule are when large and free incisions must be quickly made on account of infiltration of urine, urinary abscess, abscess of the prostate, of the kidney, in cases of septic retention, internal ureterotomy, and infection of the bladder, all of which operations are advantageously performed during the height of the inflammation.

November 26, 1904.

Medical Fees in Accident Cases, By FORGUE and JEANBRAU.

Fees in Accident Cases.—Forgue and Jeanbrau consider first, the fees for certificates, second, fees for attendance and operations, third what the physician may do should the patient refuse to pay the bill, fourth, the fee of the medicolegal expert. A valuable paper, but of less interest here because adjusted to French conditions, customs, and laws.

SEMAINE MEDICALE.

November 30, 1904.

Arterial Tension in Acute and Chronic Lead Poisoning, By VAQUEZ.

Arterial Tension in Lead Poisoning.—Vaquez considers that the characteristic feature of the hypertension of the arteries in lead poisoning is the rapidity and the intensity of its variations. A persistent hypertension is apt to indicate cerebral complications, either partial or general in character.

LYON MEDICAL

November 13, 1904.

Artificially Induced Labor Before or at Term, By VINCENT.

Induced Labor Before or at Term.—Vincent considers that labor may be legitimately induced at term to avoid dystocia due to a disproportion between the size of the fetus and the pelvic canal, and that it is not illegitimate to bring on labor at a certain hour, the same as a surgical operation, at

the end of the term, especially when the size of the fetus is such as to give rise to a fear of serious dystocia. He describes the various ways of inducing labor and expresses his preference for Tarnier's metallic dilator.

November 20, 1904.

A Very Simple Means of Regulating the Temperature in Infancy, By THEVENET and MOREAU.

Regulation of the Temperature in Infancy.—Thevenet and Moreau thought to place the fever patient in an incubator made of earthenware with a glass cover. In the lower part of the apparatus, ordinarily used for boiling water, pieces of ice are introduced and replaced as they melt away, but the question of ventilation proved insuperable for them, so they modified their method to the application of a cold coil to the abdomen. With this fever is reduced and nervous symptoms relieved.

November 27, 1904.

1. Resection of the Pylorus in Cancer of the Stomach According to Recent German Statistics, By LERICHE.

2. Fracture of the Base of the Skull, with Signs of Commotion and Contusion of the Brain. Relief of Symptoms by Lumbar Puncture, By LATARJET.

1. **Resection of the Pylorus in Cancer of the Stomach.**—Leriche, after a mention of the discredit into which pylorotomy, originally a French operation, has fallen, and a consideration of the great number of tumors which are found at autopsy to have been anatomically operable at the time of death, points out the great mortality attending the operation and in comparing it with gastroenterostomy says the one is grave, inefficacious, and rarely indicated, while the other is ordinarily easy and always gives relief.

2. **Fracture of Base. Lumbar Puncture.**—Latarjet, in the case reported, found the symptoms to be exceedingly grave and there was evidently fracture of the base. After removal of 20 c.c. of cerebrospinal fluid, there was an immediate improvement. In quarter of an hour there was less headache, the respiration was becoming regular, and two hours later the patient was eating with a good appetite.

RIFORMA MEDICA.

November 30, 1904.

1. Our Results with Opoththerapy in Syphilis, By A. RISSO and A. CIPOLLINA.
2. The Value and Technics of the Method of Ficker-Asakawa with "Typhusdiagnosticum," By L. BORELLI.
3. A Rare Case of Congenital Diaphragmatic Hernia, By ACHILLE ALBANESE.

1. **Serum Therapy in Syphilis.**—Risso and Cipollina give the results of their experiences with serum obtained from animals into which syphilitic material had been injected as immunizants. Their results, they claim, were much better than those of the other authors who preceded them in the same line of investigation. They injected subcutaneously in dogs considerable doses of the blood of syphilitics who were in the fully developed secondary stage of the disease. The injections were repeated three or four times, at intervals of about five days, and a week after the last injection the animals were bled. The whole blood was injected instead

of the serum, because it was thought that the blood corpuscles and other solid elements of the blood probably contain the contagious elements which it was desired to inject. Fourteen patients in the secondary stage of syphilis and two in the tertiary stage were treated with this serum. Of nine syphilitics in the full development of the secondary period, none of whom had had any other treatment, not one showed himself refractory to the serum, and in all of them the effects were far more prompt than those of the mercurial treatment in removing the eruptions, mucous patches, etc. In two patients the result was doubtful at the time of writing, but in these the treatment had been irregular and incomplete. The unpleasant effects of this serum were not any more pronounced than those produced by other serums. There were patients who bore doses of five c.c. each injected daily, without trouble, while others seemed less resistant and developed slight rashes, or sensitive spots. In such cases it was necessary to diminish the dose or else give the injections on alternate days. The authors conclude from their results that the serum which they prepared has a specific action in syphilis, but they do not deny that possibly it is only a stimulant to the resisting powers of the organism just as mercury is said to be (Tarnowsky). The authors do not agree with those observers who state that no specific serum for syphilis can be produced by injections into animals, for the reason that animals are not susceptible to syphilitic infection. It has not been conclusively proved that the lower animals are immune against syphilis, and hence are refractory, for example, to tetanus, but if tetanus bacilli and toxins are injected into them, they yield an antitetanic serum.

2. Ficker's Reaction in Typhoid.—Borelli concludes an investigation as to the value of Ficker's method of diagnosis in typhoid fever, by stating that this new method is fully as accurate and trustworthy as the Gruber-Widal reaction, and that therefore is able to serve as a substitute. When a very rapid reaction is desired, the freezing method of Asakawa may be employed. With Ficker's method one cannot only use the serum, but the whole blood which can be dried either on cardboard or on a glass slide. In using Asakawa's macroscopical method the dried blood may be used on paper, but for the microscopical examination, either the fresh or the dried blood may be used on a slide. The amount of blood needed for any of these tests is not larger than that required for the Widal test.

December 7, 1904.

1. A Reaction Employed to Demonstrate an Excess of Hydrochloric Acid in the Gastric Juice,
By A. CIPOLLINO.
2. The Influence of Soluble Ferments on the Digestibility of Cow's Milk,
By VINCENZO TRISCHITTA.
3. On a New Method of Selective Staining for Spores,
By G. SCAGLIOSI.
4. Perithelioma of the Thigh,
By FERRUCCIO BINDI.
5. Arthropathies and Cardiopathies,
By FRANCESCO SARCINELLI.

1. Reaction for Hydrochloric Acid.—The solutions required for the new test described by Cipollino are: Aniline water; a titrated solution

of sodium hypochlorite; and a solution of hydrochloric acid containing five parts of the acid to a thousand of water. One half c.c. of aniline water is poured into a test tube by means of a graduated pipette. Two c.c. of gastric juice (filtered) are added, and into this mixture are poured four or five drops of the solution of sodium hypochlorite. If the mixture assumes a yellow color, hyperacidity may at once be excluded. If, on the other hand, the mixture turns a violet color, the test should be repeated, using two parts of gastric juice diluted with one part of distilled water. If the violet color still appears then there is hyperacidity, in other words, the acidity is greater than two parts per thousand—the maximum in normal gastric juice. Some authors maintain that three parts per thousand is the normal maximum. If this opinion is held, the test may be performed with equal parts of distilled water and gastric juice. If the pale violet color persists, there is certainly hyperacidity. A dark violet color appears if there is hypacidity. The test depends on the fact that when a solution of sodium hypochlorite is mixed with some aniline water, an intense violet color results. If a solution of HCl over two tenths per cent. in strength is added, the mixture will turn a pale violet. If the solution of HCl is weaker, it will turn a red and then a yellow color, and if the HCl solution is weaker than $\frac{1}{4}$:1000, the violet color will be darker.

2. Ferments and the Digestibility of Cow's Milk.—Trischitta concludes from his experiments that trypsin is the most important ferment in the digestion of cow's milk. A dog fed on milk to which trypsin had been added increased in weight by 600 grammes within eight days. A control dog increased only by 350 with milk alone. Next in importance in the digestion of milk is pepsin, then emulsin. The author concludes that these ferments aid greatly in the digestion of milk and may, therefore, be added with profit to sterilized milk in order to render it more digestible. He suggests that the experiments which he carried on in dogs be repeated in a modified manner in children and infants. Sterilization of milk is necessary as long as we cannot give an infant milk as soon as it has been taken from the cow, and as long as we are not sure of the health of the cow. The addition of a mixture of pepsin, trypsin, and emulsin will obviate the inconveniences and disadvantages of sterilized milk.

3. Stain for Spores.—Scagliosi recommends the following method of staining spores of bacteria. The bacterial material is first fixed in van Gehuchten's or in Hermann's fluids. The author claims to be the first to apply cellular fixatives to the bacterial cell in cultures. He advises that the fixative liquids be poured over the bacterial colonies or smears in agar cultures, etc., and that the cultures so treated be allowed to remain in the thermostat for a sufficient length of time. The method which he proposes has the great advantage of fixing the bacterial bodies in the most favorable conditions, avoiding the disfiguring influences of heat, as ordinarily used. With von Gehuchten's fluid the fixation is accomplished after half an hour's contact; with Hermann's fluid after from ten to fifteen minutes. The material thus fixed is spread on slides

and the alcohol of the fixative is allowed to evaporate in the air at 37° C. The slides are then stained in Ziehl's fuchsin solution, washed in water, with or without the addition of sulphuric acid, and contrast stained in methylene blue solution. They are then dried in the air and mounted in balsam. The spores stain very distinctly with this method. The stain is of value especially for morphological studies in bacteria.

5. Arthropathy and Heart Disease.—Sarcinelli concludes as follows, on the basis of his observations as to the connection of heart disease with affections of the joints. Cardiac complications occur rarely as the result of acute articular rheumatism and the laws enunciated by Bouillaud on this subject are not in correspondence with observed facts. There is a connection between the form of joint affection and the type of heart disease which follows, the opinions of numerous authors to the contrary notwithstanding. The subacute and chronic forms of rheumatic arthritis are often complicated by cardiac affections, but not the acute forms. There are two types of cardiopathy which may occur with rheumatism. One type occurs with the subacute and the chronic form, and the other type with the acute form. While in the cases accompanying the acute forms, the subjective symptoms are not marked, the physical signs are pronounced. On the other hand, in the type accompanying the chronic forms, the subjective and external signs of cardiac insufficiency are prominent.

ROUSSKY VRATCH.

December 4, 1904.

1. On the Physiology of the Intestines,
By N. D. STARZHECO.
2. Repeated Extrauterine Pregnancies, By I. A. VOFF.
3. The Cholera in Baku,
By I. M. LEPLINSKI and I. S. ELIASHVILI.
4. Empyema of the Pleural Cavity, and Its Operative
Treatment (Concluded), By S. S. GRIGOLAFF.
5. Contribution to Our Knowledge of Tetany,
By E. E. VOSS.

1. Functions of the Cæcum, the Small Intestine, and the Colon.—Starzhesco's investigations on dogs with fistulæ at the end of the small, and the beginning of the large intestines were intended to elucidate the functions of the small and the large guts as related to each other and to bring out the physiological properties of the cæcum and the valve of Bauhin. His researches on the intestinal juice from the cæcum showed that this part of the intestinal tract does not secrete any special fluid, unless there is a special stimulus. When such a stimulus is present, however, the secretion of the cæcum begins immediately, and does not depend on the amount or the variety of the food introduced. The juice of the cæcum is capable of digesting independently proteid substances, to convert peptones into crystalloid substances, to saccharify starch, and to invert glucose and maltose. The cæcum, in contrast with the juice of the small intestine, cannot turn protrypsin into true trypsin, and does not contain any true kinase. Yet the juice of the cæcum does improve the action

of the pancreatic juices, especially that of amylase and lipase. Another interesting series of facts developed in this investigation was the function of Bauhin's valve, the purpose of which is to keep back the contents of the small intestine as long as is necessary for the digestive process to be taken up by the colon. While the mucous membrane of the small intestine is exceedingly sensitive, that of the large gut is not at all so. The great bulk of the digestive processes takes place above the ileocæcal valve and by the time this part of the tract is reached most of the food has been absorbed. In fact, only 7 per cent. of the proteids, 2 per cent. of the carbohydrates and from 5 to 6 per cent. of the fats are passed along into the cæcum. Some absorption does go on in the large intestine, however, because the amounts of these classes of substances in the fæces of a normal animal are still smaller. The colon is the least important part of the tract as regards digestion. When the small intestine is diseased, however, a larger amount of undigested material passes into the colon and thus is thrown upon the latter for the purposes of digestion.

2. Repeated Extrauterine Pregnancies.—Voff reports three cases in each of which extrauterine pregnancy had occurred twice. In two cases the first operation for extrauterine gestation had been performed elsewhere, four and ten years respectively, before the second pregnancy. In one case the first operation was performed by the author two years before the second. In view of the rarity of such cases, and in view of the importance of studying them as to their relation to the ætiology of extrauterine pregnancy in general, the author pleads for a more detailed description of all cases which occur hereafter, together with a careful microscopical examination of the removed tubes wherever possible. The interesting feature of the case which was observed during both pregnancies by the author himself, was that at the first operation the right annexa were removed, while the left tube and ovary were found to be perfectly normal. It was in this tube that the second pregnancy was found to have taken place.

3. Cholera in the City of Baku.—Leplinski and Eliashvili in this preliminary communication report the results of their bacteriological examinations of the city water of Baku, where the cholera raged during the month of September of the year just closed. Baku, being situated at the borders of the Caspian Sea, derives its water supply from wells, which give a bitter-salty water that is drunk mostly by the natives, and from the sea itself, the water of which is distilled and drunk chiefly by the Europeans. Samples of water were taken from the sea, from the wells and from baths in the town. During this epidemic the first cholera vibrios were found by the authors in the water of the swimming tanks of the Persian baths, on September 12th. Later these germs were found in samples from wells, of which two hundred have been examined to date. It was noticed that at first the only people to be infected were the Mahometans of the Tcherembekent district, and among these almost exclusively the women. After the vibrios had been discovered in the baths in this district, the morbidity

among the inhabitants of that part of the town was reduced at once to the minimum, inasmuch as the baths were closed by the authorities. These baths undoubtedly were the first and most important sources of the contagion. The baths frequented by Mussulmans only to which the authors refer were peculiarly constructed. They were built partly underground and consisted of a round semidark dressing room, and a bathroom containing a tank lined with stones and filled with water to the height of about five feet, known as the common tank. This tank was cleaned out once a month, or even less frequently, for when the water was drawn off there was liquid mud up to one's knee. In this bathing tank the women of the Mussulmans of the town bathed on a certain day of the week, and incidentally brought the laundry of their families to be washed in the same tank. They would spend all day in the baths, drinking tea, etc. The conclusions of the author emphasize the necessity of prohibiting the use of public baths during epidemics of cholera, and the propriety of a sanitary inspection of such institutions.

4. Operations for Empyema.—According to Grigolaff the place of election for empyema operations is at the eighth rib, up to the scapular line. He does not favor the use of antiseptics in washing the pleural cavity. Mechanical washing with one per cent. solutions of sodium chloride, or with physiologic salt solution may be used only in cases in which the pus is decomposed. One drain is sufficient in all cases, and it may be made shorter and smaller as the case progresses. Tamponage is only to be used when the cavity of the pleura has already healed.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 7, 1905.

1. History of the Clinical Recognition of Gastric Ulcer,
By JOHN C. HEMMETER.
2. Blindness and Oculomotor Palsies from Injuries Not
Involving the Optic or Oculomotor Nerves,
By ALVIN A. HUBBELL.
3. Contraction of the Visual Field; a Symptom of Anæsthesia of the Retina in Children,
By L. WEBSTER FOX.
4. An Exact and Secure Tucking Operation for Advancing an Ocular Muscle,
By FRANK C. TODD.
5. The Passage of Different Foodstuffs from the Stomach,
By WALTER B. CANNON.
6. The Diagnosis of Enlarged Bronchial Lymph Nodes,
By ALFRED FRIEDLANDER.
7. The Importance of an Early Aural Examination in Acute Diseases of Children,
By JAMES F. MCKERNON.
8. Some Physical Signs in Infants and Children Not Sufficiently Emphasized,
By SAMUEL McC. HAMILL and THEODORE LE BOUTILLIER.
9. Congenital Dislocation of the Hip. An Argument Concerning the Method of Its Treatment,
By HENRY M. SHERMAN.
10. The Trend of Modern Prescription Writing,
By M. CLAYTON THRUSH.

2. Blindness and Oculomotor Palsies.—Hubbell attempts to determine the possibility of blind-

ness and oculomotor palsies in cases in which there has been traumatism which, however, has not involved directly or indirectly any of the eye nerves. That is to say, can blindness and oculomotor palsies be due to reflex influences? The author believes that they can. Cases are quoted from the literature to uphold this view. In addition ten personal cases are recorded, six of paralysis of the extraocular muscles in which there was no evidence of injury either to the muscles or to their nerve supply, and four of unilateral blindness. In these last four cases it is perhaps not possible to assert positively that the optic nerve was not injured. The author does not think that it was.

4. A New Tucking Operation.—Todd's method is as follows: A flap of conjunctiva is dissected up and turned back, exposing the tendon to be tucked. A special instrument is now required. This (a tendon tucker) consists essentially of two arms which cross each other, so as to form an X, the lower legs of which are joined by a long loop. By turning a screw in the loop end the distal ends are made to approach each other, cross each other and finally retreat from each other, to an approximately parallel position. One arm of the closed tucker is placed below and one above the tendon to be shortened. As arms are made parallel, the tuck is made. This is secured by two sutures at right angles to the tendon. Two other sutures secure the centre of the tuck in the tendon to the corners of the conjunctival flap. This completes the operation. The article is illustrated. The author claims the following advantages for his operation: (1) Exactness. Perfect adjustment of the eye may be secured at the time of operation when tying the silk sutures after the tuck has been taken. (In nearly all advancement operations the operator is obliged to estimate the amount of the effect desired and does not know until his operation has been completed the exact amount of effect that has been produced.) (2) Security. When the operation is completed the stitches cannot slip and the tendon will remain where it has been placed. (3) Ease. The operation is very easy of performance, made so by the use of the instrument. (4) Flexibility. The smallest or the greatest amount of deviation may be produced. (5) Strabismus of high degree. The greatest degree of effect can be produced when accompanied by a tenotomy of the opposing muscle, and thus a strabismus of the highest degree can be corrected by operation on one eye alone if desired.

6 and 7. See this *Journal*, Vol. LXXX, page 330.

8. See this *Journal*, Vol. LXXX, page 331.

9. Congenital Dislocation of the Hip.—Sherman gives his reasons for not liking the method advocated by Lorenz for replacing congenitally dislocated hips. The method is not "bloodless," it is not safe, it is not efficient, except in a very small percentage of cases (ten to twenty per cent.). Worse than all, if unsuccessful, it is

liable to so injure the capsule that a future arthrotomy cannot be performed. The author advocates the following method: (1) Arthrotomy for the purpose of overcoming the most serious obstacle to manual reduction. (2) Manual reduction. (3) Plaster dressing for about nine months. The author briefly analyses twenty-eight cases which he has treated by arthrotomy.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 5, 1905.

1. A Consideration of Autointoxication and Autoinfection as Cause of Various Mental Disorders (*To be continued*), By L. VERNON BRIGGS.
2. The Geographical Distribution of Tuberculosis in Boston in 1901-3 as Compared with the Distribution in 1885-90, By ARTHUR K. STONE and ALEXANDER M. WILSON.
3. Improved Technics for Finney's Gastroduodenostomy, By ALFRED H. GOULD.
4. Cardiac Collapse During Examination of a Postpharyngeal Abscess; Incision; Circulation Reestablished and Maintained for Four Hours by Massage of the Heart; Death, By DAVID CHEEVER.

3. Improved Finney Gastroduodenostomy.—Gould's paper is the second of a series of four dealing with improved surgical technics. The proposed improvements are three: (1) The manner of placing the clamps. (2) The method of opening the stomach and duodenum and the excision of a piece of the stomach's mucous membrane. (3) The omission of guide sutures. Method.—Two long clamps, protected with rubber, are used. A fold of the anterior wall of the stomach is picked up 3 to 4 inches long, parallel to and about $\frac{1}{2}$ inch from the greater curvature. The ends of the clamp are not freed, but are pushed up tightly until the inner jaw rests against the pyloric sphincter, about $\frac{1}{4}$ to $\frac{1}{2}$ inch below the free edge of the fold, where they are made fast. The duodenal clamp encloses a similar fold, as it goes obliquely across the bowel from the free edge to the pylorus and is pushed up until its inner jaw touches that of the stomach clamp, where it is fastened. The handles of the clamps are next brought together. The adjoining sides of the duodenum and stomach are now sutured. The stomach is incised down to the mucosa. The duodenum is next incised into its lumen and, if necessary, the mucous membrane is trimmed. The bulging mucous membrane of the stomach is now excised. A continuous through and through stitch unites the adjacent edges of the openings in the gut and stomach. This stitch is continued round to within one inch of the point of beginning. The clamps are removed and union of the gut to the stomach completed. A layer of seromuscular stitches buries the first line of sutures. The article is illustrated.

4. Massage of the Heart.—Cheever in the title of his paper gives the principal points relating to his case. The heart was massaged through the ribs by means of rhythmic compressions and not, as has been advised by some, through an incision. The author believes that he was able to

reestablish by this means an already arrested circulation and maintain it, as well as a fair aeration of the blood, for four hours. The general lesson to be drawn is that in cases of extreme exhaustion due to postpharyngeal abscess, it is well to perform a preliminary tracheotomy.

AMERICAN MEDICINE.

January 7, 1905.

1. The Behavior of Native Japanese Cattle in Regard to Tuberculosis (Perlsucht), By S. KITASATO.
2. Is Mortality Necessarily Higher in Tropical Than in Temperate Climates? By COLONEL V. HAVARD.
3. The Treatment of Cancer of the Cervix Uteri in Advanced Stages, By J. WESLEY BOVÉE.
4. An Experimental Study of Lactic Acid Formation, with Special Reference to the Stomach, By E. PALIER.
5. Some Observations Upon Astigmatism, By L. L. DOANE.
6. Fatal Case of Cerebellar Abscess, By JOHN H. ALLEN.
7. American Medicine, By E. J. KEMPF.

1. The Transmission of Tuberculosis.—Kitasato's paper shows that, in Japan at least, the chief if not only source from which tuberculosis is spread is man. The native Japanese cattle are practically free from the disease, while human tuberculosis, including the intestinal variety, has been known since the beginning of medical history. The author presents the following formal conclusions: (1) Human tuberculosis is as frequent in Japan as in the civilized countries of Europe and America. (2) Primary intestinal tuberculosis is relatively common in adults and children, although cow's milk plays no rôle at all in the feeding of children. (3) There are large districts in Japan, where, in spite of the existence of human tuberculosis the cattle remain absolutely free from the disease. In these regions it is not customary to consume either meat or milk from bovines. (4) This is very important proof of the fact that under ordinary conditions human tuberculosis is not infectious for bovines, as the opportunities for infection certainly cannot be lacking. (5) Among Japanese in general very little cow's milk is used and especially is it employed but little for the dietary of children. (6) Under natural conditions the native animals show but very little susceptibility for perlsucht. If large doses of perlsucht bacilli are inoculated into them either intravenously or intraperitoneally, they become tuberculous to a certain degree; they do not seem to be at all susceptible to subcutaneous infection. (7) The imported and mixed race animals are very susceptible to perlsucht. (8) Human tuberculosis is not infectious for native and mixed race animals.

2. Mortality in the Tropics.—Havard concludes that, with care in his habits and diet, the northerner going to the tropics has, in the absence of epidemic, as good chances of health and longevity as in temperate climates, but must resign himself to the loss of more or less of his bodily and mental activity. He arrives at this conclusion after reviewing the recorded mortality of both civil and military populations quartered in the tropics. Most of the author's personal knowledge was acquired in Cuba and the Philippines.

3. **Cancer of the Cervix.**—Bové, after reviewing the chief points of interest connected with cancer of the cervix gives the following advice with regard to its treatment: (1) Severe surgical operations, involving appreciable mortality rates or a marked degree of additional suffering, should not be employed in the treatment of carcinoma of the cervix uteri, except in very early cases. (2) According to the reports of the exhaustive microscopical examinations in serial sections of the tissue surrounding the uterus in cancer of the cervix, we have no means of knowing before operation that eradication is certain in any given case of this disease, and hence such attempts must be reserved for the very earliest and most promising ones. (3) The galvanocautery offers the best prospects for prolonging life, relieving pain, and lessening discharges in all other cases.

4. **Lactic Acid Formation.**—Palier holds that the meaning of the presence of lactic acid in the stomach is not well understood, because the question has been studied from the clinical point of view merely. He has studied it from the laboratory side. That is, he has put various foodstuffs in test tubes and then subjected them to different conditions. From these experiments he has formulated the following laws: (1) Lactic acid develops in all organic substances containing carbohydrates, whether sugar or starch; and in some substances even while yet in solid form, such as bread and meat, for instance, at certain seasons which are especially favorable for bacterial development, some lactic acid exists already; and on dissolving such substances in water the lactic acid reaction can be soon detected. (2) Lactic acid formation is due in all cases to bacterial development, even the so called sarcolactic acid of meat. Furthermore, many kinds of bacteria can by their development bring about the formation of lactic acid in substances containing carbohydrates; but the bacteria usually vary in the different substances. (3) Lactic acid does not give the usual reaction with the usual tests when an inorganic acid is also present in sufficient strength. (4) The lactic acid development is hindered when there is an antiseptic present, such as HCl, for example, acting against those bacteria which bring about the lactic acid development; but the lactic acid that had been formed before HCl was added is not destroyed when the latter is added. It is only masked as far as the ordinary reactions are concerned and its further development arrested; but it can be separated by means known to chemistry. (5) HCl enters in combination with albuminoids, and after some time it does not give the usual reaction, though it was marked when it was first added; and then bacteria appear, and also lactic acid begins to form, the latter in substances containing carbohydrates. The practical clinical significance of the experiments can be stated thus, so far as the stomach is concerned: Whenever the total acidity is 40 per cent. or more after a test meal of a roll of bread and a glass of tea, and the HCl is insignificant or entirely negative, there is alimentary stasis of the previous day or days; for the total acidity of bread and water in a test tube is

only about 20 per cent. at the end of week. Furthermore, the organic acidity in the stomach contents with a deficiency of HCl is mostly due to lactic acid, as comparatively little of the fatty acids develops in such cases.

6. **Cerebellar Abscess.**—Allen reports a case of cerebellar abscess, in which a correct diagnosis was not made, and which terminated fatally. The symptoms from which the patient suffered aroused the suspicion of abscess, but they were not sufficiently definite to justify radical intervention.

MEDICAL NEWS.

January 7, 1905.

1. Disturbances of Digestion in Infants Resulting from the Use of Too High Fat Percentages,
By L. EMMETT HOLT.
2. Medical Quacks, Their Methods and Dangers,
By CHAMPS S. ANDREWS.
3. Anal Fissure,
By WILLIAM M. BEACH.
4. The Physics and Chemistry of Drug Action,
By EDWARD C. HILL.
5. Some Recent Developments in Clinical Pathology,
By FREDERIC E. SONDERN.

1. **Too High Fat Percentages.**—Holt asserts that many physicians do not appreciate that a too high fat percentage is capable of doing a bottle fed baby much harm. Excessively high fat percentages result chiefly from two causes: (1) From the desire of the physician to overcome constipation. (2) From the belief that the richer the dairy milk the better. That is to say, rich Jersey milk, which contains about 5.5 per cent. fat, is used with formulae calculated for ordinary milk which averages 4 per cent. fat. Personally the author has never seen the necessity for increasing the fat of bottle milk above 4 per cent. Five illustrative cases are reported to show how much damage may be caused by high fat content.

2. **Medical Quacks.**—Andrews draws upon his personal experience, as counsel of the Medical Society of the County of New York, for specific illustrations of the various, more or less artistic, ways of swindling the public which are in vogue among the medical fakirs of the metropolis.

3. **Anal Fissure.**—Beach devotes some space to the aetiology and symptomatology of anal fissure. The following treatment is advised: In the early stages laxative and topical treatment will usually suffice. If the stage of a fresh wound is passed then surgical treatment alone will be of avail. Stretching the sphincter is not required. Cutting a few fibres of muscle directly back of and beneath the ulcer will answer the same purpose. The lesion itself should be cut through, the indurated margins trimmed, and the base curetted. All this can be done under local anaesthesia. The after treatment consists in keeping the edges of the ulcer apart and in applying astringents.

4. **Drug Action.**—Hill's paper cannot be condensed. He attempts to give the physical and chemical explanation for the action of the various classes of drugs.

BRITISH MEDICAL JOURNAL.

December 24, 1904.

1. Stone in the Kidney, By H. B. ROBINSON.
2. Local Analgesia, By A. E. BARKER.
3. A Physiological Contribution to the Problem of Chloroform Anaesthesia, By A. D. WALLER.
4. An Operation for Fixing Movable Kidney, By A. FULLERTON.
5. A Note on the Treatment of Thrombosis of the Superficial Veins of the Lower Extremities, By C. M. MOULLIN.
6. The Anthropometric Investigation of Hospital Patients, By F. C. SHRUBSALL.

1. **Stone in the Kidney.**—Robinson, in a clinical lecture on renal calculus, tells us that whatever the remote cause may be (food, water, etc.) the immediate cause is an error in metabolism leading to the excessive production and excretion of uric acid, calcium oxalate, or phosphates. The cohesion of these crystals in a matrix of colloid material forms the calculus. The symptoms are variable and indefinite. Three signs stand out: pain, attacks of renal colic, and hæmaturia, but the only constant one is pain. When this is the only symptom the diagnosis is difficult, as it may be simulated by affections of the stomach, colon, or gall bladder. Any stone free to move about in the pelvis or calices is likely to be the most painful, while a stone fixed in both pelvis and calices may exist with little (perhaps dull aching) or no pain. Stones fixed in the parenchyma may give little or no pain. An oxalate stone, which is usually rough, is supposed to cause the most pain, then a phosphatic, and last a smooth uric acid stone. The pain may be a dull ache, behind and under the last rib, or a sharp pain radiating downward into the thigh or the penis. It is only a one sided pain that is any use in diagnosis. The most typical attacks of renal colic are due to a stone travelling down the ureter. Much the same may be seen where a blood clot is passing down the ureter. Hæmaturia is far less common than is generally believed. The blood is usually mixed with the urine without clots. If the bleeding is considerable, casts of the pelvis or ureter may be found. Hæmaturia of whatever degree is not constant; its appearance may be related to exercise or jolting, and it may cease with rest. The use of the x rays as a means of diagnosis is of very doubtful value. Oxalate of calcium should give the best shadow, and uric acid the least. A thick loin, restlessness, or the presence of blood, all prevent good definition. The best method of exposing the kidney is through a lumbar incision behind the peritonæum. The usual incision begins just below the twelfth rib at its junction with the outer border of the erector spinae, and extends forwards for about four or five inches in a line directed towards the anterior superior spine. The incision into the kidney itself should be a vertical one about the convex border, passing well into the pelvis so that the finger can be easily introduced to make a thorough examination. Any stone found should be removed with forceps or scoop. Where the cortex is thinned and riddled with calculous particles, removal of the kidney must be done.

2. **Local Analgesia.**—Barker describes the use of β -eucaine as a local anæsthetic, and finds it difficult to understand why cocaine is still employed. Within one day he has by this method performed the following operations: Amputation through the knee joint for diabetic gangrene; abdominal section and opening of the stomach and jejunum in a case of severe hæmorrhage; removal of a thyroid cyst; Bassini's radical cure of inguinal hernia; and removal of a silver wire from round the patella. The author has never seen any depressing effects follow the use of eucaine. In reaching the nerves of a part hollow needles of varying length are thrust into their immediate neighborhood or across their course at some distance from the area of operation. Abdominal organs are *per se* insensitive to pain. The solution used is as follows: Distilled water, 100 grammes, β -eucaine, 0.2 gramme; sodium chloride, 0.8 gramme; and one in one thousand adrenalin solution 10 drops. All this fluid can be used in an ordinary case if necessary and is quite sufficient for most. Where possible the circulation of the part is to be retarded by ligature or by the application of cold, thus maintaining, and even intensifying the action of the analgetic. The adrenalin retards the blood flow, and the eucaine only reaches the higher nerve centres very slowly, if at all. The solution is isotonic and indifferent to the tissues. As stated above the duration of the insensibility is secured by the admixture of the adrenalin. Without it sensation is only abolished for fifteen minutes, with it for three or four hours, or as long as the anæmia lasts. The insensibility does not become fully developed until thirty minutes after the injection. After this it deepens for a couple of hours. The fluid should not be used too cold or too hot. All dragging upon the parts is to be avoided, lest structures be pulled upon which lie beyond the area of infiltration. This is especially true in abdominal operations. As for general anaesthesia so also for the local preparation of the patient beforehand is most important. But a preliminary fast is not desirable. It should never be suggested to the patients that they may have pain.

3. **Chloroform Anaesthesia.**—Waller's investigations show the following: 1. That ether is less powerful than chloroform, but also less dangerous: so that chloroform should not be used in minor surgical operations. 2. That there is a parallel action of anaesthetics upon nervous tissues and upon cardiac tissues. 3. That chloroform is not an uncertain reagent, but that it produces effects strictly proportional to the mass in which it acts. For purposes of anaesthesia it should be administered in dilution with air at a percentage of not below one per cent. and not above two per cent.

5. **Thrombosis of the Superficial Veins of the Leg.**—Moullin has abandoned the ordinary treatment of thrombosed superficial veins of the lower extremities by rest and lotions, and for some years has at the very earliest opportunity excised the whole thrombosed portion of the vein, with the most excellent results. The wound is sound in a week and the patient can get up cured and freed

from all the risks of embolism, deep thrombosis, or recurrence.

LANCET.

December 24, 1904.

1. On the Restoration of Hearing After Removal of the Drum and Ossicles by a Modification of the Radical Mastoid Operation for Suppurative Ear Disease. Founded on the Experience of 400 Operations,
By C. J. HEATH.
2. Congenital Intestinal Atresia,
By H. S. CLOGG.
3. The Intravenous Injection of Antitoxine in Diphtheria,
By J. BIERNACKI and J. C. MUIR.
4. The Parasites of Smallpox, Vaccinia, and Varicella,
By W. E. DE KORTÉ.
5. Some Observations on Convulsions in Children and Their Relation to Epilepsy,
By R. O. MOON.
6. Hæmoconia,
By A. LOVE.
7. An Unusual Case of Diaphragmatic Hernia,
By H. B. G. NEWHAM.
8. A Case of Congenital Hypertrophic Stenosis of the Pylorus in Which Pyloroplasty Was Unsuccessfully Performed,
By J. R. MORISON.
9. Note on a Case of Acute Cerebral Abscess,
By A. L. WHITEHEAD.

2. Congenital Intestinal Atresia.—Clogg records two cases of that comparatively rare affection, congenital intestinal atresia. Both cases proved fatal. In 250,000 children the disease (excluding rectal cases) has been observed only nine times. The atresia may be found in the duodenum, the jejunum or the large intestine. The most frequent condition in the jejunum is complete obliteration of the lumen, the two ends being united by a band. Rarely the band may be absent, and the two ends separated for some distance. Atresia of the colon is very rare: the lumen of the intestine below the obstruction is very narrow and the bowel is empty. It seems quite conceivable that intestinal invagination may be a frequent cause of intestinal atresia. Anomalies in the vascular system, embolism, and thrombosis of the mesenteric vessels, and compression of the intestine by an artery are also given as causes: also foetal peritonitis, torsion of the intestine, ulceration, and errors of development. In the small intestine many cases can be traced to Meckel's diverticulum. Most, if not all, malformations in the duodenum are associated in some way with the development of the large glands in this region. Snaring of the intestines by the umbilical ring accounts for some cases of occlusion of the small intestine. The symptoms are vomiting, persistent and increasing in severity; abdominal distention; visible peristalsis; nothing practically is passed per rectum; the anus and rectum are well formed; rapid emaciation and exhaustion ensue, the disease running to a rapidly fatal issue. In general the higher the occlusion, the earlier the vomiting. The character of the vomitus and stools depends upon the position of the obstruction as regards the bile duct. The only possible hope for an infant born with intestinal occlusion is that afforded by surgery. Enterostomy is the course which has been most frequently practised, but it is nothing more than a palliative operation. Anastomosis is the ideal operation, but the shock which accompanies it often

proves fatal. If the obstruction is in the duodenum, and jaundice exists, operation is useless.

3. Intravenous Antitoxine Injection.—Biernacki and Muir report two series of grave cases of diphtheria treated by intravenous injections of antitoxine. In the first series of seven cases there were five deaths, and no evidence that the serum was more effective than when given subcutaneously. In the second series of thirty-eight cases, however, there were only three deaths. In attempting to estimate the beneficial effects of antitoxine given intravenously those cases must be discounted in which a marked improvement follows intubation or tracheotomy, since this may be due mainly, or entirely, to relief of the obstruction. Out of nine patients so operated on only one died. Nevertheless, the authors, even in the second series, could not say definitely of any individual patient that a better result was obtained than might have followed subcutaneous injection.

4. Smallpox Parasites.—De Korté thinks that he has found the parasites of smallpox, vaccinia, and varicella. Storing the lymph in capillary tubes, and keeping it for several months, he makes hanging drop preparations, in which the amoeba-like bodies can readily be found. He gives the protozoon the name of *Amœba variola vel vaccinia*. It is amoeboid, and has for the most part an oblate spheroidal shape, but large encysted forms are also found. It is about one twenty-five thousandth of an inch in diameter. It consists essentially of cytoplasm enclosed in a cell wall, with a rounded or ovoid nucleus. The cytoplasm contains numerous granules or spores. On the warm stage the amoeba constantly alters its contour. Variolous matter contains a large number of amoebæ but relatively few extracellular spores. Absolutely fresh material can be fixed in alcohol and ether, and stained with Löffler's methylene blue; the parasite takes up the stain irregularly, and the nucleus not at all. In human vaccine lymph it is probable that the height of the inflammatory process, the eighth or ninth day, is coincident with the presence of the maximum number of amoebæ. The author has also detected in varicella lymph bodies similar in general characters to those seen in variola and vaccinia.

5. Infantile Convulsions.—Moon states that a serious view should be taken of all convulsions occurring in infancy. In most of the cases the parents have a history of epilepsy or alcoholism, which are predisposing causes of epilepsy. Even repeated convulsions in a normal brain make that brain cease to be normal and create a distinct pathological basis for epilepsy.

6. Hæmoconia.—Love has found in the blood of patients suffering from typhus fever, measles, scarlet fever, smallpox, and syphilis, four varieties of hæmoconia or "blood dust." 1. Protoplasmic bodies containing a number of bright refractile points. These are fragments of ventrophile cells. 2. Small round highly refractile bodies, apparently motile. 3. Rodlike bodies, also motile. 4. Dumb-bell forms, also motile. The last three forms probably belong to the same class. The fact that they do not stain negatives the theory that they are derived from leucocytes.

Letters to the Editor.

DR. WILEY ON METHYL ALCOHOL.

WASHINGTON, D. C., January 4, 1905.

To the Editor,

Sir: By inadvertence in describing the test for methyl alcohol on page 1010 of the *New York Medical Journal* and *Philadelphia Medical Journal* of November 26, 1904, I mentioned phloroglucin as an alternative for resorcin. In point of fact resorcin alone is used with sulphuric acid and phloroglucin with sodium hydroxide. I beg, therefore, my readers to correct the description of the test by taking out the words "or phloroglucin" following "resorcin" in the two places on page 1010.

The test with phloroglucin is made as follows: The oxidation of the methyl alcohol is carried on as described on page 1010 of your issue of November 26, 1904. Acetaldehyde is removed by adding to the liquid remaining in the test tube 6 cubic centimetres of a 3 per cent. solution of hydrogen peroxide or an equivalent amount of hydrogen peroxide if in a different state of dilution. Mix the contents of the tube and filter into a porcelain dish. After three minutes add 2 cubic centimetres of a 10 per cent. solution of sodium thiosulphate. Next add 3 cubic centimetres of a phloroglucin solution obtained by dissolving 1 gramme of phloroglucin and 20 grammes of sodium hydroxide in water and making the volume to 100 cubic centimetres. A bright red coloration indicates the presence of methyl alcohol in the original sample. The intensity of the red color is in some degree proportionate to the quantity of methyl alcohol originally present. When carefully made 1 part of methyl alcohol in 20 parts of ethyl alcohol can be detected by this reaction.

H. W. WILEY.

Acute Myelocytic Anæmia.—Elder and Fowler, in the *Edinburgh Medical Journal*, for December, 1904, conclude their paper, which is mainly an analysis of seven cases of the above mentioned condition, as follows:

1. The course and clinical features of this condition are practically identical with those of the much more common acute lymphocytic leucæmia.
2. The anæmia is generally greater than in the ordinary chronic cases. One of the cases in the authors' series is of the variety described by Leube as leucanæmia on account of the extreme qualitative and quantitative alterations in the red cells. The authors agree with Hirschfeld, however, in regarding it as acute myelocytic leucæmia.
3. The leucocyte count is not always high, it may be little above normal, but it sometimes rises to a figure comparable to that which obtains in chronic cases.
4. Eosinophiles may be absent or few in number, the same being true even to a greater extent of mast cells. As in other cases of a typical leucæmia, many of the leucocytes are difficult to classify, and one frequently observes forms which are morphologically intermediate between large lymphocytes and myelocytes. Non-granular polynuclears are also to be observed. Normoblasts may be absent or plentiful, and megakaryoblasts are sometimes present.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, December 1, 1904.

The President, Dr. RICHARD C. NORRIS, in the chair.

Chorioepithelioma Malignum.—Dr. P. B. BLAND read a paper with this title, and reported the following case: The patient was thirty-one years of age. One maternal aunt died of cancer of the uterus. The patient herself had always enjoyed comparatively good health. She was married at eighteen and had had five labors. The first four were normal, the fifth occurred at the eighth month and was hastened or produced by sustaining a severe fall. Her symptoms began about four months after her last labor and six months before her admission into the hospital. These consisted in more or less vague and indefinite pains in the lower portion of the abdomen, of a dull, aching, boring character. Two months prior to her admission she suffered from a rather free serous and offensive discharge, which soon became tinged with blood. The bleeding progressively increased in intensity. On admission the patient was extremely pale and anæmic, and had lost considerable flesh. Examination revealed the uterus of twice its normal size. It was more or less soft in consistence, the cervix was large, and the os admitted the tip of the index finger. There was no palpable pathological alteration in the tissues outside of the uterus. The patient was prepared for operation, but before opening the abdomen the uterus was dilated and a nodular mass discovered in its interior. Some of this was removed and resembled so strikingly malignant disease that hysterectomy was decided upon and performed.

The uterus was possibly of two or two and a half times its normal size, and the enlargement was uniform. The uterine wall was thickened and showed changes found in subinvolution. Occupying the interior of the uterus, on its posterior wall and in the fundal region, a large, irregular nodular mass was found. This was of a greenish blood coagulum color and of rather tense consistence. The nodules varied in size from a pea to a man's thumb. The mass did not show any line of demarcation between itself and the uterus, but apparently infiltrated the uterine wall to the extent of three eighths of an inch. The ovarian vein of the right side was distended greatly by an organizing thrombus. A portion of this was protruding from the vessel after removal. Microscopical examination of sections of the nodules revealed the tumor to be a typical chorioepithelioma. The patient was living and well eight months after the operation, without any subjective manifestations of recurrence of the disease.

The writer reviewed the early history of chorioepithelioma, and believed from his observation and study that there should be no controversy as to the nomenclature of these tumors. He believed, with Marchand, that they developed, as was recognized in his case, from the epithelial

coverings of the chorionic villi, and, therefore, that chorioepithelioma malignum was an appropriate term. He thought, in discussing the pathology, that the line of invasion in chorioepithelioma was distinctively characteristic of the tumor, differing from carcinoma, in that it was soft, mushy, and sloughing. In carcinomatous tumors the line of invasion, as was well known, was hard, dense, and firm.

Dr. Bland spoke at some length of other neoplasms containing chorionic cells, and believed, with the late observers, that they should be classed with the teratomata and not considered as true chorioepithelioma; for it would be better, he thought, to adopt a nomenclature which would distinguish those closely connected with gestation and those arising independently of it. The author also discussed in detail the ætiology of these tumors, reviewing all the theories thus far advanced as to their causation. He strongly inclined to Ehrlich's side chain theory. The high type of malignancy exhibited by these tumors he believed to be due to the time of their occurrence or their association with the preceding pregnancy. He discussed in full the symptoms and diagnosis of the condition and the prognosis. The latter he believed was extremely grave. It was perhaps the most malignant of all tumors, occurring as it did during the full physiological activity of the patient, and with the physiological process of pregnancy, in an organ in which the blood vessels were greatly multiplied and enlarged and therefore in a state highly favorable for the transportation of malignant cells throughout the body. The outlook for the patient, however, could not positively be asserted to be either good or bad, in view of the fact that spontaneous healing had occurred in some, and that even in extensive cases of metastases after removal of the primary site of infection, patients had recovered.

Dr. BARTON COOKE HIRST said he had seen two cases of chorioepithelioma, one of which began immediately after labor and ended fatally in three months. The patient had at first refused operation, but later returned to the hospital soliciting it, when it was too late. The second case was a metastatic tumor in the brain following hydatidiform mole, from which the patient died about six months after the expulsion of the diseased ovum. There was nothing in the intrauterine examination to indicate malignancy. The most interesting question to the practical man Dr. Hirst considered to be that of diagnosis. He exhibited a drawing of a case seen last year. The woman had been bleeding off and on during pregnancy. She was delivered prematurely between the sixth and seventh months. Three or four days after delivery she had begun to bleed, and profuse hæmorrhage continued until his arrival, when the woman was in a desperate condition. The vagina was packed and the woman sent to the University Hospital. The following day Dr. Hirst called the attention of the class to the causes of hæmorrhage from the uterus after childbirth, and mentioned among the causes retention of some portion of the ovum and, as the rarest of all causes, malignant growth in the womb. Though

rare, it should be borne in mind. He then examined the interior of the woman's womb and found to his surprise that he had removed with the placental forceps a curious brainlike material which macroscopically was most suggestive of malignancy. Specimens were submitted to three different pathologists. Two thought it was chorioepithelioma. The third did not think it was, but as the history was so suggestive, and the appearance under the microscope so suspicious, he recommended hysterectomy. On the advice of the three pathologists and prompted by his own feelings, he removed the uterus. Inside of the womb, near the fundus, but not at the placental site, was to all macroscopic appearances a well developed neoplasm. This was studied carefully under the microscope, and the pathologists to whom it was submitted agreed that it was not chorioepithelioma, but were unable to decide what it was. There was an infiltration of necrotic material and granulation cells which formed a well marked tumor extending beneath the endometrium about half an inch and reaching into the myometrium about one quarter of an inch. He had, therefore, removed the woman's womb on a diagnosis of chorioepithelioma and the operation had proved it to be unnecessary. The patient made a good recovery. Dr. Hirst failed to see how the mistake was to be surely avoided. He considered it easy enough to diagnosticate well marked cases already "inoperable." It was desired, however, to make the diagnosis early. In every case of pathological condition of the endometrium after childbirth there might be seen the same multiplication of syncytial cells and the same invasion of the myometrium as in chorioepithelioma, and no one yet had been able to tell him how to distinguish between the two. By the microscopical appearance of scrapings from a case of retained placental fragments the diagnosis of chorioepithelioma might be justifiable. The only light on the question, in Dr. Hirst's opinion, was that, in addition to the microscopical findings, there must be present a large exuberant neoplasm in the uterus, profuse hæmorrhage, evidence of erosion of the uterine wall, and possibly metastasis. If, however, all these symptoms were waited for, operative results were not going to be particularly brilliant.

Dr. BLAND said that the diagnosis of chorioepithelioma was somewhat difficult, but from the history and the microscopical findings he thought as a rule a reasonably positive diagnosis ought to be made. Dependence should not, however, be placed upon the microscope alone, for the clinical manifestations he considered extremely valuable. To his mind a digital examination of the interior of the uterus was the best means at command to establish the true character of the lesion, though he did not think an absolutely positive diagnosis could even be made by the execution of this procedure. A characteristic of the growth which should be of help was that it was almost always in the fundal region and on the posterior wall. Moreover, the peculiar and characteristic conformation of the basal portion of tumor was so entirely different from that of other neoplasms that that in itself should strongly suggest the

presence of this tumor. Dr. Bland expressed his gratitude to Dr. E. E. Montgomery for the privilege of reporting the case, which had occurred in his service at the Jefferson Hospital.

Posttyphoid Ovarian Abscess.—Dr. BARTON COOKE HIRST reported the case of a young woman, who was admitted into a Philadelphia hospital with symptoms of typhoid fever. One month subsequently marked pelvic pain developed. Two months from the time of admission she was discharged. The pelvic pain continued for three months after her leaving the hospital, when she consulted the writer. He found marked abdominal tenderness, fever, a weak, rapid pulse, and to the right of the uterus an inflammatory mass of the size of an orange. A diagnosis of posttyphoid ovarian abscess was made, based upon the history and physical signs. Upon operation, the ovary was found converted into a single-chambered cyst which on bacteriological examination was found to contain a pure culture of colon bacilli.

Suppurative Cholecystitis with a Gallstone and an Intraperitoneal Abscess.—The second patient was a young woman who had recovered from an attack of typhoid fever. Three months previous to the author's seeing her she had noticed a lump below the ribs on the right side. On examination, a retroverted uterus and a prolapsed ovary were found. The following operations were done: Dilatation and curettement, ventrosuspension, and shortening of the infundibulopelvic ligament. The gall bladder was incised, and a stone and several ounces of pus were removed. An abscess in the peritoneal cavity below the gall bladder was also evacuated. The patient made an excellent recovery. The pus was submitted to a bacteriological examination and found to contain a pure culture of an unidentified bacillus of the colon group.

Dr. MUELLER said that the typhoid bacillus was probably always an inhabitant of the gall bladder during the attack of typhoid fever, producing a slight degree of cholecystitis in many cases, which disappeared upon the subsidence of the attack and required in the great majority of instances no treatment whatever. Sometimes suppurative cholecystitis occurred after typhoid fever, usually in a few weeks or months after the disease had subsided. In the last fifty-five bacteriological examinations in the German Hospital of bile aspirated during operations performed by Dr. Deaver, thirty-two cultures were obtained from the fifty-five, seven of which were typhoid bacillus in pure culture; of the others, in twenty-one the colon bacillus was obtained; in three the staphylococcus, and in one streptococcus. The typhoid bacillus produced widespread lesions of the gall bladder walls, cholecystitis being invariably found in the cases examined. Histologically, the gall bladder showed ulceration of the mucous membrane, serous and cellular infiltration of the walls, and a plastic exudate covering the serosa. In one case to which he had reference a fistula existed between the gall bladder and the stomach. He recalled a case in the service of Dr. Frazier, at the Philadelphia Hospital, of a girl of fifteen who

a year previously had had an attack of typhoid fever and had entirely recovered. She became pregnant, was delivered at term, and two weeks afterward had symptoms of severe cholecystitis. To all appearances she had been perfectly well, yet a calculus had developed within the gall bladder and did not give rise to trouble until a subsequent infection with the colon bacillus drove it into the cystic duct. In cases with a distinct history of typhoid fever it was clearly understood how the infection would be carried to the gall bladder by the blood, either of the general or portal circulation. In the other cases to which he referred there was no history of typhoid, yet there was a pure culture of the typhoid bacillus found in the gall bladder, and in those cases a consideration of the source of infection made it evident that there was some point of focal necrosis within the intestinal canal, not sufficient to give rise to any intestinal lesion, from which the bacillus was carried on to the gall bladder by the portal circulation, giving rise to the cholecystitis.

Myxomatous Degeneration of an Adenomyoma of the Uterus.—Dr. BARTON COOKE HIRST exhibited an illustration of this rather rare condition, the second case only that he had seen. Myxomatous change, he said, ranked among the rarest degenerations of fibroid tumors. Primary carcinoma of the clitoris is likewise rare. Carcinoma of the vulva anywhere was rare, but carcinoma of the clitoris was rarest of all. He had seen six cases of carcinoma of the vulva and only one of carcinoma of the clitoris. Primary carcinoma of the vagina was also rare. In the case referred to the disease attacked the posterior vaginal wall within the posterior commissure and extended two thirds of the way up the vaginal canal, leaving the anterior third of the vagina free of the disease. The most interesting question, in Dr. Hirst's opinion, was that of whether the uterus in all cases must be removed. He resected three inches of the rectum with the posterior two thirds of the vagina, but did not remove the uterus. The remnant of the vagina was made into a narrow canal to carry off the menstrual discharge. The patient recovered from the operation, but had passed from under observation.

Malignant Disease of the Uterus.—Dr. A. J. DOWNES showed a uterus removed the day before from a woman sixty years of age. The specimen showed the features which in some instances are considered "inoperable." The woman was from the South, and in last April had the first sign of hæmorrhage after ten years' cessation. Her case had been correctly diagnosed by a physician in the city, but advice given against an operation. An eminent gynecologist in New Orleans gave the same diagnosis and likewise advised against an operation. Dr. Downes saw her a week before, when she appeared to be in good physical condition. Examination revealed a small mass protruding below what should have been the posterior wall of the uterus, extending an inch down on the posterior wall. The anterior lip of the uterus could be made out. Vaginal and rectal

examinations showed a fixed mass at the site of the cervix. Dr. Downes did a panhysterectomy. He first sterilized the vagina and did not touch it again. The fundus of the uterus was perfectly normal, the cervix was twice the size of the fundus. He removed the uterus through the abdominal incision without the use of a ligature, and the closing part of the operation consisted in clamping off the vagina and leaving it shut. Six months before, the operation would have been an easy one and the case practically curable, for there was evidently no cancerous tissue left after the operation. The electrothermic clamp for hæmostasis was used and practically without loss of blood.

Book Notices.

Toxicology. A Manual for Students and Practitioners. By EDWIN WELLES DWIGHT, M. D., Instructor in Legal Medicine, Harvard University. Series Edited by VICTOR COX PEDERSEN, A. M., M. D., Instructor in Surgery and Anæsthetist and Instructor in Anæsthesia at the New York Polyclinic Medical School and Hospital, etc. Philadelphia and New York: Lea Brothers & Co., 1904. Pp. 298.

Students of medicine and of pharmacy have long felt the need of a comprehensive yet handy-sized textbook of toxicology, and an effort has been made to supply this want in the manual before us, which is one of the Medical Epitome Series intended for the use of students and of practising physicians. In Chapter I the author gives a general definition of the subject, and enumerates in the twelve succeeding chapters the principal poisonous substances, classifying and dividing them according to their physiological action. Thus, we have irritants, specific irritants, metallic irritants, vegetable irritants, animal irritants, poisonous foods, cerebral neurotics, spinal and cerebrospinal neurotics, depressants, asthenics, and ptomaines. The appearance and properties of the individual poison are described, followed by the symptoms of poisoning and the fatal dose, after which come methods of treatment, post mortem appearances, tests, and illustrative cases of poisoning, the latter usually taken from current medical literature.

The work is well arranged, but cannot be said to be quite up to date. In the treatment of carbolic acid poisoning, for example, we should expect to find some mention of the use of alcohol, but references to this are wanting, and the illustrative case of poisoning which is cited is twenty-three years old! In the chapter on ptomaines, the name of the discoverer of tyrotoxin—which, by the way, is not mentioned in the book—is spelled incorrectly. We have been rather disappointed to note a number of inconsistencies in nomenclature, together with numerous minor typographical errors, which must be attributed to faulty proof reading. The chemical symbols employed by the author here and there throughout the work are also open to suspicion, that referring to potassium bitartrate, in particular, being wholly unintelligible. We mention these defects in order that the author may be led to improve the work in subsequent revisions. The newer

synthetic remedies, which are occasionally poisonous, are wholly ignored in the volume, and a chapter on the poisonous properties of such of them as have been found to possess such properties would improve the book.

Physiological Economy in Nutrition. With Special Reference to the Minimal Proteid Requirement of the Healthy Man. An Experimental Study. By RUSSELL H. CHITTENDEN, Ph. D., LL. D., Sc. D., Director of the Sheffield Scientific School of Yale University and Professor of Physiological Chemistry; Member of the National Academy of Sciences, etc. New York: Frederick A. Stokes Company, 1904. Pp. xiv+478. (\$3.00 net.)

The author states very truly that there is no subject of greater physiological importance or of greater moment for the welfare of the human race than that of nutrition. Almost daily the physician is asked how best to maintain the body in a condition of health and strength, and yet there are widely divergent views as to the extent and character of food requirement. While certain dietary standards have been accepted, frequently persons in good physical condition are seen whose diet varies materially from the standard.

The author has sought a more definite knowledge of the true physiological necessities of the body for proteid foods, because if accepted ideas are exaggerated in regard to the daily quantities of these foods necessary to maintain health and strength, then a physiological economy is possible. Fats and carbohydrates, when oxidized in the body, are ultimately burned to simple gaseous products, viz., carbonic acid and water. When proteids are oxidized they yield a series of crystalline nitrogenous products that, while ultimately excreted by the kidneys, are in the body fluids, or may be deposited temporarily and exercise a more or less deleterious influence on the system.

The experiments, which were arranged with great care, were conducted with three classes of individuals: 1. A group of five men connected with Yale University as professors and instructors. 2. A detachment of thirteen men from the hospital corps of the army. 3. A group of eight athletic students. The results of the experiments are tabulated in detail, and show that ordinarily people "consume much more food than there is any necessity for, and that it is more than probable that this excess of food is in the long run detrimental to health, weakening rather than strengthening the body, and defeating the very objects aimed at." The proof is conclusive that the amount of proteid or albuminous food needed daily for the actual physiological wants of the body is about one half the quantity that is consumed by the average man; in other words, 59 grammes of proteid food is adequate for such want under ordinary conditions of life.

The conclusions indicate that the man whose work is mainly mental has no need for high fuel values in his daily ration, because he can maintain bodily equilibrium on far less than 3,000 calories a day. And while a man who must labor hard may need a greater quantity of fats and carbohydrates than is necessary to yield 3,000 calories, one who does a moderate amount of physical work has no apparent need for such fuel value in food.

The work is a most important contribution to dietetics and does great credit to its distinguished author.

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. By JAMES NEVINS HYDE, A. M., M. D., Professor of Skin, Genitourinary, and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Presbyterian, Augustana, and Michael Reese Hospitals of Chicago, etc.; and FRANK HUGH MONTGOMERY, M. D., Associate Professor of Skin, Genitourinary, and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School, etc. Seventh and Revised Edition. Illustrated with 107 Engravings and 34 Plates in Colors and Monochrome. Philadelphia and New York: Lea Brothers & Co., 1904. Pp. 938.

The authors have expended a great deal of labor in the preparation of the latest edition of this textbook of dermatology. Every subject has been given the benefit of the latest researches in a most actively cultivated specialty. A number of new diseases have been added and, while the nomenclature remains cumbersome and the synonyms are in various languages, this is necessary in the present stage of our knowledge of the subject and the international interests of the contributors. The chapters devoted to radiotherapy, phototherapy, and general pathology of the skin are clear and suggestive. It is rather disappointing to find, in view of Sabouraud's recent work in clearing up the confusion in regard to pityriasis and seborrhea of the scalp, that the errors of the Vienna school are still endorsed. It is a pity that a volume of nearly 1,000 pages should be printed upon such heavy paper; six pounds in a book is rather unwieldy and might well justify a division into two volumes. The half tone illustrations are very good, which cannot be said of the colored plates. Any lithograph of a skin lesion is subject to the personal interpretation of the artist who makes the painting, of the lithographer who prepares the stone, and of the artisan who prints the plates, with an inevitable disappointment and expense to every one. These may be platitudes, but the increased cost of lithographs to the reader is not justified by their value, which is nothing unless they are facsimiles. As a whole the volume deserves the warmest praise, and the authors should receive congratulations upon the full maturity of a treatise the first edition of which appeared just twenty-one years ago.

The Surgical Treatment of Bright's Disease. By GEORGE M. EDEBOHLS, A. M., M. D., LL. D., Professor of the Diseases of Women in the New York Postgraduate Medical School and Hospital, etc. New York: Frank F. Liseicki, 1904. Pp. 332.

The operation of decapsulation of the kidney is the subject of this work. The author's name is everywhere prominently associated with this procedure, though an unfortunate controversy has arisen as to the title to priority in its employment.

Of necessity, considerable space in the book is devoted to this controversy. Whatever may be any reader's opinion of the merits of the question, it must be conceded that Dr. Edebohls has written of it temperately and with dignity.

As to the value of the operation itself, it must be said to be still *sub-judice*, with perhaps a growing tendency to look upon decapsulation as probably of little permanent efficacy in arresting any one of the various morbid conditions of the kidney familiarly grouped under the name of Bright's disease. But our experience must be much greater than it is now before we can decide that the operation is not a hopeful resource.

Applied Materia Medica. A Textbook Intended for the Use of Nurses in Hospital Training Schools. By J. HENRY SCHROEDER, Ph. G., M. D., formerly Lecturer on Materia Medica in the Jewish Hospital Training School for Nurses, Cincinnati. Cincinnati: The Robert Clarke Company, 1904. Pp. ix+113. (\$1.25.)

The author of this little manual has contrived to bring together within a very small compass a remarkable amount of information concerning the drugs commonly used in wards and sick rooms. The descriptions of drugs are necessarily abbreviated, but they have lost none of their scientific value in the process of condensation, and the matter is presented in a manner that makes reading easy, quite fulfilling the wish of the author "that the nurse may pursue with pleasure and profit the study of this subject" (*materia medica*). It is a book that can be confidently recommended to students of nursing and to those having to do with the teaching of nursing.

BOOK AND MAGAZINE NOTES.

One Hundred Years of Publishing is a handsome little volume giving the history of the house of William Wood & Company, the second oldest publishing establishment in New York. The booklet is neatly printed and handsomely illustrated with portraits and pictures of the various establishments Messrs. Wood have occupied.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Die Angeborene Pylorusstenose im Sauglingsalter. Von Dr. JUSSUF ISRAHIM, Privatdozent für Kinderheilkunde. Mit 1 Tafel und 1 Abbildung im Text. Berlin, 1905: S. Karger. Pp. 120. [M. \$3.50.]

A Treatise on Diseases of the Nervous System. By L. HARRISON METTLER, A. M., M. D., Associate Professor of Neurology, College of Medicine of the University of Illinois; Professor of Nervous and Mental Diseases in the Chicago Clinical School, etc. Complete in One Volume. Profusely Illustrated. Chicago, 1905: Cleveland Press. Pp. 989.

Ten Lectures on Biochemistry of Muscle and Nerve. By W. D. HALLIBURTON, M. D., F. R. S., Professor of Physiology, King's College, London; Editor of Kirke's Handbook of Physiology. With Illustrations. Philadelphia, 1904: P. Blakiston's Son & Co. Pp. xvi+160. [\$2.00 net.]

Manson's Eye Worm of Chickens (*Oxyspirura Mansonii*). With a General Review of Nematodes Parasitic in the Eyes of Birds, and *Notes on the Spiny-suckered Tape-worms of Chickens.* By B. H. RAMSON, B. Sc., A. M., Scientific Assistant in Charge of the Zoological Laboratory Bureau of Animal Industry. Washington, 1904: Government Printing Office. Pp. 72.

Miscellany

Reaction Times as a Test of Mental Ability.—Whipple, in the *American Journal of Psychology*, for October, 1904, summarizes his article as follows:

1. The reaction experiment, as conducted in the psychological laboratory, is primarily a qualitative experiment for the synthesis of the action consciousness. When due regard is paid to the objective conditions, to practice, and to the direction of attention most observers can readily be trained to adopt any of the three types of attention. The quantitative results are uniform for all observers for a given direction of the attention.

2. The reaction experiment of the anthropometric type, as conducted upon school children, is a rough and ready quantitative experiment which has yielded results of very questionable value as adjudged by the laboratory standards. The constant individual differences between groups of children, which have sometimes been assumed to indicate differing grades of mental ability or general intelligence, are largely the products of faulty experimental conditions and cannot in any event be referred either in theory or practice to constant individual differences in mental ability.

3. This examination of the reaction experiment suggests that many other experimental studies of school children have been vitiated by the neglect of those cautious in procedure and interpretation that laboratory practice has taught. As an illustration, the pitch discrimination of an unmusical observer is shown to be subject to wide variation when the test conditions are slightly modified.

4. The outcome of the reaction time test (and indeed of any psychophysical test) upon school children will depend not only upon the objective conditions of the test, upon the nature of the instructions given, etc., but also to an appreciable extent upon the ability of each child to understand and carry out the instructions given. When, therefore, a test is affected in this way, any assumed correlation between the quantitative results and the general intelligence of the group of children tested is in reality but a correlation of general intelligence with itself.

The Psychology of Day Dreams.—Smith, in the *American Journal of Psychology*, for October, 1904, summarizes his study of this subject in the following observations: Day dreaming appears to be a normal and well nigh universal phenomenon in children and adolescents, and may continue throughout life. It is especially characteristic of the years of adolescence. The content of the day dream is chiefly determined by environment, though its forms like those of night dreams are influenced by age, health, and degree of mental development. In early childhood day dreams are usually made up of memory images, actual experiences or stories being reproduced with little

change. The latter tendency is further illustrated by the insistency of children that stories told to them shall be repeated without any change in the details. The future of childhood is usually a definitely circumscribed and near future, and motor activities and eating figure largely in the content of childish dreams. With the dawn of adolescence the variety and complexity of content is increased and the range is widened. Dreams of the future are usually of the vague future with boundless possibilities. The instinct emotions become an evident factor, and dreams of love are frequent. Altruistic and egoistic emotions are both greatly intensified. The day dreams of adult life show a closer connection with actual life than those of childhood and adolescence. Dreams of the future were more in the form of plans with the possibility of accomplishment. The day dreams of old age are infrequent and are usually concerned with the remote past. Though environment exercises an important influence upon the development of the imagination and there is a possibility that it may be dwarfed and starved by repression, much is due to differences of mental endowment, and day dreaming in a marked degree is often associated with high intellectual endowments and creative ability. Day dreaming like any other mental activity may become excessive and pass over into pathological states, and in consequence of the fact that it is usually enjoyable, and a passive state, it is peculiarly liable to this source of danger. Sex differences are especially marked in day dreams, many of them being so characteristically masculine or feminine that the sex of the writer is unmistakable. While this is in part undoubtedly due to environment and conventional training, it also suggests that in the more automatic workings of the mind there may be a fruitful field for the investigation of the question of how far mental differences between men and women are innate and fundamental, and how far they are due to artificial causes.

Mania.—Wernicke, in the *Alienist and Neurologist*, for November, 1904, observes that in addition to mania there are maniacal states which are phases of composite psychoses occurring in stages or combinations of two or more fundamental forms. Mania may be related to melancholia in three ways:

1. A mild form of the one disease generally appears in the convalescence of the other and terminates it. The duration of this change, which often appears after the patient's condition has apparently become normal, may be a few days or a few weeks. 2. Mania is the most inclined to recur of all the psychoses. Years usually elapse between the early attacks, then the intervals become shorter, and finally the periods of disease may exceed in duration those of health. A similar experience is rarely observed in melancholia. Occasionally, instead of a recurring mania there is a melancholia which partakes of the better prognosis of mania. Occasionally, also, a melan-

cholia may be succeeded by a mania, this being known as the representative melancholia. 3. A combination of mania and melancholia frequently occurs in which one seems to be excited by the other. They are separated by an interval of apparent health which may last for days and weeks, or the period may be very brief and escape observation. This disease has been termed circular mental disease, or *folie à double forme*. Its prognosis is very bad, and in many cases it seems to be incurable.

The treatment of mania is usually impossible outside of a hospital for the insane. Acute pure mania never becomes chronic mania, which is a particular form of disease. Chronic mania has all the essential characteristics of acute mania, but they are so modified that the conditions of a chronic stable condition are combined with it.

Concerning Death from Chloroform.—Stiles and MacDonald, in *Fortschritte der Medezin*, for October 10, 1904, observe that inasmuch as death seldom comes as a late result of the use of chloroform as an anæsthetic, it is not improbable that there was a preëxisting cause in case of such death which may be looked upon as a predisposition to the unfavorable result. Such a predisposing factor may be found in some precedent condition of disease or in a peculiar idiosyncrasy to chloroform. Liver disease is a cause which must never be overlooked. According to Guthrie, fatty degeneration of the liver is the real predisposing factor, and chloroform simply intensifies it. The authors are not convinced, however, that fatty degeneration of the liver may not be due to the action of chloroform upon an organ which was previously healthy. The predisposing factor is believed by other writers to reside in diseased kidneys, a diseased vascular system, or in some other organ. On the other hand, some individuals who have severe organic lesions withstand chloroform readily. Preëxisting lesions are therefore not necessarily a contraindication to the use of chloroform. It is quite probable that idiosyncrasy plays an important part in the use of this substance. Many writers ascribe to chloroform a directly destructive action upon the red corpuscles, oxidation being deficient, and this leading to the deposit of fat within the organs. The more probable explanation is to be found in its poisonous effect. Chloroform is an intense poison to protoplasm, and is thus likely to cause changes in the organs and interrupt their functions. Experimental investigations with chloroform revealed fatty degeneration in the liver, kidneys, and heart, and it probably was present in other organs, but it was not certain that the fatty liver did not result from infiltration rather than degeneration. The symptoms of late chloroform poisoning resemble those of other auto-intoxications, for example, diabetic coma. There has also been observed an increase of acetone in the urine, and the most recent physiological investigations seem to show that the fat and not the albumenoids or carbohydrates is the source of this substance.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 6, 1905:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
Colorado—Larimer County.	Nov. 1-30.	1	1
Dist. of Columbia—Washington.	Dec. 24-31.	1	1
Illinois—Chicago.	Dec. 24-31.	11	3
Illinois—Danville.	Dec. 17-31.	2	1
Michigan—at 32 localities.	Dec. 17-31.	Present.	
Missouri—St. Louis.	Dec. 17-23.	18	1
South Carolina—Georgetown.	Nov. 16-Dec. 31.	8	
Tennessee—Memphis.	Dec. 24-31.	3	
Tennessee—Nashville.	Dec. 24-31.	8	Two cases imported.
Smallpox—Foreign.			
Austria—Prague.	Dec. 3-10.	15	
Ecuador—Guayaquil.	Dec. 7-14.	1	1
France—Lyons.	Dec. 3-10.	1	
France—Paris.	Dec. 10-17.	4	1
Great Britain—London.	Dec. 10-17.	2	
Gt. Britain—Newcastle-on-Tyne.	Dec. 10-17.	19	
Great Britain—South Shields.	Dec. 10-17.	5	2
India—Bombay.	Nov. 31-Dec. 6.	14	1
Italy—Catania.	Dec. 8-15.	1	
Italy—Milan.	Oct. 1-31.	1	
Mexico—City of Mexico.	Nov. 19-Dec. 10.	3	1
Norway—Christiania.	Dec. 10-17.	1	1
Russia—Moscow.	Nov. 27-Dec. 8.	1	2
Russia—Odessa.	Dec. 3-10.	1	
Russia—St. Petersburg.	Dec. 3-10.	5	
Russia—Warsaw.	Nov. 5-12.	2	
Turkey—Constantinople.	Dec. 4-11.	50	25
Yellow Fever.			
Ecuador—Guayaquil.	Dec. 7-14.	3	
Mexico—Juchitan.	Dec. 18-24.	2	1
Mexico—Tuxtitepec.	Dec. 18-24.	2	1
Cholera.			
India—Bombay.	Nov. 30-Dec. 6.	26	
India—Calcutta.	Nov. 26-Dec. 3.	69	
Plague.			
Arabia—Aden.	Nov. 25-Dec. 2.	18	14
India—Bombay.	Nov. 30-Dec. 8.	76	
India—Calcutta.	Nov. 26-Dec. 3.	8	
Straits Settlements—Singapore.	Nov. 6-19.	3	3

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 4, 1905:

- BROOKS, S. D., Surgeon. To report on January 10, 1905, to chairman of board of examiners at Fort Stanton, N. M., for the purpose of determining his physical condition.
- BROWN, F. L., Pharmacist. Granted leave of absence for thirteen days from December 19, 1904. Granted extension of leave of absence for two days from January 1, 1905.
- GREGORY, G. A., Acting Assistant Surgeon. Granted leave of absence for seven days from December 30, 1904.
- GREENE, J. B., Passed Assistant Surgeon. Granted extension of leave of absence for seven days from January 3, 1905.
- LINLEY, W. J., Acting Assistant Surgeon. Granted leave of absence for thirty days from January 16, 1905.
- LUMSDEN, L. L., Passed Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, N. Y., and directed to proceed to Philadelphia, Pa., and report to the Medical Officer in Command for duty. December 29, 1904.
- NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for seven days from December 25, 1904, under paragraph 191 of the regulations.
- SALMON, T. W., Assistant Surgeon. Relieved from duty at Philadelphia, Pa., and directed to proceed to the Immigration Depot, New York, and report to Surgeon G. W. Stoner for duty. December 29, 1904.
- WAKEFIELD, H. C., Acting Assistant Surgeon. Granted leave of absence for three days, under paragraph 210 of the regulations.

Boards Convened.

Board convened to meet at Washington, D. C., January 5, 1905, for the physical examination of candidates for the position of Second Assistant Engineer, Revenue Cutter Service. Detail for the board—Assistant Surgeon-General G. T. VAUGHAN, chairman. Assistant Surgeon A. J. McLAUGHLIN, recorder.

Board convened to meet at Fort Stanton, N. M., January 10, 1905, for the purpose of making a physical examination of Surgeon S. D. BROOKS. Detail for the board—Surgeon P. M. CARRINGTON, chairman. Assistant Surgeon NORMAN ROBERTS. Assistant Surgeon H. G. EBERT, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 7, 1905:

ELMER, M. K., Assistant Surgeon. Detached from the *Hancock* and ordered to the Naval Hospital, New York, N. Y., for treatment.

FEREBEE, N. M., Medical Director. Having been examined by a retiring board and found incapacitated for active duty, on account of physical disability incident to the service, retired from active service on December 31, 1904, under Section 1453, Revised Statutes.

McMURDO, P. F., Acting Assistant Surgeon. Detached from the Navy Yard, League Island, Pa., and ordered to the Naval Recruiting Station, Baltimore, Md.

PAYNE, J. H., Passed Assistant Surgeon. Detached from the *Marietta* and ordered home to await orders.

ROSS, JOHN W., Medical Director. To be placed on the retired list on January 11, 1905, under provisions of Section 1444, Revised Statutes, upon which date he will reach the age of sixty-two years. Ordered to continue duty with the Isthmian Canal Commission after retirement.

STEELE, JOHN M., Surgeon. Detached from the Naval Recruiting Station, Baltimore, Md., and ordered to the *Colorado* on January 10, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 7, 1905:

BYRNE, CHARLES B., Colonel and Assistant Surgeon General. Detailed a member of the army retiring board to meet at Fort Leavenworth, Kan., vice George W. Adair, Lieutenant Colonel and Deputy Surgeon General, relieved.

DAVIS, WILLIAM B., Major and Surgeon. Relieved from duty at Honolulu, Hawaii, and ordered to the Philippine Islands for duty.

DEVEREUX, J. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Meade, S. D., and ordered to Fort Logan, Colo.

FARR, CHARLES W., First Lieutenant and Assistant Surgeon. In addition to his present duties will perform the duty of attending surgeon, San Francisco, Cal.

GER, CHARLES C., First Lieutenant and Assistant Surgeon. Retired from active service on account of disability incident thereto.

MEARNS, E. A., Major and Surgeon. Granted thirty days' leave, to take effect upon expiration of his present sick leave.

OWEN, W. O., Major and Surgeon. Ordered to Fort Leavenworth, Kan., for examination by an army retiring board.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Ordered to proceed from Jackson Barracks, Louisiana, to the United States Army General Hospital, Fort Bayard, New Mexico, for treatment.

SILER, JOSEPH F., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Logan, Colo., and ordered to Fort Meade, S. D., for duty.

WOODSON, R. S., Captain and Assistant Surgeon. Relieved from duty at Fort Clark, Texas, and upon discharge from the Army and Navy General Hospital, Hot Springs, Ark., ordered to Fort McDowell, Cal., for duty.

YOST, JOHN D., First Lieutenant and Assistant Surgeon. Relieved from duty at San Francisco, Cal., and ordered to Honolulu, Hawaii, for duty, relieving William B. Davis, Major and Surgeon.

Births, Marriages, and Deaths*Born.*

GOLDBERG.—In Buffalo, N. Y., on Saturday, December 31st, to Dr. and Mrs. Jacob Goldberg, a son.

Married.

FULLER—THOMSON.—In St. Louis, Missouri, on Wednesday, December 28th, Dr. Allen Garfield Fuller and Miss Holmes Lackland Thomson.

PERRY—CREW.—In New Orleans, Louisiana, on Wednesday, December 28th, Dr. C. Seldon Crew and Miss Iris Perry.

PROPPER—PROPPER.—In Camden, New Jersey, on Thursday, December 29th, Dr. Julius Propper and Miss Gizelle Propper.

RHOME—PETERSON.—In Philadelphia, on Wednesday, January 4th, Dr. Byron Luther Rhome and Miss Lily Blanche Peterson.

SEEBASS—THIES.—In Denver, Colorado, on Monday, December 19th, Dr. Alfred R. Seebass and Miss Herta Thies.

WALDEN—BURWELL.—In New York, on Monday, December 26th, Dr. Richard Channing Walden and Miss Daisy Bissell Burwell.

WALKERTON—JOHNSON.—In Washington, D. C., on Wednesday, December 28th, Dr. Bathurst B. Bagby Walkerton and Miss Alpie C. Johnson.

Died.

ADAMS.—In Washington, D. C., on Sunday, January 1st, Dr. Arthur C. Adams, in the fifty-first year of his age.

ANDERSON.—In Chicago, Illinois, on Saturday, December 24th, Dr. Axel Morris Anderson, in the thirty-third year of his age.

BARNUM.—In Cassville, N. Y., on Sunday, January 1st, Dr. David Albert Barnum, in the sixtieth year of his age.

BEALE.—In Charlottesville, Virginia, on Thursday, December 29th, Dr. C. W. Beale, in the eighty-first year of his age.

BEEBE.—In Chicago, Illinois, on Friday, December 30th, Dr. Ellen Beebe, in the fifty-sixth year of her age.

CALDWELL.—In Pittsburgh, Pennsylvania, on Tuesday, December 20th, Dr. Merlin Caldwell, in the thirty-first year of his age.

DEVORE.—In Ripley, Ohio, on Thursday, December 29th, Dr. Earl Devore, in the twenty-seventh year of his age.

EAGLETON.—In Ocala, Florida, on Wednesday, January 4th, Dr. James M. Eagleton, in the seventieth year of his age.

GRIFFIN.—In Philadelphia, on Sunday, January 1st, Dr. Frederick Griffin, in the forty-ninth year of his age.

HOYL.—In Fort Valley, Georgia, on Monday, December 26th, Dr. J. D. Hoyl.

JONES.—In Clayville, N. Y., on Sunday, December 25th, Dr. J. E. Jones, in the seventy-third year of his age.

MINTON.—In New York, on Monday, January 2nd, Dr. D. S. Minton, in the sixty-sixth year of his age.

O'HARA.—In Buffalo, N. Y., on Sunday, January 1st, Dr. Arthur P. O'Hara, in the forty-fourth year of his age.

PATRICK.—In St. Paul, Minnesota, on Friday, December 30th, Dr. J. B. Patrick, in the forty-ninth year of his age.

PHOLON.—In San Francisco, California, on Thursday, December 29th, Dr. William Pike Phelon, in the seventy-first year of his age.

POMEROY.—In St. Louis, Missouri, on Friday, December 30th, Dr. John Reynolds Pomeroy, in the fifty-sixth year of his age.

RAY.—In Denver, Colorado, on Friday, December 30th, Dr. John Ray, in the forty-eighth year of his age.

ROSS.—In Kansas City, Kansas, on Saturday, December 31st, Dr. William Alexander Ross, in the eighty-eighth year of his age.

SMITH.—In Brooklyn, N. Y., on Tuesday, January 3rd, Dr. Evan F. Smith, in the fifty-fourth year of his age.

SMITH.—In Louisville, Kentucky, on Saturday, December 31st, Dr. Richard Henry Smith, in the sixty-seventh year of his age.

WILKINSON.—In Louisville, Kentucky, on Saturday, December 31st, Dr. Monroe Wilkinson, in the sixty-eighth year of his age.

WOOD.—In Owensboro, Kentucky, on Monday, January 2nd, Dr. A. C. Wood, in the eighty-first year of his age.

YOUNG.—In St. Louis, Missouri, on Thursday, December 29th, Dr. Hiram W. Young, in the thirty-fourth year of his age.

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WHOLE NO. 1364.

Lectures and Addresses.

THE ABUSE OF WATER DRINKING IN DISEASE.*

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NEW YORK,

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In accepting your president's invitation to address you this evening, it seemed best to me to select some topic of every day interest. I have, therefore, decided to consider briefly the abuse of water drinking, especially as prescribed by physicians.

In what I have to offer on this subject there will be but little that is new, inasmuch as the facts set forth are available to all of you in the textbooks which are accessible. Unfortunately, however, too many physicians are indifferent about acquiring information at first hand and prefer rather to follow the crowd or some popular opinion as they successively take up some new shibboleth. This idea they will follow as a fad and use in a most careless and indiscriminate way. Failing to get good results, instead of studying the cause of the failure, they will decry the method. The results of investigations made by careful students they will pass by unheeded and they will scorn or ridicule any precise directions. In the recoil which follows their over enthusiastic faddism they not only destroy their own efforts; but unfortunately, the carefully and slowly gathered results which are based upon real investigation are set at naught and lost.

The abuse of water drinking is not, as is usually supposed, an American vice, but is practised in every part of the world. It is not by any means confined to the city, but is seen in its full glory at the various mineral springs, where the temptation to "drink all you wish for five cents!" seems too great to be resisted. To what extremes this

water drinking at the spas can be driven I myself saw ten years ago at a famous New England spring, where the "champion water drinker" of this resort, a chronic nephritic, whose record was sixty-five goblets a day, was pointed out to every visitor and his feat considered one to be emulated. That such extremes may easily be followed by fatal results is proved by the deaths which have been reported after following the "water cure" of Cadet de Vaux, who recommended for gout the drinking of six to eight ounces of water as hot as possible every quarter of an hour; forty-eight drinks of this kind, that is, about ten litres, to be taken during the day.

Before considering the abuse, it may not be amiss to point out briefly some of the accepted facts about the effects of water drinking in health and in disease. This subject is one which is full of difficulties, since many of the older researches must now be modified in the light of the newer doctrines of osmosis, electrolytic phenomena, etc. The uncertainty of our views on the subject and on the causation of œdema and dropsy, the exact definition of hydræmia and plethora, etc., has been well shown by Kraus in his recently published treatise on *The Dietetic Treatment of Cardiac Diseases*.¹

Water once within the body is no longer water, but must be considered in its relations to the various salts, colloids, etc., with which it comes in such intimate contact.

The normal quantity¹ of water for the healthy adult individual, exclusive of the water contained in the food, is about one and one half to two litres a day. Of this two thirds appears in the urine, one third being retained in the body.

Only a small portion of the water which is taken is absorbed by the stomach, the maximum quantity being ten per cent.; the other ninety per cent. is passed on into the intestines. A fact which is seldom recognized is that not only is the absorption of water in the stomach very slight, but that even the excretion of water into

* Read at a meeting of the New York County Medical Association.

¹ *Handbuch der Ernährungstherapie*, von Leyden und Klempner, 1903, Vol. 41, p. 366.

the stomach may take place under the conditions pointed out by von Mering.

Another most important fact is that every drop of water introduced into the system must be excreted from it, directly or indirectly, by the heart; hence the larger the quantity of liquid introduced, the greater the amount of energy demanded of the heart for its disposal.

Water drinking has certain effects on the body, as is well stated by Hoffmann.² The functions which are principally affected are first, the metabolism; second, the temperature; third, the circulation, especially the heart; fourth, the glandular secretions; and, fifth, the peristalsis. The most important of these are the metabolism and the circulation.

The effects upon the metabolism are contradictory, but the following may be accepted:

"The increased drinking of water does not increase the breaking down of the albumins. It is true that such an increase causes a greater excretion of urea, but this does not depend upon the increased production of urea, since the effects disappear very promptly if the increased drinking of water is continued for several days; hence it cannot be doubted that this is only dependent upon a greater washing out of urea, which, however, is only a temporary effect. The question is a difficult one. I am inclined to agree with the views of von Noorden, which are expressed as stated. Nevertheless, the metabolism as a whole must be distinctly increased, as may be inferred from the effect upon the heart, the circulatory activity, and the peristalsis. This increase of metabolism after the free drinking of water takes place, especially at the expense of the carbohydrates and fats."

The effects upon the circulation have been well shown by Baruch,³ who emphasizes the importance of considering the relations of temperature, the quantity taken, and the duration of the contact of the water with the mucous membrane. Taken in small quantities hot water raises the pulse rate and lowers the blood pressure; cold water diminishes the pulse rate and raises the blood pressure; lukewarm water (that is, at a temperature of 77° to 86° F.) lowers blood pressure. *Water at ordinary temperature (60°) has very little effect.* These effects cease in about twenty minutes. They are due to the influence exerted upon the vasomotor centres rather than to a dilution of the blood. The greater the quantity of water above 200 c.c., the greater the effect

upon the blood vessels. This effect, however, does not last longer than three minutes. The imbibed water begins to appear in the tissues within an hour and the entire quantity is eliminated in three and one half hours.

Diuresis does not depend upon the quantity of water introduced into the body, but upon the blood pressure in the kidneys. Excretion is also influenced by the temperature of the body, as is well shown by the report of Sahli, quoted by Baruch,⁴ who found that in hypodermoclysis in cases of mercurialism the diuretic effect ceased as soon as the patient had fever.

Finally as regards the mysterious relation of water drinking at meals to obesity. This resolves itself into the very simple explanation given by Oertel and Schwenninger, that this depends merely upon the fact that more food can be eaten when a large quantity of water is taken with meals, and less food is relished when the quantity of water at the meals is very much diminished.

Turning to the practical side, it may seem paradoxical to say that the abuse of water drinking has already been discussed in the presentation of the above. These abuses are committed by every one of us in his routine work. Usually no harm is done, even though we fail to achieve the results desired. But the contrary is true in the not infrequent cases where we add to the burdens of an already taxed heart and circulation, and where we thoughtlessly augment the embarrassments of organs we are striving to relieve.

I do not propose to consider all of these conditions, but I will direct your attention to only the more important of them.

Most striking of all is the abuse of water drinking in chronic nephritis. Patients require no urging to drink as much as possible, since the laity firmly believe that copious libations and the treatment of Bright's disease are synonymous. The larger the quantity of water consumed, according to the patient's reports, the more benignant and encouraging becomes the attitude of the attending physician. That any harm might follow such a course is beyond his belief. To doubt the efficacy of "kidney flushing" is the rankest heresy; that good might even result from reducing the daily amount of fluids to normal quantities is incomprehensible. And yet such is the case. It is to von Noorden⁵ that we are indebted for having called attention to this, and for having had investigations made by several of his pupils (Ritter, Dapper, Rzetkowski, and Mohr) to corroborate his contentions that when the heart

² *Handbuch der Ernährungstherapie*, von Leyden und Klempner, Vol. I, p. 475.

³ *Hydrotherapy*, 2d edition, p. 289.

⁴ *Hydrotherapy*, 2d edition, p. 292.

⁵ *Sammlung klinischer Abhandlungen*, 2. Heft, pp. 56 to 63.

is no longer competent, the daily quantity of water should be restricted to one and one quarter litres (not including the water contained in the food, which averages 500 to 700 c.c.).

In the earlier stages, also, when good compensation exists, this restriction is advisable as a prophylactic measure. Von Noorden has proved that in both stages the elimination of the important salts is not lessened by this restriction. Even in the nephritis of diabetes he does not hesitate to restrict fluids when the cardiac condition demands it.

In the early days of this restriction the patients often complain of thirst, which, however, soon disappears. On one day in the week the patient is allowed to drink as much as he pleases. This insures the removal of any nitrogenous salts which might perchance have accumulated.

Von Ziemssen has also observed good results from the restriction of fluids in contracted kidneys, especially in cases where there are distinct evidences of arteriosclerosis.

Ewald could also corroborate von Noorden's views.

My own experience during the past few years has been the same, as the results obtained in these cases have been decidedly better since the use of water has been more rationally controlled.

Von Noorden has also observed cases of chronic parenchymatous and even acute nephritis in which the regulation of water has been useful. Baruch⁶ also emphasizes the importance of this in acute nephritis and prefers the use of small quantities of cold water every half hour. "If the enormous labor which this overfilling of the system with fluids inflicts upon the embarrassed circulation is considered, it would not be difficult to see the advantage of smaller quantities given for reflex effect. Comparison of clinical results has too frequently convinced me of the superiority of the latter method."

In heart diseases the abuse of fluids is less evident, but none the less serious in its consequences. Not only do many physicians fail to reduce fluid in these patients, but they even order flushing at the spa and at home to patients with gout, chronic rheumatism, gravel, hepatic and gastric disorders, etc., who have manifest or undetected organic disease. This is especially true at the spas where the routine use of stencilled treatments wrecks many a compensation or converts latent into actual cardiac disease.

To quote from a former paper on The Causes of Failure of Compensation in Diseases of the

Heart,⁷ which I read before the Academy of Medicine in 1900: "Many a compensation is shattered at Carlsbad and other resorts under the so called guidance of physicians. How many more are wrecked by the patient's own efforts in Banting, thyroid medication, etc.! Far too many paunches are flattened, livers shrunken, and gall bladders cleansed, dyspepsias cured, vain women's figures restored to youthful lines and suppleness with the high sacrifice of cardiac compensation. Small wonder, then, that Carlsbad physicians are now sending their patients to Nauheim for the after cure!"

The other abuse of water drinking in cardiac diseases lies in the failure to reduce the quantity of fluids. I refer to the value of the dry diet in many of these cases.

The significance of the influence of water drinking may be appreciated if we consider the striking results in Dennig's researches.⁸ After placing four adult individuals in nitrogenous equilibrium under a normal diet, they were subjected to several successive periods of alternate normal quantity of fluid (that is, about 2 litres), and periods of six days during which the amount of fluid allowed was reduced to half a litre. On the six days during which the normal amount of liquid was allowed, the amount of water excreted varied between 49 and 71 per cent., whereas during the dry periods the amount was increased to from 111 to 173 per cent. The far reaching inferences from these experiments need no further comment. Their practical significance is attested by the good results which often follow the restriction imposed by the dry diet. The chronic hyperæmia of the kidney, the existence of dropsy, and the hydræmic plethora, and anæmia in advanced cardiac conditions are sufficient indications of the need of great care in warning patients against too much liquid in these conditions. As already stated, every drop of water taken into the body means additional work for the heart. Our aim is to regulate the blood pressure in the kidney rather than to crowd more work upon the already struggling heart by carelessness in fluid regulation. Indeed, the cardiac tonics often reassert their action if the quantity of fluid is restricted.

In chronic gastric and intestinal disorders the significance of this abuse can be more readily recognized; but, nevertheless, the warnings are unheeded. Many a patient bears within him the indelible records of what Salisbury and Banting régimes can do. So, too, have marks been left by the milk diets which have been imposed upon

⁶ *Loc. cit.*, p. 292.

⁷ *Medical Record*, February 16, 1901.

⁸ Quoted in detail by Kraus, *loc. cit.*, p. 365.

feeble women and men, the splashings of whose large atonic stomachs have fallen upon deaf ears. Their physicians pay just as little heed to the significance of the small amounts of urine secreted by patients with dilated stomachs, or to the importance of von Mering's researches that water may even be excreted into such stomachs. Of what significance is the fact which they all learned at the medical school that the stomach practically absorbs but little water, provided they can induce these patients to drink freely? Water out of sight is out of such physicians' minds!

As regards the effects of large quantities of water in metabolic disorders, the abuse of water drinking will last till patients and their doctors worship at other shrines than that of their mystic Baal, uric acid. I have already given the views of Hoffmann upon the effect of water drinking on the metabolism. I shall also give those of the distinguished Berlin physiologist, Rubner, who says:⁹ "Formerly a distinct influence upon the metabolism was attributed to water drinking, and it was supposed that the splitting up of albumins was decidedly increased by it. This, however, is incorrect. Copious water drinking may for a short time cause a washing out of nitrogenous products from the body; but water has no effect upon the splitting up of the albumins and upon the general metabolism."

Furthermore, as regards the excretion of uric acid, Minkowski¹⁰ has shown that the older researches are valueless, since the uric acid tests fail to react when the urine is too dilute. He also quotes the researches of Schoendorff, who concludes that water drinking has very little practical effect upon the uric acid excretion; and also those of Laquer, Zagari, and Pace, who found that water drinking was followed by a slight increase of uric acid excretion, but this was much less than the increase in the excretion of urea.

Minkowski's directions represent the latest views upon the regulation of water drinking in these conditions; he advises that it be so regulated as to increase the total daily amount of urine a little above the normal, i. e., to about one and one half to two litres. In general, two to three litres daily may be regarded as a sufficient quantity for the total fluids for this purpose. My own belief is that three litres is too high an allowance if, as is so often true in these cases, there is the slightest suspicion concerning the condition of the heart or blood vessels. The rational use of smaller quantities or the employment of alkaline and saline mineral waters of the Vichy or Hom-

burg, or even Wiesbaden types, will meet this indication.

As regards free flushing for the removal of calculi or gravel, etc., one should always first ascertain the condition of the circulation and then be sure that the increased intake of water is represented by an adequately greater amount of urine. Should this fail to occur, an investigation into the cause of the failure should be made before blindly ordering more water. If the necessary rise in the renal blood pressure has not been obtained, it is much better to resort to cardiac tonics with or without the alkaline diuretics.

In passing I would refer to a method of flushing, which is successfully practised by Dr. T. T. Gaunt, of this city. He puts the patients to bed and allows nothing but a goblet of cold water every hour. Although this régime is kept up for a week or longer the patients do not complain of hunger; neither do they complain of any inconvenience from the method. I believe the reason for the success of this method can be found in the fact that any possible strain upon the circulation is reduced to a minimum by putting the patient to bed.

In acute infectious diseases and in septic conditions, in which free diuresis means so much in the successful outcome, we must also guard against the dangers which may follow from crowding too much water at ordinary temperature. These patients are already on a fluid diet, and the motor and secretory functions of the stomach are lessened as a result of the fever. We can readily guard against any abuse if we carefully watch for any evidences of dilatation of the stomach. The water should always be given cold and in frequent small quantities. In septic cases where energetic and prompt results are desired I have frequently obtained good effects from resorting to the use of frequent small doses of cold alkaline mineral waters to which a weak Moselle or Rhine wine has been added.

In conclusion, I would state that the practice of simply directing the patient to drink as much water as possible, as is so often done, without considering the condition of the heart, circulation, and kidneys, cannot be too strongly condemned.

The question of the abuse of water drinking in other conditions might be considered at much greater length, but enough has been said to show how much harm may be done to the patient by the simple off-hand direction to "drink as much water as you can."

941 MADISON AVENUE.

⁹ Von Leyden and Klemperer's *Handbuch*, Vol. 1, p. 55.

¹⁰ Von Leyden und Klemperer's *Handbuch*, Vol. 2, p. 297.

THE SURGICAL CURE OF INTRACTABLE DYSPESPIA, DEPENDING UPON GASTRIC ULCER AND ITS COMPLICATIONS.*

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Ulcer of the stomach, with its complications and sequences, is the most constant non-malignant lesion answerable for intractable dyspepsia. Moynihan, the great English authority upon stomach surgery, says: "It has been the immemorial custom to look upon dyspepsia as due chiefly, if not solely, to deficiency in the quantity or quality of the gastric juice, to some lack of adequate power in the stomach as a secreting organ. But dyspepsia of the intractable, constantly recurring form, is more often a matter of physics than of chemistry."

This utterance crystallizes the recently acquired surgical conception of dyspepsia and, in the correlated cure which surgery affords, adds a most welcome and important contribution to internal medicine. Intractable dyspepsia has ever been among the opprobria of therapeutics, and now to have a simple, safe, radical cure for its most inveterate forms constitutes about the most noteworthy addition of the last decade to the resources of our art.

In the light of recent experience it appears that many of our cases of obstinate dyspepsia are due to the ravages of ulcer or the relics which it leaves behind, and that the condition has to be appreciated to be properly diagnosed. The only way to recognize any important, if somewhat less frequent, pathological state is to be constantly on the alert for it. It was so with extrauterine pregnancy, with appendicitis, and with gall stones. Stomach lesions, if placed under the same scrutiny, will be as easily and frequently diagnosed. These conditions entail great suffering and incapacity and as Murphy says, they are up to this hour grossly neglected by the physician and the surgeon, with few exceptions.

Ulcer of the stomach occurs in from 2 per cent. to 5 per cent. of the population (Ewald). Fridler, in 2,200 autopsies, observed fresh or healed ulcers in 20 per cent. of women and 1½ per cent. of men. The ulcers and scars were frequently the seat of carcinomatous degeneration. Hauser believes that cancer develops in 6 per cent. of ulcers. Graham found a history of ulcer from one to fifteen years in 16 out of 18 patients operated on for cancer. Man-

sell Moullin says, when an ulcer once becomes chronic, a cure, in the full sense of the word, is seldom attained by medical treatment. Their acute course is beset by the dangers of hæmorrhage and perforation. Hæmorrhage causes death in from 3½ per cent. to 11 per cent. (Muller) of all cases. Perforation occurs in from 6.5 per cent. (Dreschfield) to 18 per cent. (Habershon) of all cases. The fatality of this catastrophe is well nigh 100 per cent.

It is, however, to the chronic ulcer and its complications that this communication has especial reference. The chronic patients are not so liable to these immediate dangers, but the constant pain is most distressing and emaciation from chronic starvation precludes the possibility of work. The dyspeptic is utterly wretched: he cannot forget his ailment: his thoughts are centred upon his stomach; his diet, his beverages; his symptoms occupy his whole attention and he has none to devote to the ordinary affairs of life. He is a pessimist and a misanthrope.

Mayo Robson enumerates the following complications of gastric ulcer:

1. Local peritonitis, or perigastritis, ending in adhesions.
2. Local peritonitis, ending in suppuration and a localized abscess.
3. Subphrenic abscess.
4. Abscess of liver, pancreas, or spleen.
5. Fistula between the stomach or pylorus and adjoining organs, or even with the surface of the body.
6. Acute perforation of the stomach wall.
7. General peritonitis.
8. Hæmatemesis and melæna.
9. Dilatation of the stomach.
10. Tumor of the stomach or pylorus.
11. Cicatricial stenosis of pylorus.
12. Hourglass stomach.
13. Spasm of pylorus producing intermittent narrowing (Reichmann's disease).
14. Atonic motor deficiency.
15. Severe gastralgia.
16. Persistent vomiting.
17. Tetany.
18. Acute or chronic pancreatitis.
19. Profound anæmia resembling the pernicious form.
20. Pressure on, or stricture of, the bile ducts, with jaundice.
21. Catarrh of gall bladder from adhesions producing attacks like those of cholelithiasis.
22. Great loss of flesh and strength, ending in phthisis.
23. Cancer secondary to ulcer—"ulcus carcinomatosum."

Seventy-five per cent. of chronic ulcers are in the pyloric region. This fact has important bearing on the later development of pyloric obstruction and upon the surgical correction of the symptoms arising therefrom. While the acute ulcer occurs most frequently in young women who are anæmic and under thirty years of age, the chronic ulcer affects those in middle and advanced life and occurs

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oftenest in men, 72 per cent. vs. 28 per cent. in women (Seymour Taylor).

The pain below the ensiform cartilage in a chlorotic female under 30 years of age, increased upon taking food, and reaching its maximum intensity about two hours after, and relieved by vomiting, which contains an excess of HCl, is significant of ulcer. If there is hæmetemesis, which occurs in 64 per cent. of cases (Leube) and melæna, the diagnosis is practically certain. There is often a fixed finger point tenderness with thickened ulcer or one that has contracted adhesions. These cases do not require the stomach tube for diagnosis.

In the chronic cases, pain and vomiting are usually present, with tenderness on pressure over the pylorus between the costal arch and ensiform cartilage. Vomitus of a fœtid character and in large quantities, is frequent, and often contains mucus, and sometimes material like coffee grounds. This is indicative simply of the presence of blood in the stomach and other means must be resorted to to discriminate ulcer from cancer. These symptoms are often in abeyance for weeks and even years. The presence of the ulcer may be unexpectedly declared by the occasional advent of serious hæmorrhage or perforation.

Most of the symptoms, however, are from some of the complications; the contraction of a pyloric ulcer in healing causing obstruction with dilated stomach, or the presence of perigastric adhesions; and, where dilatation is present, the prolonged retention of food is evident by the rejection of food in the morning that was taken the night before. Loss of weight is almost constant and may be extreme. Pyloric tumor from induration, or adhesions may be present, and suggest the tumor of malignancy. The induration may be so suspicious in its mimicry of cancer that it is not extravagant to say that many patients with chronic ulcer have been mistaken for sufferers from cancer and allowed to die, that might have been saved by accurate diagnosis and prompt operation. Chronic ulcer is usually smooth; cancer nodulated, rough, and uneven.

Next to the pylorus the posterior wall of the stomach is the most frequent site for ulcer, and in this location, the pain, instead of being in front, is under the left scapula or at the head of the ninth and tenth ribs. Lying on the back increases the pain, which is relieved by standing, leaning forward, or lying on the abdomen.

The most characteristic features of gastric ulcer are its persistence and recurrence. In spite of the most careful dietary supervision, rest, and even rectal alimentation, as soon as solid diet is resumed, the former symptoms of pain, vomiting, and bleeding again assert themselves. This may be repeated

over and over again. The probable explanation is that the ulcer, which often attains considerable size, may contract attachments to adjacent structures, especially if, as is very frequent, it happens to be upon the posterior wall and adherent to the pancreas. It may be likened to an old leg ulcer that has become attached to the periosteum covering the tibia. Contraction is impossible and cicatrization is interfered with every time the patient walks.

Hæmorrhage from a chronic ulcer is a different thing from hæmorrhage in an acute ulcer. In the latter the hæmorrhage, while sharp, does not invariably tend to recurrence and the patient quickly recovers from the temporary depression. In chronic ulcer, the hæmorrhage, though small in amount, recurs with brief intermissions of a few hours or days, and the frequent repetition produces a condition of most profound anæmia.

It is not regarded as good surgery to operate for hæmorrhage in acute ulcer, because the oozing seems to come from numerous erosions and not from any vessel. It is manifest that operation would be unavailing in that form of hæmorrhage. In the other form of ulcer, the base is hard and infiltrated, and the edges evidence the long standing of the disease; the eroded vessel is unable to contract and retract in the indurated and thickened tissue, and therefore spontaneous closure is unlikely. Young patients, the subject of acute round ulcer, rarely have fatal hæmorrhage. It is stated by Hood that no death from hæmorrhage in a young female with gastric ulcer occurred in Guy's Hospital in twenty years.

Operation in the chronic ulcer can easily determine its site on account of the induration; the ulcer can be excised or its base ligated; a quickly performed gastroenterostomy seems to be competent to cure the condition.

Cases of a very severe single hæmorrhage might be subjected to operation before recurrence, provided the hæmoglobin is or can be brought above 35 per cent. When the hæmorrhage occurs frequently, and when there is soreness, operation is indicated. In the acute cases, the operative mortality of nearly 40 per cent. is almost prohibitive.

The question of perforation is important and interesting. Perforation of the chronic gastric ulcer takes place with varying frequency. The lowest estimate of its incidence is 3.2 per cent.; the highest statistic ratio, that of Fenwick, is 28.5 per cent., while Robson calculates that from 15 per cent. to 20 per cent. perforate. It therefore occurs with sufficient frequency to demand that any sudden, severe, stabbing, and altogether unbearable pain in the epigastrium followed by collapse, become the subject of the closest scrutiny. The anxious, agonized

facies, the cold, clammy perspiration, livid lips, and blanched features tell too plainly the havoc that is being wrought on the interior. The abdomen, which is at first rigid and retracted, soon becomes distended by the consecutive peritonitis which seals the doom of the victim in 96 per cent. of these so called hopeless cases. But are they hopeless? Mikulicz was able to find only one case that was saved, out of 35 operations between 1885 and 1893, but between 1894 and 1896 there were 68 operations, with 36 deaths, or a recovery of 47.06 per cent.

Prompt operative interference should be made in these cases. If operation is done in the first twelve hours, 81.5 per cent. of the patients will get well; in the second twelve hours, 36.4 per cent. survive, and in the third twelve hours, only 12.5 per cent. If the subjects live over forty-eight hours, then about half of them can be saved. (Adapted from Mayo Robson.)

The appalling fact that the dangerous complications of hæmorrhage and perforation are attended with such high mortality, with or without operation, constitutes the most eloquent plea possible for a surgical cure of all chronic ulcers before these disastrous sequences supervene. All cases that have resisted careful medical and dietetic treatment demand operation.

Ulcer is a surgical disease like appendicitis, but has much less chance of recovery. One writer compares it to ulcer of the rectum, of the tongue, and of the lower extremity in the necessity for surgical treatment. Ticomi takes the advanced position that it should uniformly receive radical treatment, which he believes to be as necessary as the radical treatment of hernia. While I cannot endorse this, believing as I do that the majority are medical from first to last, yet I agree with von Leube, the most ardent advocate of purely medical management, when he says "if a gastric ulcer is not cured in four weeks' treatment it cannot be cured by medical treatment at all."

We must not ignore the mortality of gastric ulcer, which Heydenreich puts at 25 per cent. and Einhorn estimates as directly and indirectly the cause of death in 50 per cent. Contrast that mortality with the optimistic statement of Wyllis Andrews, that the surgical treatment of gastric ulcer should and will yield ultimately as good results as the interval operation for appendicitis.

Greenough and Joslin say that out of every two patients seen in a hospital with gastric ulcer, one will ultimately die. Contrast that gloomy outlook with the report of Moynihan: 100 gastroenterostomies for gastric ulcer with only two deaths.

Even when gastric ulcer heals, the frequency of its location at or near the pylorus begets in many instances, as a result of the cicatrization, a stenosing

obstruction that often results in a dilated stomach. In 1902, out of 252 routine stomach tests, Graham found 135 cases of dilatation of the stomach due to pyloric ulcer and cancer. When the ulcer, in its next most frequent site the posterior wall, cicatrizes it often produces a mesial contraction that results in the hour glass stomach. In some instances a trifid stomach is formed.

In any location an ulcer is prone to necrose deeply and, as the result of infection, to produce adhesions in adjacent viscera. Perigastric adhesions are especially vicious when they occur around the pylorus, acting from without as an obstructive agent and inducing a train of symptoms that is a type of the mechanical form of dyspepsia, not amenable to medicinal cure, but requiring surgical relief. I have seen adhesions about the pylorus from a recent cholecystitis produce such obstruction as to cause vomiting of all ingesta and the patients had to be nourished per rectum until relieved by operation.

The frequent occurrence of gastralgia for a long period, in cases where an investigation of the gastric functions fails to detect any abnormality, should lead to suspicion of adhesions.

The history of these dilatation cases extends usually over many years, probably. Pain, vomiting, and perhaps hæmorrhage, exacerbations, and remissions are conspicuous. Finally the infrequent vomiting assumes the enormous quantity indicative of retention and stagnation.

The routine examination of stomach cases very easily demonstrates the presence of dilated stomach. When the tube is introduced and removes the test meal, the patient having been requested to lie down, the stomach is pumped full of air with a Davidson syringe. Its outlines are then easily discerned by inspection, percussion, and auscultatory percussion. Occasionally a tumor is thus developed near the pylorus which may be a high lying pyloric ulcer greatly indurated. Dilatation with pyloric tumor, of course always raises the suspicion of cancer, but the chemical examination in cases of ulcer will usually show an excess of HCl, whereas in cancer there is generally an absence of HCl, with the presence, however, of lactic acid.

I shall not go minutely into the important and sometimes difficult differentiation of cancer of the stomach, but referring again to non-malignant dilatation, the splashing sounds can be demonstrated and the causative pyloric obstruction is often confirmed by actually seeing the left to right peristalsis.

These are the mechanical conditions resulting from chronic ulcer and its complications, which produce the invalidism and utter misery of the dyspeptic whose sufferings are too often regarded as chemical or due to motor insufficiency, and whose emaciation, from the chronic starvation of regur-

gitated food, is sometimes looked upon as a part of the cachexia of cancer. Indeed many cases of this character with tumor have, even after exploration, been diagnosed as malignant, until, as the result of the gastroenterostomy that was done as a palliative resort, the patient's ulcer was cured and he got entirely and permanently well. In the treatment of most cases of chronic and incorrigible dyspepsia, depending upon the existence of chronic gastric ulcer and its complications, gastroenterostomy has demonstrated its competency to cure.

The explanation of these cures lies in the rapid emptying of the stomach and the resulting physiological rest which allows the ulcer, frequently more than one, to heal. The stomach is simply a hopper for food, and in order to drain it, which is the object in all cases of ulceration, the most dependent point must be chosen.

The anastomosis of the jejunum is usually made either anteriorly (the method of Wolfler) or retrocolic (the method of von Hacker). Much discussion has arisen as to which is the preferable method, but the Mayos, who have had the largest experience in gastric surgery in America, after employing both methods, have found their results to be equally good with either. They demonstrated, however, and established the principle that in either operation the desideratum was to make the opening at the lowest part. When this was done, the difference between the anterior and posterior openings was actually found not to be half an inch.

The discussion as to whether the Murphy button or simple suture should be used is not momentous. The results with each have been very satisfactory. The button is simpler for the operator who is not dexterous with the suture. It requires a shorter time, although some operators employ the suture with great speed. Moynihan commonly completes the entire operation in thirty minutes, and has performed it in seventeen minutes. The tendency seems to be toward the simplification of all surgery and the discarding of all mechanical aids to gastrointestinal anastomoses.

In the performance of stomach operations great care should be exercised in the preparation of the patient. His nutrition should be improved by rest in bed, rectal alimentation, and measures conducive to increased metabolism. The mouth should be sterilized and all carious teeth extracted. Stomach lavage is a necessity to alleviate the stagnation of retention. The last lavage should be some hours before operation and all fluids should be evacuated by putting the patient in Trendelenburg's position, if necessary. A neglect of this precaution has caused drowning of patients from the large quantities of fluids ejected during anesthesia.

The following technique of gastroenterostomy, as

observed in the practice of the Mayos, has been the simplest and altogether the most ideal method that I have employed. A three and a half inch incision through the right rectus muscle gives ample space for careful exploration of the stomach and adjacent viscera. The finger determines the patency of the pylorus, which should allow the finger and thumb to meet easily. Often the indurated ulcer can be felt as a hard, thickened area, or seen as a puckered spot through the peritonæum. Frequently where the ulcer cannot be felt, there are "sentinel glands" at the greater curvature that indicate its presence. The posterior method utilizes the jejunum just as it lies normally against the stomach with the mesocolon intervening. In the operation, this is nicked and, with careful avoidance of the middle colic artery, torn more widely. The omentum and colon have been turned up over the stomach. The posterior wall is pushed through the mesocolon aperture and a suitable point selected near the greater curvature and about its centre. A fold, 3 inches long, is grasped in a Doyen forceps. The jejunum is picked up at the plica jejunoduodenalis, and at a point about 3 or 4 inches therefrom (Mikulicz) it is also grasped in forceps. The remainder of the stomach, omentum, and viscera are returned to the cavity and nothing is visible but the two forceps holding the viscera and carefully surrounded with gauze, to be anastomosed outside of the abdomen.

The jejunum is sewn transversely to the stomach for a distance of 2 inches by a continuous seroserosure suture of Pagenstecher linen. The viscera are then opened and an ellipse of mucosa is excised from each, to give a larger and an unobstructed calibre to the anastomotic ring. A second over and over suture now unites all coats of the cut margins of each viscus and is continued around in front, completing the union of the inner circle. The clamps are removed. The first suture is then resumed through the serosa, around the inner line until it meets the point of first introduction, where it is tied and completes the anastomosis.

The inner suture, going through all the coats, is hæmostatic, and the outer, which includes only the serous and subserous, protecting and approximating.

The mechanics of this procedure depends upon the fact that the short limb of the jejunum goes straight from its junction with the duodenum to the anastomosis. It has no slack to drag upon its new attachment. The transverse union of the jejunum does away with the loop which has always bred mischief. A similar operation is used by Czerny, and Peterson says there has been no case of vicious circle in 215 operations by this method. I shall, therefore, not describe the various ingenious but, according to this, unnecessary procedures to over-

come that hitherto troublesome and fatal complication.

Immediate improvement is the rule and continues and becomes permanent in the great majority of cases. Emaciation disappears, the dyspepsia vanishes, and the patient can take solid food with ease, which to the former sufferer is almost unbelievable.

I shall not go into the various other operative procedures applicable to gastric ulcer and its consequences, as drainage is the essential, and gastroenterostomy may be taken as the type.

It may be concluded, therefore, in this new and important field of surgical usefulness, that the hitherto neglected and distressing cases of otherwise incurable dyspepsia have a reasonably certain and safe assurance of restoration to function and happiness by modern gastroenterostomy and allied operations.

Original Communications.

THE PATHOLOGY AND TREATMENT OF DIABETIC GANGRENE OF THE LOWER EXTREMITY.*

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Gangrene in the lower extremity is a symptom of grave significance, which is often presented to us as the first evidence of serious and incurable disease. It may occur in this region as a result of a variety of conditions. This variety in causative factor has led to the classifications of a senile type of gangrene; diabetic gangrene; the gangrene of frostbite; symmetrical gangrene; gangrene from embolism, thrombosis, or injury to the main arteries; a gangrene caused by bacterial infection (streptococcus, *Bacillus aerogenes capsulatus*, and bacillus of malignant oedema), and others. The present paper will deal mainly with diabetic gangrene, incidentally with the senile type, and will be devoted to a report of nine cases with conclusions.

CASE I.—The record of this case is incomplete, inasmuch as very meagre notes were preserved, yet it will serve a purpose. The patient, male, fifty-two years of age, unmarried, Englishman, waiter, presented himself for treatment, suffering from an infected corn which had become gangrenous. An area of gangrene the size of a twenty-five cent piece was found on the inner side of the left foot over the metatarsophalangeal joint. This was surrounded by a wide area of inflammatory reddening and swelling. The urine contained sugar, yet he had suffered no symptoms previous to the gangrene which caused him to consult a physician, and did not know that he had diabetes. He was a liberal drinker, had been

a waiter for years, and had always enjoyed good health. Two days after admittance to the hospital the second toe became gangrenous. Within three days the third and fourth toes also became discolored and a dusky zone appeared on the dorsum of the foot. The temperature was moderately elevated throughout. A Syme's amputation was made as a conservative operation. The vessels were found to be obliterated, yet the surface of the wound bled freely and the operation was completed. The flaps were sutured. On the third day gangrene appeared in a large part of the posterior flap. A circular amputation was then done through the lower part of the thigh. The artery at this point was decidedly atheromatous. The flaps, as well as the fascial planes, again sloughed in large part, as did also the surface of the wound. The stump was now dressed open, general treatment was directed to the diabetic condition, and the sloughs were allowed to separate. The patient made a slow recovery. His stump healed after the opening of numerous abscess tracts, which had formed along fascial planes, the sugar disappeared from the urine, and the man was discharged from the hospital in a very satisfactory condition. He was well six months after the operation, when he passed from observation.

CASE II.—A Polish Jew, thirty-five years of age, and a pedler, gave a history of having suffered most intense pain in the toes of both feet for about three months. He was certain that he had not frozen his feet during the winter which had just closed. He had been treated in the out patient clinics for this pain without relief, and was sent to the hospital because of a gangrene in the third and fourth toes. The patient was not well nourished, but seemed to be in good health, with the exception of his feet. Sugar was found in the urine, but he presented none of the constitutional symptoms of this disease. The arteries could not be felt at the ankle. Amputation was decided upon, but it was deemed wise to expose the anterior tibial artery in the upper third of the leg before deciding upon a site for amputation. This artery was found to be completely occluded, and amputation was done above the knee. The patient made a satisfactory recovery, and was discharged with no sugar in the urine.

A dissection was made of the arteries below the knee. The anterior tibial artery was completely obliterated. The posterior tibial was obliterated below the middle third, while the upper two thirds still retained a very narrow lumen.

CASE III.—Mrs. M., sixty-two years of age, a woman of slight build and minimum adipose tissue, was sent to me from Rising Sun, Indiana, with gangrene of the second and third toes of the right foot. This gangrene had appeared after a slight injury to the middle toe. The patient had always enjoyed good health and did not know that she suffered from diabetes until her physician, Dr. O. P. M. Ford, found sugar in her urine, when consulted relative to the gangrene. When she entered the hospital the gangrene was confined to the toes and an expectant line of treatment was applied. The patient was kept in bed

* Read at the meeting of the Mississippi Valley Medical Association at Memphis, Tenn., 1903.

and the foot was rendered first aseptic, then perfectly dry; hot water bottles were placed alongside the foot and the entire extremity was slightly elevated. An antidiabetic diet was given. The urine contained three per cent. of sugar. Gangrene appeared in the fourth toe and within seventy-two hours had extended to the dorsum of the foot. Amputation was advised. I was prevailed upon, against my better judgment, to attempt an amputation in the middle of the leg. At the time of this amputation the arteries were found to be almost occluded, yet hæmorrhage was free and the amputation was completed. The patient recovered well from this operation, but the flaps became discolored on the fourth day and were extensively gangrenous on the seventh. The temperature became elevated with this change. An amputation above the knee was very rapidly made seven days after the first operation. The patient never became satisfactorily conscious after this second operation. The wound showed no evidence of slough, but the patient became progressively more difficult to arouse and to feed, and died, six days after her second operation, in profound coma.

I believe that in this case a primary amputation above the knee would have resulted in the recovery of the patient. A study of the arteries of the leg demonstrated a complete obliteration of their lumen below the upper third. The popliteal artery was greatly narrowed and sclerotic, while the femoral at the site of division was rigid and presented atheromatous patches.

CASE IV.—Mr. H., sixty-two years old, manufacturer of ladies' hats, married, of Jewish extraction, of temperate habits, had enjoyed good health up to the time of the present illness. This illness began with an injury inflicted in the close paring of a corn in the sole of the left foot. Seven days after this injury the adjacent skin became sensitive to the touch and reddened. An area of gangrene three fourths of an inch in diameter then appeared at the base of the middle toe. Dr. W. H. DeWitt, the family physician, was called at this stage. His examination revealed the following facts: The patient, a fleshy man, had been in the best of health and had not consulted a doctor for years. He had not lost flesh recently. Appetite good (not voracious), bowels regular. The urine had been passed in the usual amounts and seemed to the patient to be normal. There were, in fact, no subjective symptoms. The urine was found to contain a high percentage of sugar and no albumin. The treatment instituted was as follows: The patient was confined to the house and urged to keep the foot elevated as much of the time as possible; a strict diet was enforced; and arsenic was given internally.

The small slough separated after a few days, leaving a deep undermining cavity with sloughing base and walls. There was no extension of the gangrene superficially, but the deeper tissues did not show the slightest granulation; indeed, the purulent discharge increased and the process seemed to be extending upward along the tendon

of the middle toe. This cavity was cleansed daily with hydrogen peroxide or dry cotton swabs and dressed with a ten per cent. balsam of Peru application. The temperature varied from normal to 99.5° F. The urine still contained three and one half per cent. of sugar after the diet had been well established.

Nine weeks after the appearance of the primary spot of gangrene I was asked by Dr. DeWitt to see the patient, because of imminent gangrene of the middle toe. The patient was now put to bed. Every effort was made to render the foot aseptic and to mummify the gangrenous toe by dry powder dressings. The foot was enveloped in a voluminous cotton covering, placed between hot water bottles, and elevated about six inches. The internal medication was continued and the patient urged to drink at least one gallon of distilled water per day. He exceeded this amount after the second day.

The pain that he had suffered seemed to be entirely relieved by the elevated position of the foot. A line of demarcation formed promptly and the gangrenous toe was disarticulated at the end of six days, without hæmorrhage. The infectious process in the sole of the foot did not progress so favorably. More pus was discharged, the probe could be inserted upward for two inches and a half to three inches, and the temperature reached 102° F. Coincident with this extension of the infectious process there appeared a ring of hæmorrhagic bleb, and under this a band of gangrene which almost completely encircled the base of the great toe. The entire toe then became insensitive, cold, and purple. The temperature now reached 103° F. Three days after gangrene had appeared in the great toe a zone of dusky discoloration and hæmorrhage bleb formed on the dorsum of the foot. Permission to operate was granted and the patient was sent to the Jewish Hospital.

Operation under chloroform. A tourniquet was not applied. The leg was raised high in the air and an attempt made to amputate at the knee, leaving the cartilages. The popliteal artery was found to be practically closed, however, and the amputation was made at the middle of the thigh. Even at this location the artery was found to be extensively calcareous and rigid, yet there was no reason to think that the artery would be found to be in better condition three, four, or even five inches higher up, and a heavy ligature was carefully applied. The wound was not sutured, its edges being held in place by gauze dressings. The patient endured the double operation well, and showed no evidence of shock. A tourniquet was loosely wrapped around the thigh, above the dressings, and allowed to remain here for two weeks, for immediate use in case of secondary hæmorrhage. Three days after operation the entire circumference of the skin flap was found to be gangrenous for a varying zone, as was also the entire surface of the wound. The bone protruded from the retracted tissues. The temperature remained practically normal, except for one rise to 100.2° F. for three hours. The total amount of urine passed in twenty-four hours varied from 1500 c.c. to 1780 c.c. This urine contained ten per

cent. of sugar. The patient was extremely restless or delirious.

This picture presented was certainly dismal. The stump was maintained in a perfectly aseptic condition and the surface of the wound sprinkled with digesting powder, to dissolve the necrotic tissues. In the course of three weeks the stump presented a perfectly healthy granulating surface, the mind was much clearer, the appetite good, and the sugar had gradually declined to three per cent. One week after the amputation a gangrenous spot, the size of a silver dollar, was found over the right heel. This was unquestionably a decubitus slough. This leg was at once suspended in an improvised hammock and there was not the slightest extension of the slough.

For four weeks after the operation this patient presented the most unusual symptoms. He recognized his family and his attendants and would respond rationally to the first few questions propounded, but for the remainder of the time he was delirious to a degree that disturbed the entire hospital. His nights were hideous to himself and to his nurses; indeed he required the constant attention of an able bodied male nurse to restrain him. After the trial of morphine, chloral, codeine, bromides, and trional, without results, hyoscine hydrobromide, $\frac{1}{100}$ grain, relieved the delirium and gave him sleep.

After the third week the improvement in both local and general conditions was entirely satisfactory. The temperature was normal, the appetite good, the urine was passed in normal amount and contained two per cent. of sugar; the wound presented a perfectly healthy granulating surface and the patient was able to sit up for a great part of the day. The stump will be completely healed in another fortnight. The sugar has entirely disappeared from his urine.¹

CASE V.—J. E., forty-three years old, German, male, married, night watchman, had suffered from varicose veins of the leg for a long time. He had otherwise enjoyed fair health until a few weeks before, when he began to lose flesh and strength, even though his appetite was very good, indeed voracious. He had been drinking large amounts of water. In January, 1903, he bruised his right great toe. This injury left a dark red area of congestion on the inner half of the tip of the toe, and he was led to call his family physician, Dr. A. G. Kreidler, by reason of the fact that this bruise had become larger, instead of smaller, during a week of home treatment. Dr. Kreidler found a well marked area of gangrene on the tip of the toe, a circular area of gangrene over the site of a bunion on the metatarsophalangeal articulation, and demonstrated five per cent. of sugar in the urine. I was asked to see the patient at once and recommended the same line of expectant treatment that has already been detailed—diet, aseptic mummification, elevation, and dry heat. He was also given codeine and a preparation of arsenic internally. In one week the general condition of the patient had greatly improved, the sugar percent-

age had decreased one half, and the gangrenous process was arrested. Three weeks later the sugar had disappeared from the urine, the gangrenous sloughs had separated, the wounds were about healed, and the general health was excellent.

This patient remained on the diet and resumed his duties as a night watchman. He has again consulted Dr. Kreidler within the past few days, relative to a similar area of congestion on the opposite foot, with the statement that his diet list became so insufficient that he had been forced to eat other things. The urine was again found to contain a high percentage of sugar. He has been placed under rigid dietetic, medicinal, and local treatment, with very favorable results, and there is fair reason to believe that he will again recover from the threatened gangrene.

Pulsation could not be felt in the posterior tibial or the dorsalis pedis arteries at the time of my examination, but I am informed by Dr. Kreidler that pulsation returned in about two weeks after the onset of the gangrene. The radial and the temporal arteries show undoubted signs of arteriosclerosis.

CASE VI.—Mr. S., seventy-six years old, German, retired merchant, had always enjoyed excellent health, and had led an active life. After slight injury he developed an area of discoloration about half an inch in diameter, on the inner half of the tip of the great toe. This formed a blood blister, which gradually increased in size, and Dr. J. C. Buttemiller was called. The gangrene continued to extend until the inner half of the great toe became involved as far as its base. A second circular area of gangrene appeared two days later in an old bunion on the inner side of the metatarsophalangeal articulation, and attained the size of a twenty-five cent piece. In addition to this spot the dorsum of the foot became much reddened and a small blister formed. Sugar was not found in the urine of this patient. The expectant line of treatment, which has already been outlined, was applied to this case with most gratifying results. The gangrene was arrested, the sloughs separated promptly, and the patient recovered.

CASE VII.—Mrs. K., sixty-eight years of age, had suffered greatly with corns in the soles of the feet. Many chiropodists and several physicians had been employed from time to time to treat this condition. In August, 1903, she was treated by a careless chiropodist, who infected the corn. He continued to pare the same and other corns with the knife that he used to clean up the ulcer, and the foot became inflamed. On September 10th, the second toe of this foot became insensitive and turned purple, then black. Dr. J. C. Buttemiller was called at this stage and I saw the case in consultation a few hours later. The entire second toe was black, yet a line of demarcation had formed. An area of inflammatory redness extended to the ankle on the dorsum. The sole of the foot was covered by a thick, horny callus, in the centre of which there was a deep unhealthy ulcer from which an ichorous pus was discharged. There was much pain in the foot. The tempera-

¹Three weeks after paper was read: The wound has almost healed, patient has been on a regular diet for three weeks, with no recurrence of the sugar in the urine, and the general health is excellent.

ture was 100° F. The urine was loaded with sugar. The general condition was good. A wet dressing of aluminum acetate was applied, to reduce the inflammation and the foot was elevated. The patient was asked to drink at least one gallon of water daily, and was given acetanilid 7½ grains and sodium bicarbonate 15 grains three times a day, as internal medication. On the following day the redness had become greatly reduced and the dry treatment was instituted. Local conditions now remained about stationary for three days, but the temperature became higher and ranged from 100° to 103° F. Five days after I first saw the patient, and nine days after the beginning of the gangrene in the toe, a dusky discoloration and a hæmorrhagic bleb formed on the dorsum of the foot, at the base of the gangrenous toe. Amputation was urged and granted. The patient was removed to the Jewish Hospital and a circular amputation made in the lower third of the thigh. This was done with the leg high in the air and without tourniquet. The femoral artery was much narrowed by an endarteritis obliterans at the seat of ligature. The tissues were so lax that two catgut sutures were applied to the deep tissue, and two silkworm gut sutures to the skin. Otherwise, the tissues were held together by the dressings. The patient stood the operation perfectly well and required no stimulation. Hot salt solution was given per rectum every three hours, in order to supply her tissues with abundant water. Her condition remained fairly good for four days, but she slept most of the time. On the fourth day she took her food less readily, her mental condition was less satisfactory, and both her pulse and respiration became very rapid. She died five days after operation. The arteries in the amputated leg showed the same advanced changes that have been found in preceding cases. Both arteries were totally obliterated at the ankle. The posterior tibial at its middle had narrowed to a diameter of one eighth inch, and this lumen was filled by a recent blood clot. The popliteal artery was much narrowed, but still open. The lumen of the femoral artery formed a triangle at the seat of ligature.

CASE VIII.—Consists only in the report of the findings in a popliteal artery which was removed from a case of diabetic gangrene operated on by Dr. N. P. Dandridge. This artery shows the same marked degeneration of the intima that has already been reported in other cases. This artery presents the same degree of change that has been associated with total obliteration of the branches at the ankle in other cases. While much conclusion is not justified the specimen will serve as additional evidence.

CASE IX.—A negro, thirty-two years of age, presented himself at the Cincinnati Hospital, with a well developed gangrene of the leg. No history of any value could be obtained from him. An amputation was made by Dr. N. P. Dandridge at the junction of the lower and middle third of the thigh. The patient recovered promptly. The femoral artery was very greatly narrowed in this case and the entire popliteal artery was totally

occluded by the organized tissue of an obliterating endarteritis. The popliteal vein contained a recent thrombus. This case is included in the present report because of the age of the patient and the interest that attaches to the arterial change. The endarteritis was probably of syphilitic origin in this case.

(To be concluded.)

ON RUBIDIUM SALTS, WITH SPECIAL REFERENCE TO THE USE OF RUBIDIUM IODIDE IN OPTIC ATROPHY.

By PAUL BARTHOLOW, M. D.,
NEW YORK.

Comparatively little attention has been paid to the interesting subject of the uses and effects of the rubidium compounds. What literature there is will be found in many ways insufficient. At best it appears to be tentative, the chief essays in this field being devoted to the object of tracing analogies between this rather rare element and the other members of the same series, such as potassium (principally), cæsium, sodium, beryllium, etc. With potassium, rubidium stands in such close relation, with respect to physical and chemical properties, the behavior of both to reagents being exactly similar, that the discovery of their separate existence might have been deferred indefinitely but for spectrum analysis (1). The spectroscope, in fact, revealed the new prodigy to Bunsen and Kirchhoff in the mineral waters of Creuznach and Durckheim, the element showing itself by two characteristic red absorption bands in the extreme red portion of the spectrum (2). Rubidium is univalent, belongs to the alkaline group of metals, and appears in the pure state as a silvery substance, of very slight density. Its specific gravity was found to be 1.50, and quite recently its combining weight has been fixed at 85.4 (3). It is a fugitive substance, when isolated; volatilizing readily, and igniting spontaneously in moist air. In nature it is widely diffused, though never in great quantities (4). Bunsen extracted it from lepidolite; and it is also found in the ashes of many plants, in the crude potash obtained from the residue of beet sugar manufacture, and in tobacco leaves, coffee, tea, and cocoa (5). Rubidium appears to be useful to the building up of plants, though in what way is not definitely known; for the vegetable organism has the power of assimilating it in association with sodium and potassium. Whether it plays any part in the organization of human structures is at present a matter of pure speculation (6).

In the view taken of the rubidium compounds by physiologists, the most prominent place has

been occupied by the chloride. In general, as may be deduced from the researches of Richet (7), Botkin (8), Brunton and Cash (9), Harnack and Dietrich (10), this salt possesses properties, and exerts effects, similar to those of potassium chloride, but distinctly less powerful. For example, Grandaue found that an injection into the jugular vein of a rabbit or dog of one gramme of rubidium chloride in 15 grammes of water produced no obvious disturbance (11). On the other hand, such an injection of potassium chloride in these animals caused death within a few minutes. It is generally inferred, and the inference is true as regards any ordinary dose, that rubidium chloride is scarcely one half as toxic as potassium chloride. Under artificial conditions, however, where the dose is very large and the resistant mass very small, e. g., in frogs or turtles, effects that are, probably speaking, toxic have been observed. Under such conditions, first a stimulant, and then, with increasing doses, a paralyzing action on the heart have been noted, an action compared to that of digitalis or barium. Such resemblance would seem to be figurative, for Brunton and Cash observed that the barium salts were antagonistic to rubidium. With respect to their practical utility, it cannot be said that researches into the effects of rubidium chloride in such animals as the frog, the rabbit, and the guinea pig, are very satisfactory, for little more can certainly be deduced from them than that, in sufficient doses, intravenous injections cause a progressive enfeeblement of the heart, and arrest it, though not invariably, in systole. In practice, it must be remembered, as Professor Naunyn (12) pointed out, that neither rubidium nor potassium is toxic when given medicinally, or by the mouth, in man; and universally this fact goes a great way towards a settlement of the question. In one particular, as regards the action of rubidium chloride on animals, opinions are contemporaneous that it paralyzes striated muscle fibres. Clinically, with respect to the iodide or bromide, I have not observed that they have any effects that can be separated from the probable effects of iodine or bromine ions, freed by the dissociative force of an aqueous solution; and, as these salts, iodide and bromide, form a reaction with the sodium chloride of the blood, it would seem probable that the rubidium chloride thus coming into existence in the organism does not, at least in the conditions of practice, exert any distinct effect on muscle tissue, or in particular on cardiac muscle.

That rubidium salts are not in any sense heart poisons is the opinion of Leistikow after extensive experience (13). Upon the motor nerves

rubidium chloride has little action, but not improbably, as many investigations imply, it may, in very large, overwhelming doses, depress the heart by stimulating the vagus and higher inhibitory centres. In medicinal doses, this and the other rubidium salts are supposed by most to support the heart and raise slightly the arterial tension (14).

From this general review of the rubidium salts, let us turn to a brief examination of the effects of rubidium iodide in practice. So far it has been used chiefly in syphilis, as a substitute for potassium iodide, in individuals who were intolerant of the latter, or in whom its prolonged use had caused iodism, or, again, in those who had heart disease. Employed in this way, the benefits of rubidium iodide are asserted without qualification by a number of the best authorities, as, for example, Neisser (15), Jadassohn (16), Leistikow (17), Wolff (18), Schöler (19), v. Mering (20), Jacobson (21), Vogt (22), and Braunschweig (23), who are all, I think, that have published their views of its medicinal properties. It is principally of service in the skin and visceral phenomena of syphilis. Leistikow also reports a case of acute polyarthritis of gonorrhoeal origin in which rubidium iodide effected a cure. There can be little doubt in the mind of any one who has read these reports, or who has made trial of the salt, that it is less irritating than potassium, affects the stomach less, that with even less probability can it be thought likely to cause violent catarrh of mucous membranes, muscular weakness, or the graver oedema of the glottis. Without intending a panegyric on a useful remedy, I believe that the soundness of these deductions seems scarcely open to objection.

Some less obvious properties, which I thought could be traced in the physical nature of rubidium iodide, and which I endeavored to ascertain by some investigations, led me to consider that it would be of value in cases where very delicate structures were diseased, and where, on account of their anatomical situation, it was a matter of great difficulty to reach the morbid process—in atrophy of the optic nerve. These properties are: (a) The non-irritating character of a five per cent. solution; (b) its great diffusibility; (c) the power, which this solution has of drawing water from the circulation and causing a vigorous movement of red blood corpuscles to the site of application; (d) the chemical activity of the ions of rubidium and iodine freed by the dissociative force of the aqueous solution. In addition, we may postulate two things—that it is the "free ions only that react," that it is the iodine ion more

than the rubidium ion whose maximum effects we desire to attain. It is known that electrolytic dissociation goes on freely in solutions of the iodides of the alkaline group and that their action is proportional to their dissociation. In solution, rubidium iodide splits up more rapidly than the other iodides; the ratio was determined by Erdmann as follows (24):

Lithium iodide.....	107.4;
Sodium iodide.....	119.1;
Potassium iodide.....	140.
Rubidium iodide.....	144.3.

From these observations, it would appear (25) that rubidium iodide might be the most active agent of the group.

To such theoretical considerations it may be added that rubidium iodide has been recommended in a general way in the treatment of eye diseases by Bunge (26). Three or four drops of the following solution are instilled:

Rubidium iodide.....	25 grains;
Distilled water.....	1 ounce.

For some time I have used this solution, which is limpid, non-irritating, and painless, in the case of a patient who has suffered for years from tabes, and in whom troublesome symptoms of optic atrophy have been superadded, e. g., concentric diminution of the field, with progressive loss of acuity of vision. As the history showed, these symptoms were in all probability caused by the action of a postsyphilitic toxine. The eye trouble seemed to have antedated the tabes, and to have shown itself by a sudden attack of hemianopsia. On direct examination by daylight, the discs presented an appearance of extreme pallor, indicating a degeneration of nerve substance and growth of connective tissue. The calibre of the vessels was narrowed. The light reflex of the iris was lost. The patient was a man of 55 years of age, of neurotic heredity, and it was interesting to note that the signs of an original neurasthenia interpenetrated the tabetic phenomena, especially the ataxia. Under observation of strange or curious eyes, the incoordination was strikingly increased. The general condition was remarkably good, and the heart and kidneys were normal. The vexations that followed as a consequence of failing vision induced the patient willingly to try the most energetic measures. We employed by turns injections of mercuric chloride, of iodipin, of strychnine into the temporal region to the limit of safety, but without arresting but in a temporary manner the deterioration of sight. Beginning August last, the instillation of rubidium iodide has been pursued methodically, with short intervals of cessation. For three

weeks no improvement was discernible. At the end of five it began to be evident that he could use his eyes more effectively, from his manner of walking, advancing towards an object, etc. The outlines of objects became a trifle more defined, and the patient himself voluntarily admitted that he "saw better." Owing to the badness of vision, the test types were of little avail, but from rough tests it appeared November 1st that the area of sight had enlarged sufficiently to make the fact certain.

It is useful to ask how far this improvement might justly be ascribed to the remedy, how far to one of those sudden changes for the better to be observed in this malady. Upon a skeptical appraisal of the two factors, it seems to me that the improvement was more distinct and lasted longer than one of the periodic gains occurring at intervals in the long course of the disease, and that the remedy is entitled to some credit. As a means that promises some accomplishment in cases so unfavorable, it is worthy of attention.

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157 WEST FORTY-SEVENTH STREET.

Dr. Leonidas H. Laidley has resigned his position as medical director of the World's Fair at St. Louis.

THE PRESENT STATUS OF RAILWAY EMERGENCY WORK.

By U. F. MARTIN, M. D.,

NEW YORK.

(Concluded from page 57.)

FIRST AID INSTRUCTION.

Turning to the question whether employees shall be instructed as to how these packages may be utilized we again find diametrically opposed opinions. There are men, who opposed the first aid package, who here agree as to the advisability of giving some instruction to the men. There are others who oppose both schemes, relying upon the surgical aid that can be obtained in the vicinity. As to how much and in what way this knowledge shall be imparted to the men, there is also considerable difference of opinion. A glance at the tabulated answers will show this. Speaking favorably of such teaching, the employees of the Grand Trunk Railway in Toronto and vicinity have had the benefit of similar instruction by Dr. Bruce L. Riordan for many years past, and a large number of classes have been held with most encouraging and practical results. They now intend to make the instruction more widespread.

Here are some views as expressed by different railroad surgeons in answer to a letter sent out by Dr. M. J. Kenefick, of Algona, Ia.:

Dr. Denney, of the Chicago, Burlington, and Quincy, replies: "We have first aid packages at certain points on our lines, but at many places where doctors can be had on short notice, we have not been paying much attention to this, excepting at some of our larger division points." Dr. Plummer, of the Rock Island, says: "There has never been any instruction in first aid to the injured given to the employees of our road. We had a limited number of the emergency boxes containing dressings suitable for first aid in our trains and in some of our stations, but the management of the road has seen fit during the last year to cut down our supply of them, so in the matter of first aid we are doing practically nothing." Dr. Bouffleur, of the Chicago, Milwaukee, and St. Paul, writes: "I am sorry to have to reply, No! Some of the earlier attempts on our roads were so unsatisfactory that some of our officials do not believe it practical. A scheme of limited first aid is being considered and will, I am sure, be of much service when fully inaugurated." Dr. Owens, of the Chicago and North Western, states: "There has been no systematic instruction in first aid." Dr. Sueve, of the Chicago Great Western, answers: "No, only to foremen at shops. Accidents usually take place where switching is done, and in Iowa, at least, there is usually a doctor at

that station or near it. First aid instruction is going on all the time through the public and medical presses, and through treatment by physicians; employees see what the doctor does and learn the principle of aseptic surgery."

One cannot study the statements continually made by railroad surgeons, without coming to the conclusion that it is of considerable importance to instruct men thoroughly in what *not* to do in case of accident. Dr. J. D. Williams, in a paper recently read before the railroad club of Pittsburgh, voices this sentiment when he says "that the prayer of the injured is not always 'Oh, Lord, save me from mine enemies;' but it is 'Oh, Lord, save me from my friends.'" He had in mind the treatment administered to wounds by ignorant but overzealous persons where it has been packed with tobacco "chews," covered with old germ bearing cobwebs, or soaked with black oil or kerosene. First aid instruction is not meant to turn men into amateur surgeons, but to prevent them from simply making bad worse, or from introducing needless complications which the railroad surgeon has to contend with or the railroad claim agent subsequently to settle for.

Two illustrations will be sufficient to demonstrate clearly the superior advantage of having men trained, not after any theoretical pattern, but according to some practical working scheme. The following instances may be found cited in the *Railway Surgeon*: "A fireman who had cut the artery in his wrist on a broken pane of glass in the round house one night in the mountains, was taken fifty miles on a light engine to the nearest doctor with a wound so badly bound up, that it bled constantly, and the injured man had been given several 'horns' of whiskey 'to keep up his strength,' with the result that the heart action had been stimulated and had so pumped out more blood. In this case the surgeon literally saved this man from his friends."

Dr. C. R. Dickson, of Toronto, is authority for this account of intelligent first aid service in mines: "An example is found at the Carbondale colliery at Jermy, Pa., and the attending surgeon at the emergency hospital is, as might be expected, a very enthusiastic believer in the practical value of first aid. Dr. M. J. Shields has practised during the whole of his professional career, about fifteen years, in the coal mining districts of Northeastern Pennsylvania, where a great many of the employees come from Great Britain, bringing with them their splendid training in first aid. Being a practical man, he appreciated the advantages of such training, and early in 1900 organized a first aid society of twenty-five men. The colliery employs four hundred men and has five

Railroad.	Question 1.	Question 2.	Question 3.	Question 4.	Question 5.	Question 6.	Question 7 and Remarks.
Boston & Maine.	Facts not obtainable.	No knowledge of any accident where waiting was for a length of time.	Not practicable.				
Bangor & Aroostook.	Facts not obtainable.	Facts not obtainable.	Perfectly feasible to equip passenger trains with a small emergency box.	We have nothing of the kind.	Yes	No	Not practical for so small a road.
Boston & Albany.	Facts not obtainable.	Facts not obtainable.	We provide each train with a small emergency box, but these are seldom used. As a matter of fact, we are frequently obliged to remove some of these cases because the material has deteriorated to such an extent as to become useless.			None and the very few accidents occurring would not justify the expense of maintaining a hospital car.	We have surgeons located at several places on the road, with a territory of twenty to thirty miles, and it is therefore possible to secure medical aid in case of accident.
New York, New Haven, & Hartford.	Facts not obtainable.	Facts not obtainable.	Yes				
Pennsylvania.	Facts not obtainable.	Facts not obtainable.	Equipping all baggage, mail, express, work and freight cars with terminals and offices and important stations with first aid boxes. Cars also provided with stretchers.	Yes	Employees to be so instructed by medical officers.	Company has plans for transportation of injured men in emergency by using a hospital car, but nothing as yet done toward building any of these cars.	
Lehigh Valley.	Facts not obtainable.	Facts not obtainable.	All our passenger trains are equipped with emergency cases, as well as freight stations along the line.	Yes	Yes	Yes	Yes.
Atlantic Coast Line.	Facts not obtainable.	The men who need hospital care after injury have had first aid quite well equipped, and were afterward sent to a hospital.	This is practicable, but it means a degree of care over supplies that is difficult to maintain. The provision of "first aid" material with the material men's service, but so far we have not reached a definite decision in the matter.	No	I doubt if the train men could be educated to render anything like efficient first aid. The application of the simple measures in a "first aid" package.	Yes, but it is used more for the transportation of sick men to the hospital than for injured men. The latter are sent in by express and easiest train.	This would be expensive beyond the value of the equipment. The infrequent use of the car would lead to neglect, and its condition would not always be adjusted to the best interests of the injured.

Railroad.	Question 1.	Question 2.	Question 3.	Question 4.	Question 5.	Question 6.	Question 7 and Remarks.
Casapeake & Ohio.	Surgeons are located in general terms along the line of the C. & O., every station having a first aid kit, and that prompt medical aid can be rendered in every emergency. We have never had any serious results from delay in obtaining medical aid.	only a short time.	The emergency boxes No. 1, except stretchers might be furnished each passenger car and first aid kit, but not think it necessary, because we are able to render such aid along the line of the road.	No, except stretchers.	No; for the first dress ing frequently done on the line of the U. S. army stretchers, which these are placed either in caboose or baggage car of each train, and general hospitals belonging to the railroad on the line.	Yes, for transportation of smallpox cases to detention hospital.	No; our stretchers are constructed on the lines of the U. S. army stretchers, which these are placed either in caboose or baggage car of each train, and general hospitals belonging to the railroad on the line. special arrangements with railroad companies and general points for the care of injured patients unable to be moved to the general hospital.
Grand Trunk.					Arrangements being made whereby our boxes of the Grand Trunk will be in strict accordance with the standard system of instruction in first aid, and the injured patients are instructed in the International Association of Railway Surgeons. The instruction are to be held at Port Huron and other points shortly.		Referred to Interstate Commerce Commission. Have medical and surgical departments, with physicians located at numerous points along the line. Their retainers are required to answer promptly calls for aid both for our passengers and employees injured on the line.
New York, Chicago, & St. Louis.	Facts not obtainable.	Facts not obtainable.	We consider it feasible to provide first aid boxes with a supply of medicine for each car, and to have first aid kits in each car, and to have first aid kits in each car, and to have first aid kits in each car.	Yes.	Consider it practical.	No.	Feasible, but it does not seem necessary.
Albany.	Facts not obtainable.	Facts not obtainable.	Possible to provide first aid boxes with a supply of medicine for each car, and to have first aid kits in each car, and to have first aid kits in each car.	No.	No.	No.	It would not be practicable. We have a hospital system.
Marquette.	Facts not obtainable.	Facts not obtainable.	Taking up the question of providing cars with small emergency boxes, and to have first aid kits in each car, and to have first aid kits in each car.	We have some supplies. Think it practical on our trains for emergency work.	No.	No.	Not feasible. The company appoints a good many local surgeons at different points along the line, and the injured are quickly provided with the care of a competent surgeon.

Railroad.	Question 1.	Question 2.	Question 3.	Question 4.	Question 5.	Question 6.	Question 7 and Remarks.
St. Louis & San Francisco, "First Aid System."	Facts not obtainable.	Facts not obtainable.	Considering the matter of first aid to injured, "first aid to injured."				
Chicago, Milwaukee, & St. Paul.	Facts not obtainable.	Facts not obtainable.	No answer.				
Colorado Midland.	Facts not obtainable.	At least immediate medical aid.	Yes, our company provides emergency boxes, provided by our medical department.	Medical boxes always on hand for emergency work.	Our trainmen are so instructed.	No	Not feasible or practicable for this company.
Rock Island System.	Facts not obtainable.	Facts not obtainable.	Consider it feasible to provide each passenger with a small emergency box for "first aid."	We have at present time supplies on some of our trains.	Considers it practical to have trainmen re-instructed a few such times.	No	Think it would be a good plan to have a hospital car, but the present mode for transporting injured passengers proved to be very satisfactory.
Chicago Great Western.	As far as known, only one.	One hour.	It is feasible, but in my opinion useless and unnecessary, because it runs through a populous country and doctors are always available. It would cost 100 times out of 100 at or near stations, and when they occur away from stations and the emergency boxes are not to be gotten at because of steam, smashing up, etc.	No. We have had, but have discarded them because we found it impracticable.	Not on our lines; but on lines running through a sparsely settled country, yes.	No	In our opinion unnecessary and impracticable, because they would only be of questionable use when accident occurred near their station.
Chicago, Burlington, & Quincy.							Reply to inquiries that we have not the information you ask for.
Union Pacific.							Referred to Interstate Commerce Commission Report.
Chicago & North-western.	Referred to Interstate Commerce Commission Report.		Our experience has not indicated the necessity thereof.	On work trains only.	Not practised to get any definite result.	In connection with work train.	Its use would be very limited except in a section of country not well settled. The above section and communication between towns and the appliances and help securable in ordinary towns does away with the necessity of such appliances.
Northern Pacific.	Facts not obtainable.						Have two large hospitals on this system where employees are cared for, and outside of hospital points we employ local surgeons, who, in case of accidents, employees receive immediate attention and aid.
Chicago & Alton.	None.	Immediate aid.	Provide each passenger car and caboose with a small emergency box.	Yes	Yes	No	Do not think it necessary with plan adopted.

Railroad.	Question 1.	Question 2.	Question 3.	Question 4.	Question 5.	Question 6.	Question 7 and Remarks.
Missouri, Kansas, & Texas.	Facts not obtainable.	Facts not obtainable.	Discontinued use of and adopted policy of employing local surgeons. Their location is such that a train is never further than 10 miles from a local surgeon.	All surgeons are provided with supplies, and in case of accident are immediately called upon and given. All trainmen carry a list of their names and addresses.	Impracticable, for the reason that experienced persons in many instances did more harm than good.	No.	Company maintains a large hospital at No. 10, has arrangements with hospitals at sundry other important points.
Seaboard Air Line.	Facts not obtainable.	Facts not obtainable.	Consider it feasible to provide every passenger car and caboose with emergency boxes for first aid to injured.		Employees should be properly and thoroughly instructed how to use appliances.		
Missouri Pacific.	Facts not obtainable.	Local surgeon hastened to injured immediately.	Do not consider it feasible to have such supplied. Have tried it and failed.	All private cars for passenger use are provided with both medical and surgical cases. All work and wrecking trains are provided with first aid boxes of both medicines and dressings.	You cannot make uneducated persons like surgeons. They can do little with surgical dressings.	No; think it would be superfluous in their system.	Have two large general hospitals and eleven emergency stations. We can pick up a man and send him on to the hospital almost as quick as your city ambulance could do the same work.

main gangways. He divided his men into squads of five, distributing one squad along each gangway. The chief of each squad was selected, after passing an examination on first aid to the injured, and in his care was placed a small box containing simple appliances. Each member of the squad carries a first aid packet with him, and there is a folding stretcher in each gangway. As is customary in first aid training the men are taught to forward a short description of the accident by the messenger who summons the doctor. An actual example of such a message follows:

FIRST AID ASSOCIATION,
JERMYN, PA., June 4, 1903—1 p. m.

Dr. SHIELDS:

Sir: Ed. Powers requires your attention at his home. Had his head squeezed between car and mule; right eye black and swollen; cut on eyebrow will require stitch; blood running from right ear, right side of face contused and swollen. Several minor bruises about face. No injuries about body.

Respectfully,
(Signed) DOWD.

What kind of instruction, and how much, should be given is the question that naturally comes to mind. One chief surgeon remarks that corporations, like railways, organized and conducted primarily for profit to stockholders, are not likely to take kindly to any suggestion for reform unless it can be shown that there is a business side to the proposition. There should be no difficulty, he thinks, in showing that there is a great loss annually of time and money to the roads by reason of improper aid to the injured, rendered at the hands of uninstructed employees. There are two or three elementary principles that should be understood by employees which can be taught them in five minutes. Such instruction has been well outlined by Dr. Brockman as follows: "This instruction should be brief, to the point, and cover the following topics: *a*, how to stop hæmorrhage; *b*, the importance of keeping the patient warm and removing him to some house or car; *c*, how to handle a victim of a fracture with the least pain and injury; *d*, how to protect open wounds; *e*, how to treat burns.

"*a*. Every workman should know in a general way the location and course of the large vessels in the extremities and where pressure can be best made over them to control dangerous hæmorrhage. He should be taught that slow bleeding from a lacerated or crushed extremity will probably stop if the limb is elevated for a short time, but if the flow is profuse, i. e., from an artery, it will be necessary to apply constriction above the knee or elbow. He can in a few minutes be taught to apply the Spanish windlass until the flow stops,

that he must then take off every half hour to see if the wound will bleed again. By this intermittent pressure there will be but little danger of gangrene.

"b. Every workman should be taught the importance of getting the injured man to some warm place as soon as possible, for cold has much to do with causing shock and death in the seriously injured.

"c. He can be taught readily how to bandage the legs together or to a board or long stick so as to hold the broken bone as still as possible, or how to make a temporary splint out of a blanket, that will hold the limb in position until it can be attended to by the surgeon.

"d. Most important of all is how to treat open wounds, for these constitute the great majority of the serious accidents and here is where he should be instructed to do the least that will meet the indications. These are to stop serious hæmorrhage, and by the use of some sterile material to protect the wound from further infection.

"e. He should be taught how to protect the burned surface with a suitable dressing."

Dr. A. O. Williams suggests that as every railroad man carries a time card and all their work is governed by that card, it should be utilized for this purpose also. Incorporated into these cards and made a part of their study, should be some of these first principles instilling cleanliness, the adding of heat, when necessary, and the means of controlling hæmorrhage.

Over the Pennsylvania system the employees to be instructed will include all passenger and freight trainmen, including engine men and firemen, and other employees at terminals, yards, shops, etc. Instruction will be given by the medical members of the relief department at convenient points. It is to consist of instruction how to place the injured on stretchers, how to transport the injured, simple directions for taking primary care of wounds, fractures, burns, shock, etc., without the use of drugs; also instruction regarding emergency treatment of pain, unconsciousness, convulsions, and heat prostrations.

As a criticism upon this teaching of laymen, one doctor expresses the novel opinion that where surgeons are many and good, such instruction would seem to be *really trespassing, infringing, on the rights of physicians and surgeons*, and doing the injured person an injustice. In his opinion, it is fundamentally impossible to teach train men a few lessons on how to render proper first aid, and thinks the best that can be done is to teach them what not to do. As far as hæmorrhage is concerned, nearly all the injuries resulting from rail-

road accidents are of a crushing nature, so that the application of a tourniquet is not needed. His experience in the question of straightening legs in case of fracture by these men has been that the condition has been made worse, and, in one instance, a simple fracture was converted into a compound. "About all the benefit to the medical profession," he writes, "is that it affords some of our new railroad surgeons a chance to give instructions to men in shops and employees along the line, which will help to advertise them."

TABLE IV

Shall Railroad Employees be Instructed in First Aid?

Yes.

Bangor and Aroostook
Pennsylvania.
Lehigh Valley.
Grand Trunk.
Lake Shore and Michigan Southern.
New York Central and St. Louis.
Père Marquette.
Colorado Midland.
Rock Island.
Chicago and Alton.
Seaboard Air Line.

No.

Atlantic Coast Line.
Chesapeake and Ohio.
Wabash.
Chicago and Great Western.
Chicago and North Western.
Missouri, Kansas, and Texas.
Missouri and Pacific.

No Answer.

Boston and Maine.
Boston and Albany.
New York, New Haven, and Hartford.
St. Louis and San Francisco.
Chicago, Milwaukee, and St. Paul.
Chicago, Burlington, and Quincy.
Union Pacific.
Northern Pacific.

THE HOSPITAL CAR.

Upon the subject of hospital cars, there seems to be more definite opinion, the majority being against their introduction as unnecessary in railroads running through well populated districts. Running through sparsely settled country can hardly be charged to such railroads as the Pennsylvania, the Lehigh Valley, and the Erie, all three of which either have them by this time or are having such cars built. An illustration of the cars to be placed in the service of the Erie Railroad was published in the *Medical Record* for May 7, 1904. The article is a sample of the difference of opinion held upon this topic by men apparently equally competent to judge. Dr. Sanford writes: "It may be safely said that there is not a physician or surgeon present, who does not believe that the need of establishing such a system of hos-

pital cars upon our railroads is imperative, and it would seem to be the duty of railroad corporations to make such provision for the prompt relief of injured passengers. As we recall the memory of the distressing railroad accidents of past years, the more impressed we must be by the horrors of these recent recurrences in the West and South. It is a sad thought to picture the mangled and dying on beds of snow, or often in the dingy room of some wayside cabin, or even as was recently the case, in a barn, being cared for by a chance physician who perhaps himself only escaped total disability, assisted by the willing laity in his feeble efforts to alleviate the sufferings of the many injured, while miles away, after much delay, a relief train is being prepared as quickly as possible, but slowly and inadequately supplied with a few surgeons, and possibly a nurse, to be sent to the scene, hampered in their work by lack of facilities. Allow the comparison with the immediate departure of a hospital car with its staff of a goodly number of surgeons and nurses, prepared for all emergencies." It was with the intention of securing, if possible, data that would corroborate such delays in the care of the injured, that the first two questions were asked. The negative answer in all letters, except one, where one hour was stated as the time, would lead one to think that such occurrences were very rare, or that they were forgotten as soon as possible. One thing is true, that serious accidents are more numerous in the vicinity of switches, and therefore not far from town, so that the baggage cars, etc., can quickly be appropriated for use in transporting the injured to hospital. Another reason for its failure to meet with approval is the necessary cost of building such cars, as proposed by Dr. Sanford, and maintaining them. Each of these cars will be 50 feet long, and heavily constructed, and everything will be painted white, as in a hospital ward, the floor being covered with white rubber in block form. Each hospital car will be divided into two compartments, one 36, the other 14 feet long, separated by heavy sliding glass doors of frosted plate, wide enough for a stretcher to pass through. The larger compartment, corresponding to a hospital ward, will contain eight white enamelled iron bedsteads. There will likewise be two swinging beds, suspended from the roof, to do away with all jarring motions. Each bed will have a frame for enclosing the bed with white curtains.

Dr. D. S. Fairchild has described a car which has been constructed on the Chicago and North Western road, and has been attached to the wrecking train at Clinton, Ia. This car was

overhauled and reconstructed by the men themselves, outside of regular working hours, and the only expense attached to it was the material used, as the men gave their services free of charge. The actual cost to the railroad was not more than \$100. An old coach was secured and the inside torn out and refitted. In one end, five sections were made, each having an upper and lower berth, accommodating ten persons in all. Adjoining these sections on one side, are three closets, one the water closet, one a clothes closet, and the third, the surgeon's supply press; in this last closet are shelves of various sizes, in which supplies are kept, in a compact and accessible form. The central part of the car has two tables at one side, arranged like those in a dining car; on the opposite side, is a writing desk and a seat, running parallel to the side of the car. This portion is well supplied with windows. At the other end, is a cupboard and ice box, and opposite to this a cooking range. In the top is placed a stretcher, also an operating table. Whenever the car is called, this table is taken down and firmly placed, one end resting on the side table, the other end, being supplied with folding legs, rests on the floor.

Answers to the letters sent out show that the following four railroads have hospital cars of some kind, usually attached to a work train: The Atlantic Coast Line, the Lehigh Valley, the Chesapeake and Ohio, and the Chicago and North Western. The Pennsylvania road has plans for a car suitable for the transportation of invalids, which may in emergency be used as a hospital car, but nothing as yet has been done toward building any of these cars.

CONCLUSIONS.

As a result of the study of the present status of railroad emergency work, the following conclusions seem justifiable:

Questions 1 and 2.—Data are difficult to obtain, but the answers would indicate that a delay, of considerable period and involving avoidable loss of life, was rare.

Question 3.—The balance of proof is in favor of the supply of trains with some form of emergency package such as could be of service in the hands of laymen, preferably such packages as devised by Dr. Crutcher, of the Chicago and Alton, or by Dr. Brockman, of Ottumwa, Ia. In addition to this, the surgical chest for use of the doctor in the baggage car, simple yet efficient. The objection that it is usually destroyed in the smash up is true only in head-on collisions.

Question 4.—A considerable number of railroads are adopting such a plan. A few have tried

and found it wanting, and have discarded the package.

Question 5.—With the adoption of the emergency package, all are agreed as to the advisability of some simple plan of instruction to railroad employees. Its practical working is doubted by some, but others are equally positive of its beneficial result.

Question 6.—The hospital car, while a distinct advantage at the time of an accident, is still problematical as to its value, on account of its infrequent use, and consequent neglect; also on account of its cost of introduction and maintenance. One car would not be sufficient, but a system of hospital cars would have to be instituted.

MERALGIA PARÆSTHETICA, FOLLOWING TYPHOID FEVER.

By L. L. VON WEDEKIND, M. D.,

U. S. S. *Cincinnati*,

SURGEON, UNITED STATES NAVY.

The patient, an officer, aged 30 years, was, in November, 1903, admitted to the United States Naval Hospital, Cavite, P. I., as with febris enterica. The admission diagnosis was confirmed in a few days. A typical, but very severe type presented, and in January, the patient had a relapse, extending the time of treatment in hospital to over ten weeks, and the convalescence at the end of this time was slow. To obtain the benefit of a different climate he was sent north, to the United States Naval Hospital at Yokohama, Japan, arriving there in March, 1904, where he remained for a period of ten weeks, returning in May, 1904, to duty, when he was assigned to this ship. From the date of his illness to the time of his return to duty, some six months elapsed.

Upon reporting for duty I noted that he showed the evidences of a recent illness, and though both willing and anxious to do duty, it became evident that his willingness was away ahead of his ability, and he was consequently relieved and sent home to recuperate.

Immediately upon reporting for duty in May, the patient became an officer of the watch and I noticed his somewhat peculiar gait, but for a time made no mention of or comment upon it, supposing it to be a personal peculiarity. He would rest against anything while on duty which might be convenient, and after a tour complained of being tired and of pain in his legs. He never expressed a desire to exercise ashore. Knowing of his previous illness and that he had been in hospital, I inferred that the weakness and pain in his legs was natural to a condition of completed convalescence after a six months' rest, also that with exercise on deck, he would, in the

course of a short time, gain not only increasing strength and vigor, but that the regular exercise and out door life were the best possible means to perfect recovery. After the lapse of about a month, noting no improvement, I inquired as to the cause of his peculiar walk and received the following history:

While under treatment in Yokohama, and for no apparent reason he can assign, he was suddenly attacked with left facial paralysis, this condition remaining for twenty-one days. During his illness, while in the Philippines, he noticed that his thighs had to a greater or less degree lost sensation; that, while in bed, his hands touching the thighs, the sensation was in places, different, and that occasionally he had a very peculiar tingling sensation in the areas of anæsthesia. Owing to his illness, this condition seems not to have impressed him as being peculiar, for he referred it to his general illness, and therefore made no mention of it as it was in no way disagreeable, being called to his attention only when his hands happened to touch the anæsthetic spots. While completing his convalescence in Yokohama, leading a pleasant out door existence in very pleasant surroundings, exercising purely for pleasure and not overdoing the exercise at any time, he noted no ill effect, but found, on the contrary, a diminution of the tingling and a decided diminution of the anæsthesia; though the borders of the anæsthetic zone remained fixed, the sensation to touch was gradually returning.

During his first tour of duty after joining this ship he was very tired and found that in addition to the anæsthesia and tingling, each of which returned during the first watch, he also suffered from myalgia in the thighs and legs, and found his feet swollen and tender. On account of an almost complete rest of a few days between tours and to the subsidence of all symptoms which had occasioned discomfort, he made no mention of his condition, and found upon the completion of the second tour a similar state of affairs, with cessation after a complete rest. His appetite being excellent at the time and his digestion perfect, he very naturally concluded that his strength had not fully returned, but would in due course, and so, until I questioned him, he made no complaint, other than of extreme weariness, and he used to mention in mess that his legs pained him.

An examination shows almost complete anæsthesia of the external and anterior aspects of each thigh, the outline on each being identical, one spot about the size of a silver dollar, of exquisite hyperæsthesia along the inferior line of demarcation on the right thigh only. Digital pressure in this spot discovers pain deep seated, such as would be noted in a subperiosteal abscess, but under the hyperæsthetic spot only, and under pressure only. The zone of anæsthesia is like "inlaid boards," the tingling similar to "the after effect of striking the funny bone." Myalgia is general in both thighs and legs after continued exercise, disappearing completely after a long rest. A spot on the right side of the chest three inches below and to the right of the nipple, which he terms "a heat spot," will suddenly flare up and burn for a moment and as suddenly cease.

I have questioned very closely as to the normal sensation in the soles of the feet, but he denies any loss in this region, still the manner of and the awkwardness and uncertainty noted in his gait, both upon reporting and since, suggests a difference there, as well as a loss of complete control of coordination.

The general nervous system is badly shattered, as he has little if any control, and irritability, very foreign to him, is constant. What is usually termed lumbago is present now and again. The right foot, I have occasionally seen, both in walking and sitting with the right leg crossed, to drop, exactly as in wrist drop, but this is not constant and the patient has control. Still it is present at times, and that it is not an attitude, its presence in walking demonstrates.

The treatment has been rest, strychnine, and massage; the results, not great. Judging, however, from his condition when he reported for duty and his statement regarding the return of sensation during convalescence from typhoid, the ultimate outcome should be good.

The exact area, conditions, and symptoms in each thigh, with the exceptions noted above, indicate the involvement of the same nerve on each side, and at its origin and in addition to the external cutaneous, especially on the right side (the pressure?), may include the strands of some others.

The patient's discovery of the anæsthetic spots, during his attack of typhoid, fixes the origin of the present trouble, and doubtless also that of the facial paralysis. The personal history is absolutely negative.

Actual Indications for Vaginal Hysterectomy.

—Richelot, in the *Revue de chirurgie*, for November 10, 1904, establishes a parallel between abdominal and vaginal hysterectomy. He discusses these two methods in connection with uterine fibromata, cancer, and pelvic suppuration. He favors abdominal section for fibromas of moderate size as well as for those which are very large. If, however, the fibromatous uterus is small, movable, hard, painful, and disposed to bleed, and if the abdominal wall is thick, he advises vaginal hysterectomy. With regard to cancer there have been many illusions as to the abdominal method. Statistics show unequivocally that even if the connective tissue and the glands are removed, recurrence will follow as quickly after the abdominal as after the vaginal method.

The author believes that he has rendered good service to at least 18 or 20 per cent. of the cases in which he has performed vaginal hysterectomy for cancer, survival in these cases continuing from three to twelve years. He believes it will be unreasonable to look for results which will be much better than these, and he therefore states that he shall continue to operate for cancer by the vaginal method. With reference to pelvic suppuration the abdominal method enables one to see the field to better advantage and remove only that which is strictly necessary. If, however, the tubal collections of pus are very septic, it is better to remove them by the vagina and perform vaginal hysterectomy.

THE VASODILATORS AND CONTRACTORS.

By GEORGE W. GREENE, M. D.,

AUBURN, N. Y.

We are taught in works on therapeutics that alcohol dilates the arterioles and at the same time causes increased vigor of the systole. So much is the systole increased that, notwithstanding the dilated arterioles, the blood pressure is materially raised. It is, therefore, theoretically as well as clinically the ideal heart stimulant. There are very few physicians who would not give alcohol in sudden heart failure, as, for example, in syncope or heart failure in pneumonia.

It would seem, looking at it from a theoretical standpoint, that it would be the ideal treatment in hypertrophic dilatation with degeneration. But here sadly enough theory and practical experience are seriously at fault. I have repeatedly seen serious cardiac insufficiency occur in people who were habitual indulgers in alcohol. More than that, I think that the use of alcohol renders the prognosis unfavorable. But here digitalis, a drug which contracts the arterioles as well as the heart, and causes prolonged systole and very materially raises the heart pressure, is the drug of all others. I seriously doubt if there will ever be found a substitute for digitalis. Dr. Oliver Wendell Holmes calls it the opium of the heart.

There is another drug, however, with almost identically the same physiological effects. I refer to ergot. But who ever heard of giving ergot in heart trouble? It is alleged that the indication for digitalis is low arterial pressure, but to show that this is not true I will simply point to chronic myocarditis; those cases where there is evident cardiac insufficiency with dispnœa, and dropsy of the feet, cases without valvular trouble where the heart goes tip tap, tip tap. These cases have marked low arterial pressure, yet in them in my hands digitalis is worse than useless, positively injurious. In these cases the nitrites, of which nitrite of sodium is the type, occasionally accomplish wonders, and yet the nitrites lower blood pressure by dilating the arterioles. They relieve the heart by taking the load off, and rest the heart by giving it less to do. To illustrate:

About a year ago I had an old man who without valvular trouble was water logged, with very evident pulmonary œdema. He was unable to lie down, his heart sounds, though clear, were short and sounded like the ticking of a watch, yet this hopeless man under two grains of nitrite of sodium every three hours so far recovered that he resumed his work of a gardener.

Another use of the vasomotor contractors and dilators, of which medical literature says very lit-

tle, is their use in headache. When the patient looks like a corpse, he is almost always relieved by a full dose of nitrite of sodium or nitroglycerin, while in the congestive variety, where the face is red, the eyes are suffused, and the carotids throbbing, a full dose of fluid extract of ergot will work wonders. Ergot and nitrite of sodium are physiological antidotes; so also are digitalis and nitroglycerin, and yet no less an authority than Da Costa combines them. The only reason that they are not both inert is that the nitroglycerin evaporates and leaves the digitalis.

Another use of the vasodilators which is highly extolled is in the treatment of arteriosclerosis or cirrhotic kidney. They dilate the arterioles and lessen the danger of apoplexy. If two grains of nitrite of sodium are combined with one hundredth of a grain of bichloride of mercury, they will, at least theoretically, absorb the new connective tissue. I think this fact has been proved clinically. I believe after repeated trials that the nitrite of sodium is of great value in the treatment of anemia. It dilates the arterioles and hastens the elimination of the waste material. This waste material contracts the arterioles, which hinder the elimination and thus keep up a vicious circle, which can be completely counteracted by vasodilators, of which I think nitrite of sodium is the type.

I approach the subject of the treatment of pneumonia with misgivings, for almost every physician has his own idea of the treatment. On only two drugs is there unanimity of opinion, alcohol and strychnine. There are very few physicians who do not give them at some time during the disease. I myself give alcohol only when it is indicated by heart failure.

Digitalis is highly recommended, because it raises blood pressure, but I never heard of its companion drug ergot being used. Many very competent observers condemn it. No less an authority than the late Dr. Loomis was one of these. Dr. Elsner has lately recommended adrenalin chloride. A man with pneumonia is like a man running up hill. His heart is beating at twice its normal rapidity, and he is using up strength which will be needed before he has passed the crisis. I believe in veratrum viride in this condition, and I give it for two or three days in sufficient doses to soften the pulse. When the heart begins to fail I give strychnine and alcohol. Pneumonia is a self limited disease, and is probably the least affected by treatment of any disease. In the Massachusetts General Hospital they have kept an accurate record of the pneumonia cases and the treatment for a hundred

years. Dr. Loomis, when studying these records, drew a line showing the death rate; the higher the death rate, the higher the line. During this time every kind of treatment was in turn in vogue, yet strangely enough the line was practically straight. Dr. Loomis used to classify pneumonia as follows: Cases which you could not kill, cases that cannot be saved, and cases in which judicious treatment will turn the scale favorably.

There is one other class of cases where vasodilators are of great value. I refer to eclampsia. During an attack of eclampsia and immediately preceding it, there is an enormous rise of arterial pressure. It has become a recognized plan of treatment in epilepsy to advise the patient to carry pearls of nitrite of amyl, and when an attack is impending to crush one on a pocket handkerchief and inhale. During puerperal convulsions, Playfair recommended veratrum viride in large doses, and Edmunds advises it without regard to dose. I believe its action is due to the dilatation of the arteries of the brain. If I am ever so unfortunate as to have a case of puerperal eclampsia I shall inject 10 minims of solution of nitroglycerin.

Death from chloroform is caused by extreme vascular dilatation, the victim, in fact, bleeding to death into his own veins. Judging from the therapeutics of adrenalin chloride, the idea struck me that perhaps it would be a suitable prophylactic to inject 10 minims of adrenalin into a vein before administering chloroform. I wrote to Professor Hare, stated the facts, and asked his opinion. He answered that the best surgeons now used it for that purpose. In the last edition of his book I see he now recommends it.

To conclude, the vasomotor dilators and contractors are among the most important therapeutic agents we have at our disposal.

The Bradford Street Hospital, Brooklyn.—Charities Commissioner Tully is planning to make the Bradford Street Hospital, in East New York, one of the largest and most modern institutions of its kind in this borough. The commissioner made formal application to the Board of Estimate on January 13th, requesting it to authorize the purchase of 100 additional feet of land north of the present hospital building. The question of enlarging the present hospital has been agitated for a long time by the citizens and civic organizations in East New York. The building was formerly used as a station house in the old town of New Lots, and is in a deplorable condition. It is not fireproof, and there are no fire escapes from the upper floor.

DELAYED RESULTS OF A WOUND OF
THE BRAIN.

By PHILIP F. O'HANLON,

NEW YORK,

CORONER'S PHYSICIAN.

It has been said at various times by observing members of our profession that the coroner's office does not often furnish much to the literature of medicine. Be this as it may, there is good reason for this dearth of information from the channel in the fact that the life of a coroner's physician is pretty well taken up with attention to his duties. In the borough of Manhattan alone some six thousand cases a year are despatched by those employed to do the work. Out of this number of cases between 1,500 and 2,000 autopsies are made. To any one familiar with the distances between cases it would be an easy matter to compute the time taken up in travel alone. Travel entails fatigue and the latter is not conducive to pen pushing of facts after all are through for the day. I will be glad to break the ice in this matter, if it meet with any benefit to my brothers and relate facts as they come along, facts, mind you, not opinions. This being so, I will of course be excused from having to elaborate or argue on the subject. It is a fact that a number of persons die, and the deaths reported to this office upon being investigated post mortem do not explain any cause, even after chemical and microscopical efforts have been made; and these examinations are made in the laboratories of our medical colleges by most competent and hard working investigators.

Imperfect clinical histories is one of the most irritating conditions presented in many of the hospital coroner's cases. Effort properly directed by the industrious internes would, if persisted in with proper spirit, largely tend to eliminate this unhappy fact; the gentlemen devoting their time and the best days of their career would be gainers to as large an extent as the coroner's physicians, and the medical world and the public in general would reap an advantage far beyond the most lurid dreams of the imagination.

No fiction penned can picture stranger truths than those seen by us. Books do not begin to tell such facts, that seem to be almost beyond belief, and, when related, do not awaken responsive credit. To relate a case in point:

During the excavation for the foundations of a large department store here some years ago a man by name McD. had an altercation with the night watchman, in which he made an effort to hit the latter with an iron crowbar. The watchman pulled out a pistol and at close range fired

and the disturber fell to the ground. Upon examining him it was found he had a wound of the temporal bone. He was taken to a large hospital where the "scalp" wound was dressed. The next morning, the man walked into Jefferson Market Police Court and there made a complaint against the watchman. Time passed, two months elapsed, McD. working all this time. A little later he was taken with fits in the street, brought to a hospital, and a diagnosis was made of epilepsy. He was allowed to go out again, and, to make a long story short, McD. used to "throw a fit" quite often and quite as often the old diagnosis, epilepsy, followed as a matter of course. One day he was taken to a large down town reception hospital, and it so happened that an x ray of his head was made and McD. went again upon his merry way. Time passed on and anon McD. wound up in Bellevue because of the usual epileptic attack on the street. He remained at this hospital, where a diagnosis of brain abscess was made, and in due time McD. reached the coroner's room at the morgue.

An autopsy made revealed a bullet resting beneath the anterior lobe of the right hemisphere at the base, to all purposes a harmless foreign body so far as the lead itself was concerned. The track of this bullet was plainly visible through the brain tissue, beginning at the left temporal lobe and passing across to where it was found. An examination of that part of the brain broken down into an abscess showed a small piece of lead, to which adhered a sharp piece of bone, which had set up the irritation which resulted in the formation of the abscess. Investigation showed that McD. had been shot 18 months before, at the time and place stated in the foregoing narrative, and no one was found who suspected the true cause of the trouble, except the x ray enthusiast who had a skiagraph, and to whom I went, relating the case, and this skiagraph showed the bullet to be in the place where I found it at the autopsy.

Rather interesting, is it not? Some day when I again have a few moments I will continue to relate what may be of interest, even though it staggers belief. I think this case "puts it up" to the gentleman of crowbar fame of whom the books speak to the astonishment of the medical student reader. Organs particularly capable of giving symptoms during life with no corresponding post mortem lesions are the heart and the brain, and many a good premium life insurance companies have lost by too great importance being attached to symptoms that afterwards clear up and are not due to disease of these organs.

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A WORD ABOUT IMPROVEMENT.

To Our Readers:

We respectfully call your attention to the *New York Medical Journal and Philadelphia Medical Journal* for the first issue of the new year.

The *Journal* will be vastly improved for 1905 over any previous year in its history.

For instance, the first issue of the new year was made up of 52 pages, or 104 columns of text matter, which makes it the largest weekly medical journal on the Atlantic seaboard.

Its contents were as follows:

Lectures, one.....	4 pages,	8 columns
Original articles, six, by eight authors.....	21 "	42 "
Subscribers' discussions, three authors.....	3 "	6 "
Therapeutical notes.....	1 "	2 "
Editorials, ten, one signed.....	4 "	8 "
News items.....	5 "	10 "
Pith of current medical literature.....	8 "	16 "
Proceedings of societies.....	1½ "	3 "
Book notices.....	1½ "	3 "
Miscellany.....	1½ "	3 "
Official news.....	1 "	2 "
Births, marriages, and deaths.....	½ "	1 "

Total, 52 pages, 104 columns

There were also forty pages of clean, ethical advertisements from houses whose commercial standing and products are beyond reproach.

For typographical effect, quality of paper used, and for press work, the *Journal* stands to-day unequalled by any weekly medical journal in the world.

We ask your careful scrutiny of the first issue for 1905, which was but the forerunner and criterion of the numbers which are to follow.

A. R. ELLIOTT PUBLISHING COMPANY.

THE BUFFALO CAMPAIGN AGAINST CANCER.

Since our last issue went to press the newspapers have contained accounts of an alleged 'successful serum treatment of cancer discovered in the Gratzkoff Laboratory of the University of Buffalo—at least of its measurably successful employment on mice inoculated with a disease resembling cancer in its gross features. Our readers will recall the fact that a number of months ago the newspapers proclaimed the discovery in the same laboratory of the germ of cancer. That announcement proved to be fallacious—premature, as the newspapers now put it—and a realization of its fallacy is said to have led the medical officers of the laboratory to resolve not to give out anything more for publication without the most complete evidence of its truth. This resolution became known to members of the profession in Buffalo, and they consequently entertain a general belief, as we have taken pains to ascertain, that the present announcement is not "premature."

The story is that a mouse affected with cancer was received at the laboratory some time ago from Copenhagen; that from that mouse there were inoculated from 150 to 200 other mice, "all of which now have cancer;" and that treatment of these inoculated mice with a serum prepared in the laboratory has produced the disappearance of small tumors and arrest of the growth of larger ones. It purports to have been given out from the laboratory that the experiments thus far made justify the application of the treatment to human beings, though it is admitted that the disease in the mice must yet be studied for a much longer time before it can be said that the investigation has been followed to its legitimate conclusion. Thus far, it appears to be sarcoma rather than carcinoma. As to the final result, the profession can only hold its judgment in suspense, but we certainly hope that the Buffalo laboratory will be found to have added materially to our knowledge of cancer.

THE ACCURACY OF CLINICAL THERMOMETERS.

Two important factors have contributed much to bring about the present unsatisfactory conditions in the clinical thermometer industry, unsatisfactory alike to the manufacturer, the dealer, and the user. One of these factors has arisen

from the somewhat unreasonable demands of those who use these thermometers, and is due to want of information as to the degree of accuracy essential in the use of a clinical thermometer. The dealer, as a result, finds it difficult to dispose of a thermometer that has so small a correction as 0.1° F., the demand being for thermometers that need absolutely no corrections, and these conditions would hold even if the certificate showed an error of only 0.01° . The mere fact that any correction is required, although entirely negligible, seems to mean to the uninformed user, and indeed even to the well informed, that the thermometer is not a good one. These conditions have led the dealer to demand of the manufacturer thermometers with accompanying certificates that have zero corrections at all points of the scale for every thermometer, and here the second factor is introduced that has played so harmful an influence. It is almost impossible for the manufacturer to meet this demand honestly. It would mean the rejection of a very large percentage of even his most carefully made goods, and it could therefore be done only at a very marked increase in cost over the prevailing rates, and all this without any real advantage to the user.

Unfortunately, some manufacturers have yielded to the pressure of competition and have furnished certificates with their thermometers showing zero corrections at all points of the scale, regardless of the real amount of correction required. It is no uncommon experience with the salesman to find a dealer who cares little whether the thermometers are in error by 0.1° or even 1° so long as the salesman will furnish him with certificates showing a zero correction at every point of the scale. The demoralization in the industry to which this has led can hardly be overestimated. It has resulted in filling the market with thermometers which are in many instances entirely untrustworthy, that have never been tested, but which are nevertheless sold with certificates showing all zero corrections. To their credit be it said, a number of manufacturers have made a determined stand against these conditions.

At the suggestion of all the interested parties,

the United States Bureau of Standards some time ago began the certification of clinical thermometers on a limited scale, and has now tested over ten thousand thermometers. With a view to increasing the general reliability of the product by removing as far as possible the factors previously discussed, and at the same time safeguarding the interests of those who use clinical thermometers, the Bureau of Standards is now considering the question of issuing a certificate under the following conditions: When a thermometer shows at the so called normal point (98.6°) an error not exceeding 0.1° and at other test points an error not exceeding 0.2° , the bureau proposes to issue a certificate containing the statement that it "has negligible errors." These errors are, in the opinion of the experts of the bureau, negligible for the order of accuracy that is essential in clinical thermometry. Thermometers having errors greater than this would then receive the usual form of certificate stating the magnitude of the corrections at the several test points. The proposed new form of certificate of the Bureau of Standards will not state the amount of the corrections, inasmuch as they are considered entirely negligible.

The proposed "blanket" certificate is intended to relieve the manufacturer and the dealer of the unreasonable objection made by the user to a thermometer having these small errors, and at the same time to guarantee to the user a degree of accuracy sufficient for every purpose. The Bureau of Standards directs attention to the fact that this proposed step is along the lines followed by the great German testing bureau, the Physikalisch-technische Reichsanstalt, which engraves on the thermometer the word "fehlerfrei" (meaning free from error) if the corrections at the three test points do not exceed 0.05° C. (about 0.1° F.). The proposed certificate of the Bureau of Standards would insure the same degree of accuracy at the "normal point," and is a little more liberal at the other points, where the demand for accuracy is admittedly less.

It is only fair to point out that in the proposed certificate of the Bureau of Standards the thermometer receiving it would read within about 0.1° of correct temperature near normal and with-

in 0.2° at other points. If a thermometer was broken or another substituted this would of course introduce the remote possibility of an apparent change of 0.4° in a patient's temperature, should it so happen that the first thermometer had read 0.2° high and the second thermometer 0.2° low, for example. At the present time the Bureau of Standards issues a certificate giving the magnitude of the corrections required at four test points, and certification is refused if the correction exceeds 0.3° F. The Imperial German Bureau has established a maximum limit of 0.1° C. (0.2° F.), while the maximum variation allowed by Kew Observatory (England) is 0.4° F.

These questions have been raised in the *Journal* with a view to getting further information as to what may be considered a "negligible error" in clinical thermometry, and with this end in view the editor invites a discussion of the subject by those who are interested and have given the subject some thought. It is of interest to note in this connection that the German Imperial Testing Bureau, as stated above, regards a correction of 0.05° C. (0.1° F.) as entirely negligible. The proposed certificate of the Bureau of Standards shows that it, too, is of the same opinion, going somewhat further (0.2°) at points other than the normal point. The important question is, Does the physician draw any conclusions as to the condition of his patient from an observed variation of 0.2° , 0.3° , or 0.4° F.? We should like to hear from our readers on this subject, as the Bureau of Standards would no doubt be largely guided by a consensus of expert opinion in the matter.

THE PHYSICIAN AS AN INVESTOR.

I.

From the amount of literature advertising "fake" schemes for investment with which the desk of the physician is flooded, it is evident that the wily fakir puts a very low estimate upon the intelligence of the profession. That this estimate is deserved, most of us who are in a position to know would scarcely deny. The fakir starts after the young physician as soon as his sign is swung to the breeze, and pursues him throughout his after-life with enthusiasm proportionate to the doctor's real or supposed financial success. It would seem

that the wily schemer holds the view that the readiness with which the physician can be induced to part with his hard-earned dollars is inverse to the difficulty with which he acquired them. The attitude of the physician regarding such little moneys as he may accumulate reminds me of the story of the Irishman who, by dint of seventeen years' hard work in carrying the hod, had accumulated something like \$400. He was induced to go to the races one day, and very promptly lost every dollar he had. One of his compatriots was condoling with him upon his loss, whereupon he retorted: "It's all right, Moike; come aisy, aisy goes."

About the first proposition that is submitted to the young doctor is a life insurance scheme. He is induced to buy life insurance upon the specious plea that he can pay at least a part of it, if not all, in life insurance examinations. This, he is informed, will give him a large acquaintance and a permanent position with the company. I do not know what the custom of the larger companies is at the present time, but in times past some of the most substantial life insurance organizations have been parties to schemes of this kind. Having secured the doctor's money, or, in the event of the *quid pro quo* being altogether life insurance examinations, the doctor's time and skill, he is promptly dropped by the agent, who then seeks new fields to conquer in the shape of other aspiring and struggling young practitioners.

Once the young physician has begun to progress, actually or presumably, as the case may be, he begins to be besieged by men who have easy money schemes. These schemes involve simply the backing of the promoters' ideas with the victim's money. It is strange that the doctor cannot comprehend the situation, yet he rarely does. The doctor is not victimized quite so easily as he once was, for if there has been any change at all, it must be in the direction of improvement—there was no room for retrogression. It is necessary to make the bait a little more glittering than before. The wily one approaches us now with a scheme for planting coffee beans on the top of Popocatepetl, and reaping gold dollars at the rate of a hundred a bean. We might be a little suspicious of this, but we find upon the list of directors—perhaps occupying high offices on the company's tempting paper—one or more

physicians of high standing. At the head of the subscription list appears the name of Professor So-and-so, a distinguished physician or surgeon, who has just subscribed (?) to five or ten thousand dollars or more of the company's stock. We are instructed to call the professor up by telephone and receive full particulars. We do so, and are assured by him that "it is really a shame to sell any of that stock, as the insiders want it all, but just to oblige Dr. Easy Mark and a few others of the professor's friends the company has consented, after considerable pressure, to sacrifice a small amount." Of course, the distinguished professor confirms the report that he has some stock in the company. He does not state, however, that he was one of the original promoters, nor that the amount of outlay which he has made in the purchase of his stock might be inserted in a mosquito's eye and kept therein for an unlimited time without reddening the conjunctiva of that diminutive insect.

It is high time that the physician awoke to a realization of certain fundamental facts of finance. I will briefly present several of the most important of them.

1. The man who has a profitable mining, land, or agricultural scheme to finance is not compelled to go into the office buildings of our cities or to the modest dwellings of our country practitioners and look up doctors for the purpose of inducing them to invest their hard-earned dollars. Had I a really excellent mining or other scheme to promote, I think I could spend my time much more profitably among capitalists than among doctors or other professional men. The amount of unused capital in America that is lying in wait for judicious and profitable investment is so great that even the fools should be able to understand the situation.

2. The legal rate of interest is established by our general financial and commercial conditions. This legal rate is supposed to be a safe rate, yet our men of great wealth, when they desire to make investments, buy government bonds, the interest upon which is about half the usual legal rate of interest. They do this because they consider the bonds the only investment which is absolutely safe. This is a hint that the physician who has a few hard-earned dollars which he is tempted to invest in wild cat schemes would do well to remember.

3. The most important point is this: With every

one per cent. of interest promised above the legal rate, the danger compounds. The difference in safety between an investment which promises five or six per cent. and one which, it is alleged, promises ten per cent. is something staggering.

4. It is well to remember that most of the men who have lost money in speculation have done it while "backing another man's game." The professional gambler considers this a very dangerous practice. As he expresses it, "something always goes to the 'kitty,'" whose remorseless maw will inevitably break the outsider if he plays the game long enough. The little commission charged for turning deals on the stock exchange or grain market is the equivalent of the amount that is paid to the "kitty" in a gambling game. This amount, trivial as it is, constitutes terrific odds against the man who is playing the game from the outside. It is the fleece of which the lamb must inevitably be shorn in time.

As an illustration of the readiness with which some doctors can be induced to go into wild cat schemes, a case which occurred in Chicago some months ago is a pertinent illustration.

As stated in the daily press, the particulars were as follows: A highly respectable gentleman, who practises medicine incidentally and poses as a moral educator generally, made complaint against certain race track gamblers, alleging that they had swindled him out of five thousand dollars. The swindling was conducted as follows: The doctor was informed that the gamblers had a "sure thing" on the races. This was to consist in tapping the wires over which returns were made to the various pool rooms of the city. Private and preliminary information as to the results of the races was thus to be obtained in ample time to enable the coworkers in the scheme to place bets. There was no wire tapping done. The doctor was shown a room in which fake telegraphic instruments had been installed, and gave up his money like the lamb that he was. The moral of this story is that it is better to be plucked as a lamb, and done with it, than to form a copartnership with wolves for the purpose of shearing other lambs. There should be honesty among lambs as well as among thieves.

It is high time that the physician should regard the individual who enters his office with a specious scheme for investment with promises of large re-

turns as being on the average worthy of the same respect and treatment that would be accorded a pickpocket. Such promoters should be refused an audience primarily, and if they succeed in gaining an audience should be treated with the degree and kind of consideration they deserve.

G. FRANK LYDSTON.

THE TUBERCULOSIS PROBLEM AND MR. HENRY PHIPPS'S PHILANTHROPY.

It would indeed be ungracious on the part of the medical profession to let the recent gift of \$1,000,000 by Mr. Henry Phipps to the city of New York for the establishment of model tenement houses pass by unnoticed. Few American philanthropists have identified themselves so closely with the tuberculosis problem as has Mr. Henry Phipps, formerly of Pittsburgh, now of New York. As is well known, he established in Philadelphia that admirable institution for the study, prevention, and treatment of tuberculosis, known as the Henry Phipps Institute, which is under the able guidance of Dr. Lawrence F. Flick, the well known authority on tuberculosis.

The solution of the tuberculosis problem cannot be accomplished if all energies are centred in one direction only. There are to my mind five distinct branches to be followed to attain the one end. These are, first, the sanitary housing of the poor; second, the education of the masses regarding the prevention of tuberculosis; third, taking care of and isolating, as far as practicable, the advanced and hopeless cases; fourth, the establishment of sanatoria to cure the curable cases in adults and children; fifth, the thorough training of medical men in the early recognition of tuberculosis.

No matter how many sanatoria and special hospitals we may have for the treatment and care of the consumptive poor, as long as unhygienic and insanitary tenements exist, the education of the masses will be of little avail, and the filthy and crowded rooms with lack of air and light will only help to create a continued supply of consumptives to fill the sanatoria and special hospitals.

By the establishment of the Institution for the Study, Prevention, and Treatment of Tuberculosis in Philadelphia, Mr. Phipps, with a sagacity which cannot be too much admired, has given to that and

other cities an example of how the four last mentioned methods should be accomplished; the education of the masses, the care and isolation of the hopeless cases, curing the curables, and offering facilities to medical men for a thorough study of tuberculosis and its early recognition.

Through his gift to New York, the other day, Mr. Phipps pointed out the first and primary factor in the solution of the tuberculosis problem, to provide sanitary homes for the poor. He thus struck at the very first evil responsible for the spread of tuberculosis among the poor, for it is obvious that the education of the masses regarding the prevention of tuberculosis by teaching to them the necessity of fresh air, sunlight, and clean environments cannot bring forth good results so long as they are compelled to live in insanitary tenements with insufficient light and air and lack of hygienic necessities.

To make no mistake in his noble enterprise, Mr. Phipps has called to his aid experienced sanitarians and philanthropists, among whom are such men as Isidor Straus, John W. Arbuckle, Dr. E. R. L. Gould, W. S. Hawk, Charles A. Moore, George E. Gordon, John S. Phipps, Charles Stewart Smith, Robert W. de Forest, Alfred T. White, Myles Tierney, and Charles S. Brown. As a result of a preliminary meeting of these gentlemen a board of trustees has been formed to which Mayor McClellan's name has been added in an ex officio capacity.

There is perhaps no class of people who can appreciate Mr. Phipps's gift better than the medical men of New York, particularly those who have had occasion to become familiar with the condition of the old fashioned tenement houses and the sufferings which the gloomy surroundings and lack of air and light produced among the unfortunate sufferers from tuberculosis and other diseases. What a boon it will be to the many scrofulous and anæmic children, and how much less of infantile suffering there will be in these buildings in the hot summer, for to these model tenement houses there will be attached playgrounds for the children and breathing spaces for the adults.

Let us hope that Mr. Phipps's generous gift will be an impulse to other philanthropists to do likewise; that every large city in the United States may

have an institution for the study, prevention, and cure of tuberculosis, such as Mr. Phipps has given to Philadelphia; and that model tenement houses will be created through private and public philanthropy everywhere in the United States where there are men, women, and children who must now live like cliff dwellers or in hovels unfit for human habitation.

S. A. KNOPF.

PRECOCIOUS SEXUAL DEVELOPMENT.

Perhaps one of the most remarkable cases of sexual precocity recently observed is one recorded by Stein (*Deutsche medizinische Wochenschrift*, 1904, No. 35; *Berliner klinische Wochenschrift*, December 12th). A female child six months old menstruated regularly, synchronously with the mother. Its breasts and genitals were unusually developed, and the latter were provided with hairs two thirds of an inch long. No internal examination was made.

A DIRECTORY OF TUBERCULOSIS INSTITUTIONS.

A very useful publication entitled *A Directory of Institutions and Societies Dealing with Tuberculosis in the United States and Canada* has just been issued by the Charity Organization Society of the City of New York. It has been compiled by Lilian Brandt, the society's statistician. Such a book cannot but be frequently of use to medical men.

THE PAMPERED STOMACH.

When we see an otherwise sensible man take for his entire luncheon day after day that which would not satisfy a cat, those of us who are under the impression that the organs of the body were made to work, and not to loaf, are apt to reflect that many men do a deal of worrying over things that Nature is perfectly competent to take care of.

Obituary.

THOMAS H. MANLEY, M. D.,

OF NEW YORK.

The fact that such an uncommonly robust man as Dr. Manley should have died at a comparatively early age will come as a surprise to our readers. They will recall his ardent enthusiasm in the pursuit of professional investigation, his devotion to the improvement of surgery, and the assiduity with which he recorded the results of his observations. His loyalty to the best interests of the profession, always directed along the most ethical paths, will long be remembered, and it will serve as a stimulus to many a young man in need of encouragement.

News Items.

Society Meetings for the Coming Week:

MONDAY, January 23rd.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, January 24th.—Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; New York Medical Union (private).

WEDNESDAY, January 25th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; New York Dermatological Society (private); American Microscopical Society of the City of New York; Philadelphia County Medical Society; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, January 26th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, January 27th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, January 28th.—New York Medical and Surgical Society (private; annual); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 12, 1905:

	January 7.		January 12.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	122	11	189	6
Diphtheria and croup	300	45	307	43
Scarlet fever	227	22	281	17
Smallpox .....	..	..	3	..
Chickenpox	138	..	202	..
Tuberculosis	282	168	338	160
Typhoid fever	47	11	56	9
Cerebrospinal meningitis .....	..	24	..	26
	1,116	281	1,376	261

Increasing Work of the Morgue.—Over 10,000 bodies were received at the New York Morgue in 1904. In 1903 about 8,000 bodies were cared for, while in 1902 the number was only about 5,000.

Testimonial to Dr. Sheil.—Members of the medical staff connected with the health department of the Bronx have presented a beautiful loving cup to Dr. Gerald Sheil, assistant sanitary inspector for the borough, in appreciation of his courteous treatment of those under his direction.

The Manhattan Eye, Ear, and Throat Hospital.—Plans for the new home for the Manhattan Eye, Ear, and Throat Hospital, which is estimated to cost \$600,000, have been filed. The building is to be a nine story fireproof structure, containing every modern convenience, with two wings equipped with sun parlors. It will be built at Nos. 208 to 216 East Sixty-fourth Street.

City Medical Examiner Wanted.—The Civil Service Commission held a hearing on January 13th on the application of Comptroller Grout, for establishing the position of medical examiner in his department in the exempt class. Mr. Grout is anxious to have a doctor attached to his department who can devote his time in examining claims against the city for personal injuries. The commission did not take any action. President Coler said that the action of the commission on Mr. Grout's application would be guided by the ruling of the State Civil Service Board in several similar applications, which are now pending before them.

A New Morgue for Brooklyn.—Brooklyn's new morgue, which has been built on Washington Street, and adjoins the old building, will be opened on Monday next, January 23rd. The building is 40 by 50 feet, is a one story structure, and cost \$26,000. The new morgue has all modern improvements, and is provided with the most approved refrigerating system. Each slab, on which bodies will lie, is separate, and there are thoroughly equipped autopsy and undertaking rooms in the building. The old morgue has been renovated and the interior remodeled. There is a chapel and reception room, and living quarters for the keeper in the old building.

A New Red Cross Hospital, to take the place of the structure now on West Eighty-second Street, will probably be erected on One Hundred and Ninetieth Street, on the heights overlooking Fort George. William T. Wardwell, president of the New York Red Cross, has given \$100,000 for a site. John S. Huyler has presented the bricks necessary for the erection of the buildings, and an anonymous Philadelphia donor has started an endowment fund with a gift of \$3,000. The present hospital has accommodations for eighteen patients, but the new building will be able to care for one hundred. Instead of wards, the interior will be made up in small rooms, with movable walls, so that they can be raised to form a large hall. The new building is expected to cost \$150,000, exclusive of land, and to have an endowment fund of \$100,000.

The Manuel Garcia Centenary Jubilee Fund.—At a meeting of the allied committees representing the American Laryngological Association, the American Laryngological, Rhinological, and Otolological Society, and the section in laryngology of the New York Academy of Medicine, it was voted to appeal to laryngologists throughout the country for contributions not exceeding five dollars each for the Garcia Fund. Payment should be made before February 15th to either Dr. D. Bryson Delavan, 1 East Thirty-third Street; Dr. M. D. Lederman, 58 East Seventy-fifth Street; or Dr. Harmon Smith, 44 West Forty-ninth Street, representing the academy section; Dr. R. C. Myles, 48 West Thirty-sixth Street, representing the American Laryngological, Rhinological, and Otolological Society; or Dr. J. E. Newcomb, 118 West Sixty-ninth Street, representing the American Laryngological Association.

The Medical Society of the County of New York.—A stated meeting will be held on Mon-

day, January 23rd, at eight p. m. Programme: Minutes of the last meeting; report of the Comitia Minora; presentation of certificates of membership; paper, A Century's Criminal Alliance Between Quacks and Newspapers, illustrated with stereopticon views taken from typical quack advertisements of the last one hundred years, contained in Mr. Andrews's private collection of American newspapers, by Champe S. Andrews, counsel to the society. Discussion by the Honorable Edward E. Ommen, City Magistrate; Theodore Sutro, retiring president of the Society of Medical Jurisprudence; Robert C. Taylor, Assistant District Attorney, New York county; new business; adjournment. Meetings of this society in 1905 will be held on February 27th, March 27th, April 24th, and May 22nd.

The New York Academy of Medicine.—The section in genitourinary diseases will meet on Wednesday, January 18th, at 8.15 p. m. Prompt attendance is earnestly and respectfully requested. Order: Election of officers; presentation and report of cases: (a) Excision of Penis and Inguinal Glands (both sides) for Epithelioma, by F. Tilden Brown, M. D.; (b) Pseudohermaphroditism (female type), by George E. Brewer, M. D.; (c) Suprapubic Prostatectomy Complicated by Vesical Calculi, by Howard Lilienthal, M. D.; (d) Nitrate of Silver Burn of Urethra Followed by Sloughing (preliminary report with patient and specimen), by Victor C. Pedersen, M. D.; presentation of specimens and instruments; paper, Genitourinary Tuberculosis, by Robert H. Greene, M. D.; discussion by Dr. Blake, Dr. Harlow Brooks, Dr. Cabot, Dr. Erdmann, and Dr. Squier. James Pedersen, M. D., chairman; E. L. Keyes, Jr., M. D., secretary, 109 East Thirty-fourth Street.

The section in laryngology and rhinology will meet on Wednesday, January 25th, at 8.15 p. m. Order: Presentation of cases; paper, The Equilibrium Between Infection and Immunity as Illustrated in the Tonsillar Crypt, by Jonathan Wright, M. D.; specimens and new instruments; Unusually Large Polypus from the Nasopharynx, by J. Leshure, M. D.; executive session. Lewis A. Coffin, M. D., chairman; Lee Maidment Hurd, M. D., secretary, 15 East Forty-eighth Street.

The section in obstetrics and gynecology will meet on Thursday, January 26th, at 8.15 p. m. Order: Election of officers; presentation of specimens; *paper, After-Treatment of Abdominal Section, by Daniel H. Craig, M. D., of Boston. A. Palmer Dudley, M. D., chairman; Charles F. Adams, M. D., secretary, 104 West Seventy-third Street.

The Sydenham Hospital.—The newly elected board of directors of the Sydenham Hospital, located on East One Hundred and Sixteenth Street, has just received for hospital purposes as a New Year gift, from Isaac Guggenheim, \$1,000. Mr. Guggenheim has also made a generous offer further to aid the hospital and its training school by giving monthly an amount of money equal to such sums as the board of directors succeed in

* Paper deferred from December meeting of the section. Dr. Craig was unable to be present.

raising each month through donations or voluntary contributions. This offer holds good up to the sum of \$10,000 a year. The recent benefit entertainment at the New York Theatre netted the sum of \$1,500 for the hospital. Announcement of Mr. Guggenheim's liberal offer and also the result of the theatrical benefit was made known to the directors at their meeting last Monday evening. The Sydenham Hospital was started two years ago and has been very successful. At first only one building was used for its dispensary, but the work and the needs of the hospital grew so very rapidly that to-day three buildings are thoroughly equipped for this purpose. After next May the two adjoining buildings will be added to the hospital plant in order to provide more room for nurses and private patients, and when complete the hospital will occupy five buildings, Nos. 339 to 347 East One Hundred and Sixteenth Street. The last report of the hospital shows that more than ten thousand treatments were given at the hospital dispensary during the past year and six thousand hospital days were free in the hospital. The congested population in this part of the city has attracted the attention of Mr. Guggenheim and other members of the board to the absolute necessity for an institution of this character in this quarter of the city, and for this reason Mr. Guggenheim's gift is gratefully received by the hospital, and the directors are now hard at work attempting to raise sufficient funds to take advantage of Mr. Guggenheim's offer. William I. Spiegelberg is president of the hospital. Lewis M. Bloomingdale, of 78 Fifth Avenue, is the treasurer, and Sanford Simons is secretary. Among the directors are: Joseph P. Day, who is vice-president, Samuel Strasbourger, Isaac Guggenheim, N. Taylor Philips, and William Bretter.

PHILADELPHIA.

Personal.—Dr. Francis D. Patterson has been elected surgeon to the Howard Hospital, vice Dr. Charles H. Frazier, resigned.

Dr. Milton J. Greenman was elected director of the Wistar Institute of Anatomy on January 11th, vice Dr. Horace Jayne, resigned.

The Philadelphia Polyclinic Hospital, during the month of December, treated the following cases: Patients admitted to house, 115; patients discharged, 98; new patients treated in dispensary, 1,447; total visits to dispensary, 7,667; accident ward, 601.

Philadelphia County Medical Society.—The following was the programme of the Philadelphia County Medical Society for January 11th: Dr. Anna M. Fullerton (by invitation), Medical Experiences in India; Dr. B. Franklin Royer, The Antitoxine Treatment of Diphtheria; Dr. M. Graham Tull, An Unusually Severe Case of Acute Chorea Treated Successfully with Apomorphine.

Beri-Beri at Marcus Hook.—The American bark, *Abby Palmer*, arrived at the quarantine station at Marcus Hook on January 8th. Two members of the crew, an Englishman and a

Swede, were found by the quarantine officer, Dr. Henry L. Horning, to be suffering from beri-beri. They were both isolated in the quarantine hospital, and the other members of the crew were placed in the detention ward. The ship, which hailed from Kaanapali, Hawaiian Islands, was fumigated.

Section in Otolaryngology, College of Physicians.—The following was the programme of the section in otology and laryngology of the College of Physicians on January 18th:

Dr. G. M. Marshall, An Extensive Lupus Ulceration of the Nose; presentation of case; Dr. Walter Roberts, The Mastoid Incision, with exhibition of a case; Dr. E. L. Vansant, A Syringe for the Treatment of Diseases of the Accessory Sinuses; Dr. D. Braden Kyle, Demonstration of the Method of Teaching by Means of the Stereopticon, and A Case of Complete Adhesion of the Vocal Bands.

For a Portrait of Dr. William Osler.—A committee of graduates of the medical department of the University of Pennsylvania, of which Dr. Charles H. Frazier is treasurer, is engaged in collecting funds from physicians who studied at the University of Pennsylvania between 1884 and 1889, for the purpose of having a life-sized portrait of Dr. William Osler painted. The portrait will be presented to the medical department of the university.

The Annual Meeting of the Medical Club was held on Friday evening, January 13th. The following officers were elected: President, Dr. Roland G. Curtin; first vice-president, Dr. Wharton Sinkler; second vice-president, Dr. Thomas G. Potter; secretary, Dr. J. Gurney Taylor; treasurer, Dr. Lewis H. Adler, Jr.; board of governors, Dr. E. E. Montgomery, Dr. Ernest La Place, Dr. H. H. Whitcomb, Dr. Walter L. Pyle, and Dr. Alexander McAlister.

Death.—Dr. Josiah Peltz died suddenly at his home, 608 North Seventeenth Street, on January 13th, aged 62 years. Dr. Peltz was born in Chester County, Pa.; he was educated in the public and private schools of the vicinity and graduated from the medical department of the University of Pennsylvania in 1865. He was a member of the Philadelphia County Medical Society and of the Medical Society of the State of Pennsylvania. Following an attack of influenza Dr. Peltz developed valvular heart disease, from which he died.

Officers of the American Philosophical Society.—At the annual meeting of the American Philosophical Society, held at the headquarters of the society, 104 South Fifth Street, on January 6th, the following officers were elected:

President, Edgar F. Smith; vice-presidents, George F. Barker, William B. Scott, Simon Newcomb; secretaries, I. Minis Hays, Edwin G. Conklin, Arthur W. Goodspeed, Morris Jastrow, Jr.; treasurer, Henry La Barre Jayne; curators, Charles L. Doolittle, William P. Wilson, Albert H. Smyth; councillors, George F. Edmunds, James T. Mitchell, Joseph Wharton, Dr. William W. Keen. Dr. I. Minis Hays was nominated for librarian for the ensuing year.

Philadelphia Pædiatric Society.—The following was the programme of the Philadelphia Pædiatric Society for Tuesday, January 10th: Dr. D. J.

Milton Miller presented a Patient with Intestinal Atony; Dr. J. P. Crozier Griffith reported cases and exhibited specimens: (1) Umbilical Cord Hernia; (2), Congenital Stenosis of the Bile Duct; Dr. David L. Edsall and Dr. C. W. Miller read a paper on The Dietetic Use of Legume Flour, Particularly in Atrophic Infants; with Observations on Absorption and Metabolism. The retiring president delivered the annual address.

Scientific Society Meetings for the Week Ending January 28, 1905.—Monday, January 23rd, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, January 24th, Northwest Medical Society; Philadelphia Neurological Society. Wednesday, January 25th, Philadelphia County Medical Society. Thursday, January 26th, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, January 27th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

The Health of the City.—The following cases of transmissible disease were reported to the Bureau of Health for the week ending January 7, 1905:

	Cases.	Deaths.
Typhoid fever.....	99	8
Scarlet fever.....	64	2
Chickenpox.....	90	0
Diphtheria.....	98	15
Measles.....	15	1
Whooping cough.....	6	1
Tuberculosis of the lungs.....	122	64
Pneumonia.....	62	62
Erysipelas.....	15	2
Puerperal fever.....	1	0

The total death rate for the week was 478, in an estimated population of 1,438,318, corresponding to an annual death rate of 17.28 per 1,000 population. The infant mortality was 89; 73 under one year and 16 between one and two years. There were 36 still births; 22 males and 14 females. The following deaths from other transmissible diseases were reported: Tuberculosis other than tuberculosis of the lungs, 3; diarrhoea and enteritis under two years, 14. The meteorological report of the weather bureau shows another week of variable temperatures and cloudy or rainy weather; 1.36 inches of rain or snow having fallen. On January 4th and 5th the minimum temperature was 16°.

Pathological Society.—The annual exhibition meeting of the Pathological Society, which was held on January 11th and 12th, was, as usual, very successful. Many specimens of an instructive and interesting nature were shown. The exhibition meetings, which have been held by this society annually for the past few years, give an excellent opportunity for the exhibition of series of specimens or particularly interesting individual specimens in a way that conveys more to the observer than the ordinary method of showing such specimens at a regular meeting of the society. The exhibitor is able to explain his work to small groups of interested spectators and the spectator is able to examine closely such specimens as interest him and may ask pertinent questions. This year the society inaugurated a new feature by having between 8.30 and 9.30, on the two evenings devoted to the meeting, short dem-

onstrations by exhibitors of specimens forming consecutive series. The list of these demonstrations follows:

Wednesday evening, January 11th: Dr. J. McFarland, How Metastasis Occurs in Malignant Tumors; Dr. M. H. Cryer, The Variations in the Frontal Sinuses; Dr. W. T. Longcope, A Series of Aneurysms; Dr. W. E. Robertson, A Series of Hearts and Aneurysms; Dr. R. C. Rosenberger, Cardiac Pathology; Dr. B. M. Anspach, Gynaecological Pathology.

Thursday evening, January 12th: Dr. A. J. Smith, Structure of the Distoma Pulmonale; Dr. Funke, Diseases of the Alimentary Canal; Dr. C. Y. White, Tuberculosis in Man and Lower Animals; Dr. C. H. Frazier, Tumors of Thyroid and Salivary Glands; Dr. A. F. Coca, Peculiar Bodies in Serum of Artificial Blisters on Syphilis Eruption (three cases); Dr. D. J. McCarthy, Cerebral Arteriosclerosis.

GENERAL

Dr. Charles H. Althaus, of Jersey City, has gone to the Bahamas for the winter, owing to the health of his wife.

Dr. M. Lampson has resigned from the staff of the City Hospital of Jersey City, after many years of service.

San Francisco Board of Health.—Dr. J. W. Ward has been unanimously reelected president of this board.

Cincinnati Board of Health.—Dr. J. W. Miller has been appointed by this board district physician in place of Dr. Muhlberg, who is leaving the city.

Dr. Charles H. Gumley, of Cincinnati, was severely injured on December 29th by being thrown from his carriage; among other injuries he sustained a fracture of the arm.

Emergency Hospital, Buffalo.—Dr. James T. Gallagher has been appointed to succeed, as superintendent of this hospital, Dr. John H. Prior, who has resigned after long and faithful service.

Wisconsin Scholarship in Bacteriology.—Dr. Thomas W. Tormey, of Madison, Wis., has received the \$400 fellowship in bacteriology which was established recently by Dr. Gustav A. Kletzsch, of Milwaukee.

Georgia State Board of Medical Examiners.—Dr. F. M. Ridley, of La Grange, and Dr. W. D. Travis, of Covington, have been named by Governor Terrell to be members of this board for a term of three years, dating from January 7th.

The Warren County, N. Y., Medical Association elected the following officers on January 11th: President, Dr. William J. Tunt; vice-president, Dr. W. R. Keyes; secretary and treasurer, Dr. Fred G. Fielding.

Grace Hospital, New Haven, Conn.—This institution is the recipient of a gift of \$15,000 from an unknown donor to be used for the enlargement of the nurses' dormitory, the work on which will be started this spring.

Academy of Medicine, Milwaukee.—The following officers of this academy were elected on January 7th: President, Dr. T. J. Beattie; vice-president, Dr. George Gray; treasurer, Dr. C.

Lester Hall; secretary, Dr. George B. Worberg; censor, Dr. W. E. Montgomery.

Dinner to Minneapolis City Physician.—The city physician of Minneapolis, Dr. George E. Ricker, and Mrs. Ricker, were guests of honor at a dinner given at the city hospital on December 26th. A suit case and silk umbrella were presented to Dr. Ricker.

Madison County, Tenn., Medical Association.—This association has elected the following officers for the current year: President, Dr. H. D. Westmoreland, of Huntsville; vice-president, Dr. Claude Pettus, of Monrovia; secretary and treasurer, Dr. M. R. Moormann.

The Chattanooga and Hamilton County, Tenn., Medical Society, at its meeting held on January 6th, elected officers as follows: President, Dr. J. S. B. Woolford, of Highland Park; vice-president, Dr. J. W. Johnson; secretary, Dr. H. P. Larimore; treasurer, Dr. S. Y. Yarnell.

The Health Report of Connecticut for December, 1904.—The following cases of infectious disease were reported: Measles, 171; scarlet fever, 197; cerebrospinal fever, 18; diphtheria and croup, 195; whooping cough, 46; typhoid fever, 55; typhus fever, 1.

Corning, N. Y., Medical Association.—The election of officers of this association for the ensuing year has resulted as follows: President, Dr. H. A. Argue; vice-president, Dr. C. A. Carr; secretary, Dr. E. H. Hutton; treasurer, Dr. H. H. Hubbell.

Damage by Fires.—The residence of Dr. Henry M. Conkling in Summit, N. J., was practically destroyed by fire, entailing a loss of \$10,000.

Fire in the kitchen of the Royal Victoria Hospital, Montreal, on January 14th, caused over \$30,000 damage. None of the patients was injured.

Niagara County, N. Y., Medical Association.—The following officers were elected by this association on January 10th: President, Dr. Frank Guillemont, of Niagara Falls; vice-president, Dr. A. N. Moore, of Lockport; secretary, Dr. W. H. Potter, of Niagara Falls; treasurer, Dr. C. L. Preisch, of Lockport.

Minneapolis Health Department.—The medical personnel of the reorganized Minneapolis health department is as follows: Dr. F. E. Haynes, Dr. G. Daziel, and Dr. W. E. Leonard, medical inspectors; Dr. A. D. Meeds, chemist; Dr. A. A. Keys, veterinarian; Dr. J. Frank Corbett, bacteriologist.

Erie County, N. Y., Medical Society.—At the eighty-fourth annual meeting of this society, on January 10th, the following officers were elected: President, Dr. John D. McPherson; vice-president, Dr. A. H. Briggs; secretary, Dr. Franklin C. Gram; treasurer, Dr. D. C. Greene; board of censors, Dr. H. R. Hopkins, Dr. J. H. Grant, Dr. J. W. Potter, Dr. E. Wende, and Dr. F. E. Fonszak.

Milwaukee Medical Society.—At the annual meeting of the Milwaukee Medical Society, on

January 9th, Dr. H. B. Hitz was elected president. Other officers elected were: Secretary, Dr. H. E. Dearholt; librarian, Dr. A. W. Myers; vice-president, Dr. William Thorndyke; second vice-president, Dr. Oscar Chryslor; treasurer, Dr. R. C. Brown; curator, Dr. O. F. Fiedler; directors, Dr. A. J. Patsck, Dr. C. H. Stoddard, Dr. T. H. Hay, Dr. F. E. Walbridge, and Dr. G. E. Seaman.

The Incorporation of the American Medical Association.—On January 9th, Representative Dwight introduced in the house a bill to incorporate the American Medical Association. The following are the incorporators:

Robert M. O'Reilly, Presley M. Rixey, Walter Wyman, and Dr. E. H. Gregory, of St. Louis; Dr. Henry O. Marcy, of Boston; Dr. Nicholas Senn, of Chicago; George M. Sternberg, of Washington, D. C.; Dr. J. M. Matthews, of Louisville, Ky.; Dr. W. W. Keen, of Philadelphia; Dr. C. A. L. Reed, of Cincinnati; Dr. J. A. Wyeth, of New York; Dr. Frank Billings, of Chicago; Dr. J. H. Musser, of Philadelphia; Dr. T. J. Hoppel, of Trenton, N. J.; Dr. Miles F. Porter, of Fort Wayne, Ind.; Dr. E. E. Montgomery, of Philadelphia; Dr. W. W. Grout, of Denver; Dr. H. A. Johnson, of Washington, D. C.; Dr. A. L. Wright, of Burlington, Iowa; Dr. William H. Welch, of Baltimore; Dr. M. L. Harris, of Chicago; Dr. Phelps Morvel, of Atlantic City, N. J.; and Dr. Lewis S. McMurtry, of Louisville, Ky.

Statement of Mortality in Chicago for the Week Ending January 14, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Jan. 14, 1905.	Jan. 7, 1905.	Jan. 16, 1904.
Total deaths, all causes.....	542	542	566
Annual death rate, per 1,000.....	14.19	14.19	15.30
By sexes—			
Males.....	300	303	312
Females.....	242	239	254
By ages—			
Under 1 year.....	106	110	80
Between 1 and 5 years.....	39	48	49
Over 60 years.....	127	121	136
Important causes of death—			
Acute intestinal diseases.....	20	13	19
Apoplexy.....	24	12	15
Bright's disease.....	34	36	45
Bronchitis.....	24	24	21
Consumption.....	52	41	64
Cancer.....	23	18	19
Convulsions.....	16	6	9
Diphtheria.....	11	14	9
Heart diseases.....	32	47	50
Influenza.....	20	8	4
Measles.....	2	3	..
Nervous diseases.....	13	22	18
Pneumonia.....	108	135	117
Scarlet fever.....	2	3	4
Suicide.....	13	6	6
Smallpox.....	1	..	..
Typhoid fever.....	7	4	9
Violence (other than suicide).....	25	32	30
Whooping cough.....	4	7	1
All other causes.....	111	111	120

The hospital population continues to increase, chiefly by chronic cases driven to their shelter by the severe cold weather. The total deaths reported, 542, were the same in the aggregate as the previous week, but there were some curious changes in the individual causes of death. The following among the important show increases: Acute intestinal diseases, 7; apoplexy, 12; consumption, 11; cancer, 5; convulsions, 10; influenza, 12; suicide, 7; typhoid fever, 3. Important causes showing decreases were: Diphtheria, 3; heart disease, 15; nervous diseases, 9; pneumonia, 27; whooping cough, 3; measles and scarlet fever, 1 each.

LYON MEDICAL.

December 4, 1904.

Treatment of Cancer of the Neck of the Uterus by Vaginal

Vaginal Hysterectomy for Cancer of the Cervix Uteri.—The Condamins state that in cancer of the cervix the ganglions are invaded very slowly, that in cases operable through the vagina they are not involved in 80 per cent. of the cases and that when the parametrium has been invaded they present a proportion of 36 per cent. After the ganglions have become involved it is illusory to think of removing all the diseased tissue because the smaller ganglions are often degenerated and the cancer cells can be found not only in them but in the lymphatic tissues. The state of the parametrium should be accepted as the guide to the choice of operation. If this is not involved the vaginal method should be chosen. When it is involved the choice has to be made between a purely symptomatic treatment and an attempt to remove the disease through a laparotomy.

1. Development of Cancer in Animals from Human Cancer Juice Without Anatomical Elements.

By M. MAYET.

2. A Case of Infantile Osteomalacia.

1. Development of Cancer in Animals. Mayet has succeeded in producing cancer in rats from the introduction of human cancer juice.

2. Infantile Osteomalacia.—Berard and Nordmann report a case of osteomalacia in a female child 7 years old. The first symptoms appeared at the age of 18 months. At 4 years the child complained of pain in the limbs. At 5 years the legs were a little twisted. When seen, the deformations were multiple, throughout the body. The patient died two months later. The details of the autopsy are too long to reproduce.

December 18, 1904.

1. Intoxication with Gas, By Dr. ETIENNE MARTIN.

2. Sterilization of Basins Intended for Use in Surgical Operations or for Dressings,

By Dr. ADENOT and Mr. PERROY.

1. Intoxication With Gas.—Martin discusses the more frequent modes of poisoning and considers illuminating gas less dangerous than the products of combustion in stoves and furnaces. The cadaveric signs after death are very inconstant. Finally he considers how it may sometimes be possible to determine whether a person thus suffocated is the victim of an accident or is a suicide.

2. Sterilization of Basins.—Adenot and Perroy recommend as the easiest and surest method of sterilizing basins of porcelain, glass, etc., a repeated washing with soap, or carbonate of sodium, scrubbing with a 1 to 5,000 solution of corrosive sublimate, and finally rinsing with boiled or sterilized water. In case of septic contamination the strength of the solution should be increased, or it

should be allowed to remain for a longer time in contact, before rinsing.

PRESSE MEDICALE.

November 30, 1904.

1. Injections of Cold Paraffin.

By BROECAERT.

2. Mechanical Purification of Milk.

By DIFFLOTH.

1. Injections of Cold Paraffin.—Broecaert describes an instrument he has invented for injecting paraffin into the tissues. It consists of a metal syringe 9 cm. long, with a capacity of 1 c.c., needles of various sizes, and a piston 1½ cm. long, to which is attached at right angles a pair of forceps handles 20 cm. long, sufficiently large to enable considerable force to be exerted in making the injection. The results he has obtained by the injection of cold paraffin into the tissues of the nose seem at present to be good, but he acknowledges that his experience has been too recent for a definite judgment to be made as yet.

2. Mechanical Purification of Milk.—Diffloth classes under the name purification the modification of milk by mechanical processes, such as filtration and centrifugation, under rectification the modifications obtained by heat and cold, pasteurization, sterilization, condensation, etc., under conservation that obtained from the action of chemical agents. He finds that filtration does not change the chemical composition of the milk or its digestibility and was unable to demonstrate that it exerted any preservative action. Centrifugation he found did not diminish the number of bacteria in milk.

December 3, 1904.

1. Anatomy and Pathological Physiology of Liver Disease Due to Cardiac Disease,

By E. GÉRAUDEL.

2. The Nascent State of Drugs,

By M. FRENKEL.

3. The Constituents of Urine. The Alimentary Origin of Urinary Excreta. The Mineral Constituents,

By M. and H. LABBÉ

1. Liver Disease of Cardiac Origin.—Géraudel describes practically no changes in the portal zone, integrity or slight hypertrophy of the cells with no dilatation of the capillaries, while in the upper part of the liver he found a total dystrophy of the parenchyma, trabecular dystrophy with changes in the cells, and capillary dystrophy with ectasia and rupture, which give rise to infarcts.

2. The Nascent State of Drugs.—Frenkel states that oxidation in the body is generally by means of atomic oxygen and that the nascent state of a simple substance is confounded with its atomic state.

3. The Constituents of the Urine.—The Labbés consider the elimination of chlorides, phosphorus, and sulphur by means of the urine extensively, that of other salts, carbonates, oxalates, etc., more briefly. The origin of all is traced to alimentation, and their excretion found to be proportional to their ingestion. The consideration of the quantities of chlorides, phosphates, and sulphates excreted gives a means of appreciating the quantity and quality of the alimentation.

ZENTRALBLATT FUER GYNAEKOLOGIE

November 19, 1904.

1. Results After Anterior Vaginoutrine Section,

By H. v. BARDELEBEN.

2. Hebotomy,

By G. LEOPOLD.

3. Symphyseotomy,

By D. V. VELITS.

4. Technics of Lateral Section,

By L. GIGLI.

5. Prolapse of Omentum in a Laparotomy Scar Eight Years After Operation,

By WESTPHAL.

6. Suture of Fresh Perineal Tears,

By H. ROSE.

7. Model of Fœtal Skull,

By G. BURCKHARD.

1. Anterior Vaginoutrine Section.—Von Bardeleben found very good results following anterior vaginal hysterotomy, most of them for eclampsia. In five cases, the vaginal portion of the cervix was wholly restored, in two cases there were deep scars and in only one was there a deep laceration. There were no uterine displacements and there had been no hæmorrhages or uterine discharge. Bardeleben prefers the operation to any method of cervical dilatation.

2. Hebotomy.—Leopold reports five cases of hebotomy performed after the method of Gigli and Doederlein. Three of the children survived and the results for the mother were good in all instances.

3. Symphyseotomy.—Velits discusses the changes which have taken place in the minds of obstetricians concerning this operation and reports three cases of his own, in which he saw subsequently eight births. He agrees with Zweifel's assertion that the operation has the advantage of affording easy births for the women later on account of the roomier and more easily dilatable pelvis.

4. Technics of Lateral Section.—Gigli vigorously defends his priority to the originality of the operation, so frequently called "hebotomy" by the Germans. As to the technics, he says that the incision must be made outside of the articulation of the symphysis, and must be made outside of the insertion of the pubovesical ligament toward the symphysis.

6. Immediate Perineal Repair.—Rose advises the suture of vaginal and perineal wounds before the expulsion of the placenta. He places the patient in the side position and ties only the first half of the surgical knot, so that it shall not give way during the placental birth. After this event, the knot is tightly tied. His results with this method have been excellent.

November 26, 1904.

1. Opitz's "Pregnancy Glands,"

By M. SCHWAB.

2. Symptomatology of Movable Retroflexion of the Uterus,

By W. NACKE.

3. Removal from the Bladder of a Goosequill Surrounded by Calculi,

By P. VON KUBINYI.

4. Bilateral Mastitis During Pregnancy Following Impetiginous Eczema of the Nipples,

By A. CALMANN.

5. Amputation of the Inverted Uterus,

By E. FALK.

1. Opitz's "Pregnancy Glands."—Schwab asserts the glands described by Opitz as being characteristically found in the endometrium of pregnancy, are present not only in pregnancy as a result of the nidation of the ovum, but can also be evoked by the congestion of menstruation. In forty-one cases, he found Opitz's glands five times, four times in instances in which a previous pregnancy could be absolutely excluded.

2. Symptoms of Retroflexion.—Nacke analyzed 265 cases of retroflexion of the uterus. Only thirty-seven of these patients, fourteen per cent., had no symptoms. Sixty-two others had to be withdrawn from analysis because their symptoms were not referable to the displacement. The author believes that retroflexion produces symptoms only when the uterus is enlarged or irritated by physiological or pathological processes. If the pelvic contents and the appendages are normal, symptoms will be produced, perhaps, by minute nervous changes such as are called forth by the atrophic chronic parametritis as described by Freund.

3. Vesical Calculus.—Kubinyi describes the case of a woman who attempted to catheterize herself with a goosequill which broke during the procedure. A calculus developed about the fragment which the author removed with a bullet forceps, after dilatation of the urethra. Both the bladder and the urethra appeared to be anæsthetic, which the author refers to an affection of the cauda equina or the medullary cone.

5. Amputation of Inverted Uterus.—Falk removed an irreducibly inverted puerperal uterus by a horizontal incision in the anterior vaginal wall. He was enabled, after drawing the uterus forward, to ligate the broad ligament and the appendages without difficulty and without hæmorrhage. By continuing his incision around into the posterior wall, the uterus was then removed. The recovery of the patient was uneventful.

December 31, 1904.

1. Dangerous Hæmorrhage from the Urinary Tract During Pregnancy,

By P. VON KUBINYI.

2. Death During Labor from a Rupture of a Mesenteric Artery,

By JACOBY.

3. Local Anæsthesia with Eucaïne and Adrenalin,

By H. FREUND.

4. Abdominal Hernia of a Pregnant Uterus,

By A. ROSNER.

1. Hæmorrhage from the Urinary Tract.—Kubinyi narrates the case of a woman in the eighth month of pregnancy who passed bloody urine after lifting a heavy load. This was followed by urinary retention with continued distention of the bladder. The bladder could be emptied and washed out only after dilatation of the urethra and the introduction of the finger. Recovery followed. The author assumes a ruptured varicose vein in the bladder as the cause of the bleeding.

2. Intrapartum Death from Hæmorrhage.—Jacoby reports the case of a twenty-five year old

multipara who went into collapse shortly after the sudden visit of her husband with whom she had not been living. She had simultaneous abdominal pain. She recovered from this and shortly afterward began to have labor pains (in the seventh month), accompanied by a second collapse, from which the patient died. The autopsy showed an intraabdominal hæmorrhage probably due to a ruptured vein in the region of the mesocolon. No arteriosclerosis or syphilis was demonstrable. It could not be shown that the hæmorrhage was due to external violence. The case presents many features of forensic interest.

3. Local Anæsthesia.—Freund recommends for vaginal operations a local anæsthesia induced by eucaine and adrenalin. He uses the mixture by employing nine parts of a one per cent. solution of Beta-eucaine, and one part of a one to 1,000 solution of adrenalin. The solution is slowly injected and anæsthesia lasts from five to fifteen minutes. The solution can be made more astringent by increasing the proportion of adrenalin.

4. Hernia Abdominalis Uteri Gravidæ.—Rosner reports this rare anomaly in a woman who had had a right ventral hernia for some years. At term, a Porro's operation was successfully performed, the child, however, dying the same day.

BERLINER KLINISCHE WOCHENSCHRIFT.

November 28, 1904.

1. Carbonic Monoxide Poisoning.
By F. STRASSMANN and A. SCHULZ.
2. Diagnostic Significance of Disappearing Paralysis of the Vocal Cords,
By W. BERENT.
3. Mode of Infection in Pulmonary Tuberculosis,
By M. WASSERMANN.
4. Acute Articular Rheumatism in Children (*Concluded*),
By A. BAGINSKY.
5. International Congress in St. Louis, By CARL BECK.

2. Paralysis of the Vocal Cords.—Berent narrates a case in which a diagnosis of aneurysm of the aorta was made with a paralysis of the right recurrent nerve. Later the paralysis involved the adductor muscles. The diagnosis was questioned but was finally adhered to on account of the disappearance of the vocal cord paralysis. The autopsy confirmed the diagnosis and showed that the paralysis had changed, on account of the filling of the aneurysmal sac with blood clot, thus bringing about a modification of the signs produced by pressure.

3. Pulmonary Tuberculosis.—Wassermann reports several cases to show that pulmonary tuberculosis originates in the apex by way of the lymph channels in the neck, which transmit the infection to the parietal pleura of the upper part of the chest, which forms adhesions with the visceral pleura. The appearance of stitches in the apical region is significant of this mode of infection. The author condemns massage of enlarged cervical glands, and believes infection on the

right side more frequent on account of the greater mobility of that side of the chest.

December 5, 1904.

1. Diagnosis and Treatment of Cardiospastic Dilatation of the Œsophagus,
By H. STRAUSS.
2. Chromophore Zones in Vital Blood Staining,
By H. ROSIN and E. BIBERGEIL.
3. Family Tabes Dorsalis,
By W. CRONER.
4. Treatment of Blood Diseases with the Röntgen Ray,
By R. MILCHNER and M. MOSSE.
5. Cure of Œsophageal Stricture with Sounds,
By WADSACK.
6. Metabolism in Convalescence After Chronic Malnutrition,
By F. RICHTER.
7. Experiments on Development of Lymphocyte Exudates,
By A. WOLFF and A. VON TORDAY.
8. Diagnosis of Renal Tuberculosis,
By R. MILCHNER.
9. Senator's Influence in Medical Jurisprudence,
By STRAUCH.
10. Senator's Work on Skin Function, Skin Diseases, and Syphilis,
By R. LEDERMANN.

1. Cardiospastic Dilatation of the Œsophagus.—Strauss reports a case of Œsophageal dilatation at the upper end of which, at autopsy, a carcinoma was found. In a second case, the author brought relief to a patient by means of the Miculicz pressure probe, although the dilatation was, of course, not affected. The author speaks of the newer refined methods of diagnosis of this condition and of the possibilities of treatment which can be achieved by their aid.

2. Chromophore Zones.—Rosin and Bibergeil note that when methylene blue and methylene azure are used for vital blood stains, before the nuclear stain is completed, a very deep stain is developed in the erythrocytes usually not stainable, and especially those which surround the white blood cells. The phenomenon is a temporary one, and is seen in normal and in pathological blood.

3. Family Tabes Dorsalis.—Croner speaks of two series of cases of locomotor ataxia, in each of which three brothers were affected. In the first group, syphilis had been demonstrated, in the second it was positively known as to only one of the brothers. Croner believes that, although syphilis plays a very important rôle in the production of locomotor ataxia, other ætiological factors must also exist.

7. Lymphocyte Exudates.—Wolff and Torday give these as the results of their experiments. It is possible to bring about an exudate of lymphocytes in mice and guinea pigs by the injection of tetanus and diphtheria toxins, which last for one or two hours after the injection. According to the authors, these results prove the theory of active lymphocytosis. Lymphocytosis and leucocytosis run different courses in different animals. The mouse, for instance, has a tendency toward lymphocytosis which appears in this species even when the same material would evoke a polynucleosis in guinea pigs.

8. Renal Tuberculosis.—Milchner narrates the case of a girl, eleven years of age, in whom

there were a purulent discharge and hæmorrhage from the left kidney, which was enlarged and sensitive and had diminished function. The urine contained acid-fast bacilli. The diagnosis of tuberculosis of the kidney was made and the organ was removed. There was no tuberculosis, but a hydronephrosis with a kink in the ureter. The acid-fast bacilli proved to be smegma bacilli. The author insists upon the necessity of inoculation experiments in similar cases to prove the correctness or falsity of the diagnosis.

December 12, 1904.

1. Cure and Latency of Diabetes Mellitus, By H. LEO.
2. Can "Internal Disinfection" Be Induced by "Griserin"? By PETRUSCHKY.
3. Chronic Poisoning of the Eye with Lead, By L. LEWIN.
4. Physical Action of Solutions in the Human Stomach, By P. SOMMERFELD and H. ROEDER.
5. Psyche and Psychosis (*To be continued*), By P. KRONTHAL.

1. **Cure and Latency of Diabetes.**—Leo demands, as a *sine qua non*, that patients alleged to be cured of diabetes shall have no sugar in the urine by any test after being placed upon a strong starchy diet, whereas during a rigid diet there was previously no sugar to be found. He cites a case to show how careful one must be in asserting a patient to be cured of diabetes, in the instance of a man who appeared to assimilate starchy food perfectly, and in whom sugar had twice disappeared, and yet who subsequently developed a severe diabetes.

2. **Griserin.**—Petruschky has made many experiments with loretin and its salt griserin, and concludes that not only is the drug incapable of preventing the development of anthrax, for instance, but that it has some toxic qualities for the animals used in the experiments.

3. **Lead Poisoning of the Eye.**—Lewin enumerates the substances employed in industries which affect the eyes injuriously, such as lead, bromide of ethyl, mercury, arsenic, and its salts, the anilines, etc. The lead poisonings are the most important, as they are the most frequent. They may be either acute or chronic. The lesions are retinal inflammation and optic atrophy, corneal turbidity, spasms, and paralyses of the ocular muscles. The saddest cases are those in which blindness appears over night and those of optic atrophy. The "lead line" in the gums is not a reliable symptom.

4. **Solutions in the Stomach.**—Sommerfeld and Roeder conclude that every solution introduced into the stomach without the previous action of the saliva changes its molecular concentration in such a way that solutions isotonic and hypertonic as to the blood, become diluted, solutions hypotonic becoming heavier. Hypertonic solutions have a higher freezing point than the blood even after five hours' sojourn in the stomach, thus leaving the stomach in a hypertonic state. No increase in the quantity of fluid in the stomach could be demonstrated.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 14, 1905.

1. The Ocular Symptoms of Lesions of the Optic Chiasm, with the Report of Three Cases of Bitemporal Hemianopsia, By G. E. DE SCHWEINITZ and JOHN T. CARPENTER.
2. The Mathematical Point of Reversal in Skiascopy, By SWAN M. BURNETT.
3. Syphiloma of the Ciliary Body, By HERMAN KNAFF.
4. Temporal Cleft of the Nerve Head, By CHARLES H. BEARD.
5. Development of the Faculty of Binocular Fusion, By EDWARD JACKSON.
6. Dairy Hygiene, with Special Reference to the Limitation of Bovine Tuberculosis, By RICHARD COLE NEWTON.
7. Is Pneumonia Increasing? By JOHN S. FULTON.
8. The Management of Hernia in Infancy and Childhood, with Results of Operative Treatment, By WILLIAM B. COLEY.
9. The Schott Method of Treating Diseases of the Heart and Blood Vessels, By JAMES M. ANDERS.
10. Paraurethritis. An Anatomical Review, with Report of Two Cases, By J. W. CHURCHMAN.

7. **Is Pneumonia Increasing?**—Fulton in a rather elaborated statistical paper shows that in all probability pneumonia is not increasing in the United States. Several causes have led to an apparent increase of the disease. (1) Formerly there were many cases of death held to be due to unknown causes. At present diagnosis being better understood the known diseases are to a large extent credited with such deaths. (2) Formerly many children were reported as having died of convulsions, worms, teething, etc. At present such absurdities are not so frequent. Again the known causes of death absorb these cases. (3) Formerly many cases of pneumonia were thought to be cases of nervous or brain disease. (4) Mortality statistics are very badly kept.

8. **Hernia.**—Coley asserts that, roughly speaking, herniæ in infants and children under the age of 4 years can be cured by carefully directed truss treatment in about two thirds of the cases, although it is probable that, in after years, a considerable percentage will relapse. Beyond the age of 4 years, in a fair proportion of the cases, a cure can be effected by means of a truss, provided the truss is properly fitted in the first place, and the child is regularly seen by a surgeon for a period of not less than two years. In very young children it is best therefore not to operate at once. However, even in children under four years of age it is best to operate in the following cases: (1) If there is a history of strangulation that has become reduced by taxis, an operation is indicated, no matter how young the child. (2) In cases in which, despite carefully directed truss treatment, the hernia has become irreducible, or reducible with difficulty. (3) In cases in which the rupture cannot be controlled by a truss and, as a consequence, is gradually increasing in size. (4) In all cases of femoral hernia, the reason for prompt operation in this class being that a cure by persistent truss treatment is practically unknown at any age. (5) Immediate operation is indicated in all cases of hernia associated

with reducible hydrocele or fluid in the hernial sac, inasmuch as it is impossible to control the rupture by means of a truss, and there is, hence, nothing to be gained by waiting. The Bassini operation is probably the best for inguinal hernia. The author uses chromicized kangaroo tendon in place of the buried silk sutures and puts an additional stitch above the cord. For femoral hernia the author's method is, first, to thoroughly free the sac well beyond the neck; high ligation of the sac and closure of the canal by means of a purse string suture of chromicized kangaroo tendon. The suture is introduced through Poupart's ligament or the inner portion of the roof of the canal, or crural arch, from where it passes downward into the pectineal muscle or floor of the canal, outward through the fascia lata overlying the femoral vein, and upward through Poupart's ligament or roof of the canal, emerging about three fourths of an inch from the point of introduction. On tying the suture, the floor of the canal is brought into apposition with the roof, and the femoral opening is completely obliterated. The superficial fascia may then be closed with catgut or fine tendon, and the skin either with catgut or silk.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 12, 1905.

1. The Systematic Use of Work as a Remedy in Neurasthenia and Allied Conditions, By HERBERT J. HALL.
2. Improved Technics for End to End Intestinal Anastomosis, By ALFRED H. GOULD.
3. Observations on Experimental Drainage of the Peritoneal Cavity of Cats, By FRED T. MURPHY.
4. A Consideration of Autointoxication and Autoinfection as Cause of Various Mental Disorders, By L. VERNON BRIGGS.

1. **Neurasthenia.**—Hall does not believe that neurasthenia is generally due to overwork. The condition is essentially a psychic one dependent for the most part on worry and bad habits generally. A physical rest cure is not therefore the ideal mode of treatment. What is needed is systematic occupation for the patient's mind and body. Hall has obtained good results in a limited number of cases with the following plan of treatment: For a week or so rest in bed. Then without warning or discussions the patient is required to do something. At first the act may be a trivial one, such as sitting up in bed for a short time. A particular act is never repeated on a succeeding day. As soon as the patient is sufficiently improved manual occupations are assigned, such as basket making, weaving, pottery making, etc. Such tasks are to be undertaken seriously and what is produced is sold in the open market. A more or less complete workshop is of course required. The results that have been obtained by this plan of treatment are encouraging.

2. **End to End Anastomosis.**—Gould in his third paper on proposed improvements in surgical technics considers end to end anastomosis. He proposes a new method of doing an all suture operation. Two layers of stitches are employed. An internal through and through stitch and an external seromuscular one. The only original

feature of this technics is the manner of beginning the first layer of continuous stitches. These are begun at the mesenteric attachment. The article is illustrated.

3. **Drainage of the Peritonæum.**—Murphy tabulates and discusses his experiments. The following methods of draining were employed: Gauze, cigarette drains, rubber and glass tubes. Roughly summarized, the gauze and cigarette drains failed to drain the general cavity after about eighteen hours, and the rubber dam and glass tubes after about the third twenty-four hours, the difference in the time representing the difference in the stimulating effect of the various materials on the peritonæum. In all instances, the omentum was the active agent in the process of walling off, the actual adhesions between the loops of intestine being difficult to demonstrate. While the omentum in the cat is extremely large, it is not improbable, judging from findings at operation and autopsy, that the human omentum when large plays an equally active part. Provisionally and within certain limitations the following advice may be given: (1) If the object of drainage in any given case is to have a certain septic area walled off as soon as possible then a gauze or a cigarette drain should be used. (2) If drainage of the general peritoneal cavity is desired glass or rubber tubes should be employed. They will probably not drain after seventy-two hours.

AMERICAN MEDICINE.

January 14, 1905.

1. The Foundation and Aims of Modern Pædiatrics, By Dr. THEODORE VON ESCHERICH.
2. Comparison of Röntgen Ray and Surgical Treatment of Tuberculosis, By JAMES B. BULLITT.
3. The Early Recognition of Hypertension, By HENRY WIREMAN COOK.
4. Intussusception of the Appendix Vermiformis, By GEORGE EMERSON BREWER.
5. Lithæmia: Its Diagnosis and Local Treatment, By F. M. JOHNSON.
6. Three Interesting Cases: Gastroptosis and Dilatation; Chronic Tenosynovitis; Thoracic Abdominal Aneurysm, By G. CHILDS MACDONALD.
7. The Society for Experimental Biology and Medicine, By WILLIAM J. GIES.

2. **Tuberculosis.**—Bullitt has collected 616 cases of skin tuberculosis and 518 cases of other forms of local tuberculosis that have been treated by the x ray. Of the cases of skin tuberculosis 420 or sixty-eight per cent. were reported as cured. The 518 cases are divided into six groups, according to the location of the lesions. The number of cures claimed range from thirty-three per cent. in the case of tuberculous testicles to seventy per cent. in the case of disease of the tendon sheaths. The author holds that the efficiency of the Röntgen treatment of lupus is established but that the efficacy of this form of treatment for other forms of local tuberculosis is still subjudice.

3. **Hypertension.**—Cook concludes: (1) A large and increasing proportion of deaths is due to cardiovascular disease. (2) Cardiovascular af-

fections in a majority of cases are accompanied and in many cases antedated by a rise in arterial tension, which bears an important causal relation to the terminal organic lesions. (3) An early recognition and continued observation of this rise in tension is a most valuable element in the recognition, prophylaxis and corrective treatment of such conditions.

4. **Intussusception of the Appendix.**—Brewer's case was briefly as follows: A girl of twenty-two years exhibited signs of appendicitis. Operation revealed dense adhesions about the cæcum. No appendix was found. Recovery from operation ensued and in due time there was a recurrence of former symptoms. A second operation revealed a stricture of the colon just above the ileocæcal valve. The colon was incised for relief of this stricture. This incision brought to view the invaginated appendix. Appendectomy and suture of the wound in the colon were done in such a manner that the original longitudinal wound was turned into a transverse one, thus obliterating the stricture. Recovery followed without recurrence of the previous symptoms. Query, How did the appendix become invaginated?

5. **Lithæmia.**—Johnson devotes special attention to the diagnosis of lithæmia by the aid of the microscopical study of the urinary sediment. Five cuts serve to make clear the author's statements. With regard to treatment, emphasis is laid on the value of bladder irrigations and lavage of the kidneys by means of ureteral catheters.

MEDICAL NEWS.

January 14, 1905.

1. Care of Puerperæ, By JAMES D. VOORHEES.
2. Trauma and Chronic Compression of the Epigastrium as Ætiological Factors of Gastric Ulcers, By WILLIAM ACKERMANN.
3. The Nervous Symptoms Accompanying Pernicious Anæmia, By ROY M. VAN WART.
4. Prostatectomy in Emergency Cases, By JOHN F. ERDMANN.
5. Observations on the Blood Pressure in Disease, By ROGER S. MORRIS and CHARLES W. EDMUNDS.

2. **Gastric Ulcer.**—Ackermann believes that trauma of the upper abdominal and epigastric region whether it be acute, as by a blow, or chronic, as by more or less constant pressure from corsets, posture (as in sewing, bent over), or by tools, is one of the most potent ætiological factors of gastric ulcer. The histories of sixteen cases are reported in order to sustain the author's contention. Experimentally, upon animals, it can be shown that in a certain number of cases trauma is capable of giving rise to condition of the gastric mucosa that will eventually lead to the formation of ulcer.

3. **Pernicious Anæmia.**—Van Wart reports a case of pernicious anæmia which was complicated by marked spinal symptoms. Nervous symptoms associated with this condition have been frequently noted. It was not, however, till 1887 that gross anatomical lesions of the cord were reported as existing in conjunction with this disease. These lesions of the cord may or may not produce symptoms. The ætiology of these lesions, as well as the

ætiology of pernicious anæmia, still remains in doubt. It is not improbable that they are both due to the same cause, whatever that may be.

4. **Prostatectomy.**—Erdmann calls attention to the advantage of doing a prostatectomy in every instance possible when the prostate is in part the cause of obstruction in cases coming under the head of emergency drainage of the bladder. Eight such cases are reported in which a prostatectomy was done. They are of six types. (1) Impassable urethra due to stricture with rupture and gangrene of the entire scrotum and perinæum. (2) Retrograde hæmorrhage, bladder being full of clots and bloody urine, with malignancy of the prostate. (3) False passage; retrograde hæmorrhage; suprapubic aspiration with infiltration of the abdominal wall extending to the thorax and to the gluteal regions. (4) Acute obstruction due to exposure to cold and wet, inability to catheterize; trauma of the urethra. (5) Trauma of the urethra; catheterization for several days, retrograde hæmorrhage, etc. (6) Deep stricture of the urethra; obstruction; catheterization cystitis with absorption. In similar cases emergency operative procedure is recommended because: (a) Only a few minutes more are required to remove the gland, the hæmorrhage as a rule is not excessive, and the operative procedure itself does not increase the shock to any degree. (b) The removal of the prostate gives proper exit to the urinary outflow and admits of easy drainage. (c) Washing the bladder is much facilitated. The perineal route is recommended in emergency operations because: (a) The opening is practically at the lowest point of the bladder and complicated devices for drainage such as are necessary in suprapubic sections are not required; (b) The old, being irritable and feeble and requiring to be moved frequently, the drainage in the suprapubic method is constantly interfered with, while in the perineal method it is readily controlled. (c) The after soiling, when the tube is removed, is slight and easily controlled in the perineal method as compared with the suprapubic. (d) Bladder irrigations are more readily done with less soiling to the bed, etc., by this method.

MEDICAL RECORD.

January 7, 1905.

1. On the Healing of Tuberculosis (Clinical Features), By HERBERT MAXON KING.
2. The Art of Eating Properly (Euphagia) and the Harm of Eating Too Rapidly and Too Slowly (Tachypagia and Bradyphagia), By MAX EINHORN.
3. A Recent Epidemic of Typhoid Fever, By JOHN BRADFORD BRIGGS.
4. Three Cases of Excessive Fœtal Development, By JULIUS ROSENBERG.
5. Spleenless Men, By J. H. CARSTENS.
6. An Experimental Study of the Movements Produced in the Stomach and Bowels by Electricity, By G. G. MARSHALL.
7. Definition and Classification of Gastric Hemorrhage, By F. GREGORY CONNELL.
8. A Case of Sciatic Neuritis with Paralysis Following Malaria, By WILLIAM GEORGE RUSSELL.

1. **Tuberculosis.**—King leans to the belief that practically every one who has reached maturity

has at one time or another harbored the tubercle bacillus. The first infection tends to spontaneous cure, which, however, is not apt to persist. It is probably the recrudescence of an old infection which is generally taken to be the actual onset of the disease. Some case histories are given in order to illustrate this point. The author believes that the truth of the following propositions should be further investigated: (1) It is probable that the initial lesion following a tuberculous infection is often obscure in its clinical manifestations and frequently escapes identification. (2) There is nearly always a prompt and very often successful tendency on the part of the organism to a more or less complete repair followed by an interval of apparent health. (3) Following this interval, which may extend into a period of years, there is a strong tendency to relapse. (4) What is in reality a recrudescence of an arrested lesion is very frequently mistaken for an initial onset. (5) Whatever may be the facts in an individual case, the safest and most practical policy lies in regarding every apparent recovery from tuberculosis as merely an arrest of the disease, brought about by an acquired immunity which suitable conditions are very prone to destroy.

3. Typhoid Fever.—Briggs reports his study of a small epidemic of typhoid fever which took place in western Pennsylvania. It shows, what has been so often shown before, that typhoid is essentially a water borne disease and that if sewage containing typhoid excreta is allowed to get into the drinking water the disease is bound to spread. He insists that it is the duty of every physician attending typhoid patients to make sure that the patients' excreta and bath water are properly disinfected. The stools should be immersed for two or three hours in twice their bulk of five per cent. carbolic acid solution. Urine should be treated with carbolic solution. It is best to boil the linen. The bath water may be rendered harmless by adding to it one quarter pound of fresh chloride of lime and then allowing it to stand for one hour.

4. Excessive Foetal Development.—Rosenberg reports his three cases in detail. All the women had practically normal pelvises. In the first case craniotomy was performed. In the second case version was successful and a living child (weight 13 pounds) was delivered. In the third case version was attempted and delivery finally accomplished by perforating the after-coming head. The author admits that all these cases were suitable ones for Cæsarean section. The difficulty is to make a correct diagnosis and then have suitable conditions.

5. Spleenless Men.—Carstens holds that the chief indications for splenectomy are: (1) So called splenic anæmia; (2) traumatism; (3) malignant disease. The spleen has been often removed for other conditions, at times probably not advisedly. Two cases of splenectomy are reported: one for sarcoma and one for so called splenic anæmia. Both patients recovered. The author concludes: (1) In diseases of the spleen, blood examination must be made. (2) Splenectomy will cure a certain number

of cases. (3) Spleenless men can live in perfect health, as we are unable to find any difference between the blood of such men and the blood of those who have not been subjected to splenectomy.

6. Movements of the Stomach and Bowels.—Marshall has attempted to determine what movements, if any, may be produced in the stomach and bowels by direct applications of the electric current. He concludes: (1) The stomach and bowels do not readily contract under the direct application of electricity. (2) Electricity as generally administered never causes contractions or peristaltic movements of the stomach and bowels.

January 14, 1905.

1. The Diseases of the Isthmian Canal Zone,
By RICHARD LIGHTBURN SUTTON.
2. The Value of Publicity Regarding Tuberculosis,
By DENSLOW LEWIS.
3. Sudden Death, Especially from Embolism Following
Surgical Intervention, By BYRON ROBINSON.
4. The Treatment of Digestive Disorders,
By JAMES W. HUNTER, JR.
5. Infections of the Gall Bladder,
By THOMAS W. HARVEY.
6. Pneumonia in High Altitudes. Summary of 101 Cases
of Lobar Pneumonia Treated at the American Hospital,
Mexico City, from 1890 to 1904.
By ALBERT R. GOODMAN.

1. Diseases of the Canal Zone.—Sutton discusses briefly the chief diseases which are most frequently met with along the Panama Canal zone. They are: Malaria, all forms except the quartan variety, which is rare; dengue, which specially attacks the white man; beriberi, chiefly seen among the Chinese; diseases due to intestinal parasites. All the natives suffer from such infections, eggs from as many as six varieties of parasites are frequently found in a single stool. The Uncinaria duodenalis produces the most serious symptoms. Heat exhaustion, sunstroke, and yellow fever are more or less frequent. Among the insects the jigger (*Pulex penetrans*) is probably the most annoying. Dysentery was the scourge of the old French company. It is of two kinds; the amebic and that due to the Shiga bacillus.

3. Sudden Death.—Robinson reports eighteen cases of sudden death. Most of them were probably due to emboli and they nearly all followed surgical operations. Most cases of sudden death are probably due to defects in the circulatory system. The nervous system has been much overrated as a factor in the production of sudden death.

5. Cholecystitis.—Harvey admits that some cases of cholecystitis get well without the aid of surgical intervention yet he holds that it is the part of wisdom to advise operation early. Either cholecystostomy or cholecystectomy will put an end to the trouble. The author appears to consider the gall bladder a superfluous organ and so inclines to its extirpation as the operation of choice.

6. Pneumonia.—Goodman's paper is entirely statistical. The mortality percentage of the cases reported was forty-three and five tenths per cent. However the records seem to have been rather im-

perfectly kept and a number of different physicians were responsible for the treatment given.

LANCET.

December 31, 1904.

1. The Treatment of Phthisis, By H. W. G. MACKENZIE.
2. The Treatment of Streptococcic Puerperal Fever by Antitoxic Serum, By A. G. R. FOULERTON.
3. A Case of Streptococcic Puerperal Infection Treated with a Special Puerperal Antistreptococcic Serum: Recovery, By T. ROSE.
4. On the Administration of Antistreptococcic Serum, By J. W. T. WALKER.

1. Treatment of Phthisis.—Mackenzie considers the recognized methods of treatment of phthisis. In the first rank as remedies must be placed pure air and sunshine, good food, suitable clothing, proper housing, with regulated rest and exercise under medical supervision. The recognition of the value of fresh air is the most marked advance in the treatment of pulmonary tuberculosis. The advantages of the fresh air treatment are as follows: Gain in appetite; better assimilation of food; and sounder sleep. Fresh air is the best antipyretic; night sweats usually cease and colds are practically unknown among these patients. Secondary infection, owing to the paucity of microorganisms in the air, is less likely to occur. Sunlight and fresh air improve the quality and increase the oxygenating power of the blood, stimulate metabolism, and quicken the activity of the nervous system. Feeding is of paramount importance, yet save in exceptional cases anything like stuffing is quite unnecessary. Three good meals a day should be given and nothing during the intervals. The capacity of tuberculous patients to put on flesh is remarkable, and care must be taken that this does not occur too rapidly or to excess. Alcohol, wisely used, is of value, but it is powerless to prevent the incidence and progress of pulmonary tuberculosis. It is most valuable in acute cases and late in the disease. Too much wrapping up is as much to be avoided as too little. When patients are up and about overcoats and wraps should be used only when they are resting. The patient's room should be large and have a southern exposure. The chief guide in the matter of rest is the temperature. Continued fever calls for absolute and complete rest, and this holds also where the evening temperature is over 101° F. The morning temperature should determine whether the patient is to get up. The rectal temperature is the most trustworthy index. Patients up all day should rest for half an hour in the recumbent position before lunch and dinner. Walking is the best form of exercise: the length, direction, and rate must be adjusted to the individual case. The longer walk of the day should be taken shortly after breakfast. Any excessive exercise will cause a rise of more than two degrees in the temperature. All violent exercise (cycling, skating, swimming, riding, dancing, etc.) must be emphatically vetoed in cases where the disease is active. Home treatment, where the desired conditions can be obtained, compares favorably to that in sanatoria. But at a sanatorium there is constant supervision, removal of all disturbing influences, and the

patient is taught how to live. The question of climate is difficult, and the suitability of the location to out door life plays a large part. Sea voyages should never be advised where there is active disease. Fever and hæmoptysis call for absolute rest. In laryngeal cases the voice must be used as little as possible. Drugs are being used less and less: they are most useful in relieving symptoms.

2, 3, 4. Antistreptococcic Serum in Puerperal Fever.—Foulerton reviews the history of the use of antistreptococcic serum in puerperal fever, since its introduction by Marmorek. In clinical practice its action contrasts strongly with that of antidiphtheritic serum. In the latter the administration of a sufficient dose is usually followed by immediate improvement, and the dose does not have to be repeated. In puerperal fever, on the other hand, when improvement has followed the first injection of serum, it has been necessary to repeat the dose after a time. A patient almost moribund with streptococcic infection will be greatly benefited by the serum: yet the symptoms may, and often do, recur within twenty-four hours. It would seem that the action of an antistreptococcic serum is purely antitoxic, and the streptococci themselves are not affected by its use. The infecting bacteria, unaffected by the serum given, continue to elaborate their specific toxins. So that in order to neutralize the toxins, repeated doses of the serum must be given until the infection comes to a natural termination. Treatment should be begun with an injection of at least twenty cubic centimetres, and if necessary this dose must be repeated every twenty-four hours. It is useless to persist in the use of a particular antistreptococcic serum unless its beneficial action is at once apparent. Any toxic symptoms, such as cutaneous eruptions and transient arthropathies, are due to the serum itself and not to the antitoxine contained therein. Rose reports a case of pure streptococcic infection occurring in a woman aged twenty-nine years. The symptoms were most severe, the patient passing into coma after two days' delirium. Foulerton's serum was used, with immediate beneficial effect. Three doses of five c.c. each were given during the first twenty-four hours, and a fourth dose of twenty c.c. twenty-four hours later. Walker draws the following conclusions: 1. That injection of antistreptococcic serum in cases of pure streptococcal infection has been followed by strikingly beneficial results. 2. That variability in the results of the serum in proved streptococcal infection has been due to the selective activity displayed by the antitoxine of each variety of streptococcus or to the serum being used too late in the case or having lost its activity from staleness. 3. That more uniform results are likely to be obtained from the present "compound" antistreptococcic serum than from the earlier forms, from the prompt injection of serum at the commencement instead of near the close of a severe infection and from the use only of serum which has been recently prepared. 4. That the initial dose may with benefit be increased and that a large quantity spread over several days, causes no ill effect. 5. That the administration of the serum should be continued for some days after the general symptoms have disappeared and a recrudescence thus avoided.

BRITISH MEDICAL JOURNAL.

December 31, 1904.

1. A Clinical Lecture on Operations for Diseases of the Uterus and Solid Ovarian Tumors, By J. SWAIN.
2. A Tubal Pregnancy of Some Years' (?) Duration. Sac Containing Macerated Fœtus: Fistulæ Between Sac and Bowel and Between Sac and Bladder: Laparotomy: Death, By E. H. FENWICK.
3. Remarks on the Value and Significance of Certain Signs and Symptoms of Pancreatic Disease, By B. G. A. MOYNIHAN.
4. A Preliminary Note on the Bacteriological Findings in Seven Cases of Enlarged Prostate, By L. S. DUDGEON and C. WALLACE.
5. Remarks on a Case of Gummata of the Heart: Death from Heart Block: Rhythmical Contractions of the Auricles During the Long Pauses, By H. HANDFORD.
6. The Anthropometric Investigation of Hospital Patients, By F. C. SHRUBSALL.
7. (Report No. XC to the Scientific Grants Committee of the British Medical Association). The Lymph Flow from the Pancreas, By F. A. BAINBRIDGE.

1. **Uterine and Ovarian Tumors.**—Swain's paper is based on the tabulation of fifty operations. Among his conclusions are the following: Hysterectomy for cancer is very unsatisfactory in its remote results. Uterine hæmorrhage after menstruation always calls for an examination for it is only in the early cases of cancer that the outlook is good. In early cases colpohysterectomy is the best operation: the primary mortality and the incidence of recurrence are distinctly lower. The presence of a myofibroma is in many cases a menace to the life of a patient: one of the commonest causes of death is from the pressure effects of a large myofibroma. Hæmorrhage or necrotic changes in the tumor may also cause death. The hard myofibroma grows slowly and usually atrophies after the menopause. The soft myofibroma, usually single, grows much more rapidly, is independent of uterine conditions, and is unaffected by the menopause. The chief indications for treatment are the size of the tumor, profuse hæmorrhage, diseased conditions of the ovaries and tubes, or rapid increase in the size of the tumor. Myomectomy is the operation of choice in young women, providing the general condition is good, that the tumor does not extend above the umbilicus, and that there are no important complications. Where it is undesirable reoperitonal hysteromyomectomy is preferable to panhysteromyomectomy.

3. **Pancreatic Disease.**—Moynihan discusses the signs and symptoms of pancreatic disease in the following order: *Glycosuria*. The internal secretion of the pancreas, which regulates carbohydrate metabolism, is derived from the islands of Langerhans, and from them alone. Any lesion destroying the islands (a hyaline degeneration is the most common) results in diabetes. But many other lesions—*e. g.*, of the nervous system—may result in glycosuria. In "bronzed diabetes" a chronic interstitial pancreatitis is present. Hæmochromatosis, or deposition of pigment in the organs of the body, has as its natural termination diabetes of the bronzed type. *Steatorrhœa*. The presence of fat in

the stools is by no means pathognomonic of disease of the pancreas. Fat is normally present in the stools, about five per cent. of the fat taken being discharged as unaltered. If an excess of fat is taken in health, a proportionate excess is found in the fæces. In simple catarrhal jaundice the amount of fat in the fæces is almost doubled. *Steatorrhœa* when associated with azotorrhœa in the absence of jaundice, points strongly to pancreatic disease. With azotorrhœa, diabetes, and epigastric tumor, it is evidence of undoubted pancreatic disease. *Azotorrhœa*. The presence of undigested nitrogenous food in the stools (such as muscle fibres) is sometimes seen in pancreatic disease, but it is an extremely inconspicuous symptom. *Fat necrosis*. This is most commonly found in association with acute pancreatitis, of the hæmorrhagic or gangrenous forms, but may also be found in chronic interstitial (interlobular) pancreatitis. It is wholly dependent upon lesions of the pancreas, and its significance is therefore considerable. *Jaundice*. In chronic pancreatitis or in malignant disease of the head of the pancreas, the enlargement of the gland presses upon the common bile duct and jaundice results. Courvoisier's law is that persistent jaundice with a distended gall bladder depends upon cancer of the head of the pancreas.

4. **Enlarged Prostate.**—Dudgeon and Wallace have studied the bacteriology of enlargement of the prostate. In most of their observations the tumors removed from the prostates showed unmistakable signs of infection by microorganisms, and in some instances the infecting organisms were the same as those found in the urine. So that the initial lesion in prostatic enlargement may in certain cases be a septic infection from the bladder.

6. **Hospital Anthropometry.**—Shrubsall's conclusions, drawn from his anthropometrical investigation of hospital patients, are as follows: 1. That certain diseases show special affinities for certain types of the population. 2. That adult hospital patients, as a whole, are slightly fairer than the population within the sphere of attraction of each hospital. 3. That with each successive generation of city life the fair element sends an undue proportion of its members to the hospitals. 4. That child patients are markedly fairer than the children in the districts around the hospitals. 5. That diminution in stature and increase of brunette traits are almost certainly progressive with increased heredity of an urban environment.

7. **Lymph Flow from the Pancreas.**—Bainbridge's conclusions are as follows: 1. The injection of secretion or ileum extract causes an increased flow of lymph from the thoracic duct. 2. After ligation of the portal lymphatics secretion still causes an increased flow of lymph, whereas ileum extract has no effect. 3. The increased lymph flow produced by secretion is not caused by the depressor substance, but by secretion itself. 4. There is a close relation between the secretion of pancreatic juice and the increased flow of lymph. The lymph is derived entirely from the pancreas, and is probably formed as a result of metabolic changes occurring in the pancreas during the secretion of juice.

Letters to the Editor.

OPTOMETRY.

17 WEST TWENTY-EIGHTH STREET,

NEW YORK, December 23, 1904.

To the Editor,

SIR: There appeared in your *Journal* a few weeks ago an open letter from Dr. Van Fleet, addressed to the medical profession, which should not be allowed to pass without some notice. He asserts that "many of the names" of the physicians indorsing the bill "were fictitious," a rather serious charge to bring against the committee of the State Optical Society. Again, he says that "every well informed physician must know that they (optometrists) are all incompetents." What about the hundreds of physicians of high standing throughout the State who send their patients to optometrists for the reason that they believe that the work will be better done, and because no drugs are used in making the examination. This is a matter of record and cannot be denied or gainsaid. He says, further, that we "seek to treat headaches, dizziness, and the various reflex phenomena which may be due to affections of the eye itself or to affections of organs remote from the eye." How absurd and ridiculous! Our work is simply this, to measure accurately all mechanical defects in the construction of the eye or its controlling muscles and to supply lenses to correct these defects. Should headaches and various other troubles be relieved as a result of our work, so much the better for ourselves and the patient.

Another astounding statement he makes to the effect that "to prepare physicians to do this work (optometry) the law requires that a four years' course in a medical college shall be taken, after which a medical examination conducted by the State must be passed." It is difficult to see how any truthful, fair minded man could bring himself to make such a statement, for it is absolutely untrue. Nowhere does the law require any course, long or short, in medical colleges or elsewhere, or any examination whatsoever by the State, to prepare physicians or any one else to do this work (optometry). The field is now open to all comers, from the "well informed" physicians like Dr. Van Fleet down to the common peddler and street fakir who stands on the corner and sells his glasses to the unsuspecting and unwary.

Our object in seeking legislation on this subject is to prevent incompetents (whether they are found in the ranks of the "well informed physicians" or elsewhere) from engaging in this work. All should be obliged to undergo a strict and searching examination before a State board, and those who refuse to do so and who continue to oppose the enactment of this wise and beneficent measure should be branded as incompetents. Is it not rather strange that the men who profess to be alone qualified to practice optometry by reason of a four years' course in a medical college have only allotted to them in the study of the eye in all its branches the maximum time of thirty-two hours during the whole four years' course, while those who have given years of study exclusively to optometry are declared by these

aspirants to be "all incompetent"? But his closing statement is certainly the most ludicrous. We are told that "opticians know that they are violating the law in following the occupation which they are now engaged in," and that "the enactment of the bill will give them the legal right to do what they are now doing in violation of the law." I would ask, if we are violating the law, why is it that the chairman of the committee on legislation of the medical society is neglecting his duty and does not prosecute us?

Our cause is surely a just one, our purpose honorable, and our profession a noble one. Sooner or later we shall receive recognition and suitable legislation, just as the dentists fought and won their battles against the self same forces and many of the same arguments as are being used to-day. Who can deny that dentistry is infinitely better done to-day than before the dentistry laws were enacted? So it will be with optometry. The public will then know who are competent to do this work, and fakirs, peddlers, and incompetents will be relegated to the past.

A. MARTIN.

Proceedings of Societies.

NEW YORK PSYCHIATRICAL SOCIETY.

Meeting of November 2, 1904.

DR. ALLAN McLANE HAMILTON in the chair.

Some Evidence That Early Paresis May Be Arrested and Practically Cured.—Dr. CHARLES L. DANA considered paresis a parasyphilitic disease, i. e., one due to the degeneration induced by syphilis, and not to the exudations of syphilis. This degeneration might occur without any previous evidence of any exudative trouble. Formerly he believed in a syphilitic pseudoparesis, but further observation showed that such cases were due to an exudative syphilis, with the addition of degenerative changes, a coincident development of exudation and degeneration. These patients might improve and remain improved for a long time, but no matter how thoroughly the treatment cleared up the exudation, there was left some degeneration and some clinical stigma of real trouble. Other cases would not improve, but pass into real paresis. These cases were not really cured and were perfectly analogous to the so called syphilitic pseudotabes, in which we nearly cured the case, but not quite, and, in after years, the degeneration might set in again and true tabes develop.

There being, then, but one paresis, and this due to the degenerative influence of syphilis, it followed that the criteria of diagnosis were those symptoms which indicated that the patient had had nervous syphilis, and had now evidences of some nerve degeneration and coincident mental change.

With the increasing attention paid to paresis of late years, one was more often able to note its earlier symptoms, and these were almost always somatic. Perhaps the very first group of symptoms was a change of character, a lessening of interest in work, greater irritability, and inattention. Sometimes this was so slight that it escaped notice unless attention was called to it. The very earliest symptom might be a cranial nerve palsy (as in tabes) which in time

called attention to unequal pupils, persistent dysæsthesias of the head and neck; a fainting turn, or convulsion, or a sunstroke might also be among the earliest symptoms, as well as a very persistent headache with a mild type of melancholia. These patients might also present exaggerated reflexes, exaggerated facial responses, especially the nasal reflex. There might also be an apparent acceleration of and intensity in reflex response, as shown by the quick reaction to questions and overaction of the muscles in responses. All these things might be seen without any of the definite stigmata of paresis, such as decided dementia, exaltation and delusions, marked speech disturbances and tremors.

Here Dr. Dana detailed the histories of several cases by which he attempted to prove his contention. He said the contention might be that the cases reported were only cases of cerebral syphilis with arterial thickening and consequent cerebral and mental changes, but this was not the way it appeared to him. In his cases there had always been some coexisting psychic changes. In cerebral syphilis the patients had many discomforting sensations and might perhaps be hypochondriacal, not quite up to their old selves, and there the matter ceased. They might have no signs of a dementing or other psychosis. When a patient had cerebral syphilis with exudation, he had terrible headaches, eye palsies, hemiplegia, bulbar troubles, etc., and when these cleared up there always existed the possibility of paresis setting in. Sometimes it did, if one did not recognize and appreciate the very earliest period when the danger threatened. Then paresis might be averted.

Dr. Dana felt justified in saying that if they were able to get hold of a certain number of cases before the speech disturbances or decided dementia occurred, they might arrest the trouble and hold it in check as they did in early tabes. He contended that they could do in early paresis what they could do in early tabes.

The CHAIRMAN asked Dr. Dana what treatment he employed—if anything more than the antisyphilitic treatment.

Dr. DANA replied that he insisted upon the absolute removal of the patient from his previous surroundings, with the liberal use of water internally as well as externally. The iodides and mercury were given in liberal doses. In some cases the salts of mercury might be given hypodermically, either the bichloride or the salicylate.

Dr. Dana referred to another case with hypochondriacal symptoms, the Argyll-Robertson pupils, etc. This patient had been treated by Dr. Keyes with hypodermics, which simply seemed to keep him in fairly good condition, but did not cure him. Under further treatment he did get well. Dr. Dana was sure that if further treatment had not been tried the patient would have died of paresis years before.

Dr. A. E. MACDONALD did not think that the diagnosis of the cases reported by Dr. Dana, except the first one, was conclusive. A question he had in mind to ask had been anticipated by Dr. Dana, i.e., whether there was in this case anything more than the remissions to be looked for in all those cases that received prompt hospital treatment. In such cases he looked for just such a suspension of the

symptoms as described by Dr. Dana. He had found it often a very difficult thing to satisfy the friends of such patients that treatment should be continued, because the improvement was so marked that they objected to the patient remaining longer in the hospital and alleged that he had recovered.

Dr. ADOLF MEYER said that the question was an exceedingly difficult one on which to come to any definite agreement, essentially on account of the fact that it was difficult to say when general paralysis could be considered as established. The first case that Dr. Dana had cited was such as could have given rise to little doubt, with its marked expansiveness, yet Dr. Dana took pains to describe it as one of but slight exaggeration of attitude of the normal Wall Street man. A great deal of weight would have to be placed upon the forgetfulness and on inconsistencies. In one of the cases very little forgetfulness and no real dementia was said to have been present in the account of the case; but from a retrospective point of view, in the statement that the patient had recovered, he was said to have recovered from his dementia. The fact of there having been distractibility of attention before was then interpreted as a beginning dementia. To be sure, it was exceedingly difficult to demonstrate with any certainty whether one was dealing with an actual deterioration or memory defect, for several reasons. He would be especially cautious in the use of the term dementia where the only evidence was a certain feeling of insufficiency in the patient, an exhaustibility, and in the interpretation one might easily be biased by the suggestion that the patient had had syphilis before. *A priori*, one would naturally think that, since general paralysis was a disease with a definite, generally slow evolution, we should come across *formes frustes*, which were merely approaching the period of decided development. If one could determine what made it sure that the patient had the disease, matters would be much simplified; but this was a very difficult thing to do at the present time. To him it would seem certain that he would demand a consistency of the physical and the mental process. The cytodagnosis should be positive, a point of value, although the ordinary forms of syphilitic affections had also positive reactions, and not only general paresis. The question of what constituted paralysis had lately been brought under consideration by Nissl, who had split off a diffuse cerebral syphilis, and especially by Gaupp, who had lately reviewed carefully the cases of so called recovery from general paralysis. His review of the situation had been destructive to evidences of recovery, and Dr. Meyer said that he certainly would be exceedingly hesitant in accepting the proposition as proved.

Dr. L. PIERCE CLARK said that the histories of the cases Dr. Dana had presented were very suggestive of paresis, and in most of the cases he thought all would reach the same tentative diagnosis. The final termination, however, would show the error in diagnosis. We must, in the first place, demand the established clinical entity of paresis—the well known psychic symptomatology of paresis, particularly mental deterioration. It was conceivable that general paresis must present a period when deterioration would be but slightly in evidence; pos-

sibly a diagnosis at such a time would more nearly approximate the contention of Dr. Dana.

His personal opinion in the matter of the curability of paresis centred on the question of early diagnosis. It had not been proved that such a diagnosis was yet possible. In his asylum experience patients had often been admitted so early in general paresis that another diagnosis had been entertained for a long time, yet recovery never occurred. In such cases remission and non-progression of the disease were often present for several years, yet the patients were ultimately destroyed by paresis. If iodides and mercury were at all effective in suspected cases, then paresis was legitimately in doubt. He had never known paresis in any degree to be favorably influenced by these drugs. Improvement and remission, on the other hand, were brought about by general care, hydrotherapeutics, diet, rest, and quiet, simple living. Paresis, from a chemicopathological as well as a clinical view point, was a parasymphilitic affection, a postsymphilitic toxic disease. It was beyond the reach of antisymphilitic remedies as such. It was important to remember also that in many undoubted cases of paresis these drugs did harm. He looked upon Dr. Dana's first case as one of probable paresis with a remission. He thought the others were anomalous types of cerebral lues. There was no doubt that the asylum cases were of the worst type, incurable. Since being in private practice he had seen cases in which by the aid of such natural healing methods as had just been mentioned long remissions and delays in the progress of the disease had been brought about that were not possible in private asylums. He thought that the curability of early general paresis was mentally conceivable, but we were very far from realizing its practical accomplishment at present; therefore it must be classed as one of the most hopelessly incurable mental diseases.

Dr. FLAVIUS PACKER said that those who were engaged in asylum practice must look upon paresis as practically incurable. We had cases which presented long periods of remission, yet the patients returned, and when he was satisfied with the diagnosis the incurability of the disease had never been questioned. One patient left the hospital during a remission and was away a year and a half, when he returned. He believed the question of an exact diagnosis in these cases to be very important.

Dr. CARLOS F. MACDONALD thought that the correctness of Dr. Dana's attitude respecting the curability of paresis or, more properly, general paralysis of the insane, was based upon an experience and observation of cases for more than thirty years, both in hospitals for the insane and in private practice; his view was that this was a form of insanity having a distinct entity and essentially different from any other form of insanity, just as scarlet fever differed from smallpox, having its own pathology and clinical history, with a characteristic combination of diagnostic symptoms which alone would warrant a diagnosis. He knew that many writers spoke of making a diagnosis of paresis without mental symptoms, but he contended that this was a very difficult thing to do in any form of insanity. Without mental symptoms one could scarcely make a diagnosis of mental disease. He realized

of course that paresis had at the outset somatic symptoms which sometimes preceded the fully developed mental symptoms. He had long since come to regard paresis as an absolutely hopeless form of disease so far as recovery was concerned. He would be inclined to question the correctness of Dr. Dana's diagnosis made in the predevelopment stage of the disease if those patients fully recovered. The first case cited struck him as being a well marked, almost typical case of paresis, as regarded both the mental and the physical symptoms. He would regard the patient's declarations as evidence of a pronounced delusion; also that he was in a delusional state was shown both by his manner and his appearance as described. In his experience he had never known a complete and permanent recovery from true paresis. He had been led to doubt the diagnosis in many cases, but he had never known an authenticated recovery from paresis. Those cases that recovered were, in his opinion, not true paresis, but pseudoparesis, probably of the syphilitic or alcoholic variety. He understood Dr. Dana to say that he did not recognize pseudo forms of paresis, and he asked Dr. Dana how he would classify those cases which were described and so classified by many writers, in fact by most writers, as pseudo general paresis, either alcoholic or syphilitic. What term would Dr. Dana apply to those conditions? Sometimes he had deemed it wise to defer making a positive diagnosis pending the termination of a case. He was not prepared to agree with Dr. Dana that all cases of paresis were of syphilitic origin. In a considerable number of cases it was doubtless true that syphilis must be regarded as an ætiological factor, but there were a certain proportion in which syphilis did not enter as a cause. He could not understand how one would be justified in assigning syphilis as a cause in those cases in which there were no evidences whatever of syphilis in the history.

He quite agreed with Dr. Dana that occasionally, though rarely, the subjects of paresis improved, both mentally and physically, sufficiently to enable them to return to their homes and to resume their business and social relations for a time, but such persons, in his opinion, never made a full recovery, and, if the diagnosis was correct, the cases invariably relapsed and eventually terminated fatally.

Dr. WILLIAM HIRSCH thought that, up to the present time, the feeling in general was that general paresis was an incurable disease. He always took the standpoint when he came across a case that had been diagnosed as general paresis which, after a reasonable time, seemed to get well, that a wrong diagnosis had been made. He did not think this was the correct standpoint to take; we should not say *à priori* that cases were not general paresis because the patients got well. If such a standpoint was assumed, further progress would probably be prevented and but little or no further knowledge of the disease be forthcoming. We should be prejudiced, to say the least. Therefore he was thankful to Dr. Dana for bringing up this subject before the society.

The question whether general paresis in the early stages was a curable disease or not should not result in *à priori* statements before we had absolute evidence for calling it an incurable disease. So far as

the statements went concerning Dr. Dana's cases, he was inclined to agree with most of the gentlemen. He regarded the first case as one of remissions, and he did not agree with Dr. Dana that with these remissions the patients might recover so long as these remissions remained; he regarded the remissions only as partial recovery. Dr. Hirsch had known of cases where the remissions had been such that one could not have found any fault regarding the mental or physical condition of the patients. He had one patient in mind who had been treated in an institution many years ago. The patient was an officer in the German army and had a well marked general paresis. He had all the classical symptoms. He was engaged to the daughter of a general. After six months he got his remission; they were such that his family insisted upon his going home, and he was, therefore, discharged. The family was told regarding his condition, that he was not cured, but only had a remission. He asked permission to marry, but did not seek medical advice. He married and remained apparently well for a year, and his wife gave birth to a healthy child. After a year the disease developed and he died within a year, of general paresis. During this one year he had been perfectly well, all the somatic and mental symptoms having entirely disappeared. This was only one of many cases that he could report where the remissions had been such that nobody could find any symptoms of any kind. The minds cleared up perfectly. He believed that one should be extremely careful in drawing any conclusions as to the curability of the disease, and he believed one should demand that three or four years should elapse before one was entitled to draw any conclusion that the disease had been cured.

In Dr. Dana's second case one should think of the diagnosis between general paresis and lues cerebri, and this was often very difficult. Some cases presented all the classical symptoms of cerebral syphilis and some of cerebrospinal meningitis. One of the chief distinguishing points related to the reflexes; when there was a difference in the patellar reflex the point was in favor of syphilis. In general paresis the patellar reflex was exaggerated or absent. The same applied to the pupil reflexes. The diagnosis of general paresis and of syphilis was extremely difficult, especially during the early stages. If a patient got well under antisiphilitic treatment, he would always leave it open whether the case was one of cerebrospinal syphilis; he would be inclined to believe that it was, and not a case of general paresis. He was a firm believer in the importance of syphilis as an aetiological factor in these cases, but undoubtedly there were cases of general paresis in which there was no history of syphilis at all. He referred to a lady from San Francisco who had general paresis; in this instance it could be proved beyond a doubt that there was no history of syphilis. He knew of several cases where syphilis not only was denied, but it could be proved that it was not present.

So far as a diagnosis was concerned in the first stages of general paresis, he did not agree with those who stated that there should be a demand of mental deterioration at the start; the deterioration of the mental faculties was a consequence of general paresis, i. e., it developed at a later stage of the

disease. If it was necessary to demand a mental deterioration in making a diagnosis of the early stages of the disease, one could never make such a diagnosis. He believed that the gentlemen were, as a rule, proud of the accomplishment of making an early diagnosis of general paresis so much earlier than they did twenty or thirty years ago. But one should not make such a demand as a marked deterioration of the mental faculties in making a diagnosis during the early stages of the disease. Nevertheless, the question should be left open whether or not general paresis might not be curable. For that reason we should not assume the standpoint of saying that when cases were cured they must be seen in the early stages.

The CHAIRMAN said that, so far as his experience went, he had never seen a case of true general paresis cured. The cases that had ended in recovery had been those of alcoholism, the pseudoparesis of Fournier, and obscure examples of drug habits. He could not imagine such serious conditions as those described by Dr. Dana, with profound organic changes and generally absent deep reflexes, where the treatment employed or any other could have given such astonishing results.

Dr. DANA believed that a more conservative view must be taken of the question of the curability of paresis, and he thought that most of the criticism of his position had been based upon misapprehension. He used the term cured or arrested with reference only to the earliest stage of paresis, a stage to which the term "preparetic" might be applied. He had seen personally a large number of patients in whom the symptoms described in his paper occurred, but these had gone on and developed general paresis in spite of treatment in some cases, or without any treatment in others. If one would go back in the history of patients two or three years before the patients reached a hospital, one would find, in a considerable proportion of cases, that they had precisely the same conditions as he had described in his paper; and he believed that it was the duty of psychiatrists and neurologists to be able to recognize the condition in the early stages, when it was possible to stop the progress of the disease. He did not believe they were able to stop the disease in any case unless it was diagnosed early. He did not maintain that the cases he reported were real cases of general paresis as ordinarily described, but only that they would become so. He agreed with Dr. MacDonald that when paresis was in full bloom it was an incurable disease. He hesitated to bring up the subject of the relation of paresis to syphilis, because he thought the subject was a closed one. He believed that it was generally accepted that syphilis had the same relation to paresis as it had to tabes. Every year the proportion of cases of syphilis and paresis increased and, for practical purposes, syphilis might be considered the chief factor in its production.

Regarding pseudoparesis of alcoholic and syphilitic origin, he did not think the diseases were the same. In alcoholic pseudoparesis there was a sort of chronic mental deterioration, or dementia, and he preferred to call these cases alcoholic dementia rather than use the term paresis, because they did not present any close resemblance to the picture of paresis. Syphilitic pseudoparesis was really an

exudative cerebral syphilis taking the form of meningitis or arteritis. Most cases of so called syphilitic pseudoparesis sooner or later developed into a true paresis. Some of the cases, he thought, had better be termed organic dementia of syphilitic origin. Degenerative processes were not always progressive. He had even seen cases of progressive muscular atrophy of a typical kind arrested for years.

Dr. CLARK asked Dr. Dana how a knee jerk that was lost in tabes or general paresis could return. In such cases he believed there was a degeneration of the neuroperepheral nerve fibres.

Dr. DANA replied that this was a clinical fact and that it was explained probably by the fact that there was a syphilitic lymphangitis or exudate causing a loss of knee jerk; when this was absorbed this reflex returned.

Dr. HIRSCH asked Dr. Dana regarding the return of patellar reflexes. Much had been written on this subject, and all held that the return of patellar reflexes was an absolute sign of syphilis, as this only returned in syphilitic cases. This was explained pathologically by Oppenheim by the fact that all cases of spinal syphilis caused a meningitis, and the disturbance of reflex mechanism was a secondary process produced primarily by the lesion in the meninges. The syphilitic treatment caused a resorption of the injurious exudate, and then occurred a return of the patellar reflexes. Clinically, they all agreed that the return of the patellar reflex was a sign of syphilis.

The CHAIRMAN had seen cases of alcoholic toxæmia where the reflexes disappeared and then returned.

Dr. CLARK thought that Dr. Dana's cases were purely degenerative, and he asked if he believed there was this central degeneration.

Dr. DANA replied that in tabes sometimes there was both a degeneration and an exudation; the anti-syphilitic treatment would remove the latter, and the reflexes would then be restored.

Dr. MACDONALD assumed that the symptoms of true paresis were both outward expressions of organic disease in the central nervous system, that is, in the central cortex, and, if this was so, would it not follow that the condition would necessarily be one from which recovery was impossible? He would like to ask Dr. Meyer if this was not true from a pathological standpoint.

Dr. MEYER said that was the burning question, especially since the investigations of Alzheimer and others had divided off a new process as a diffuse cerebral syphilis, distinct from the condition of a general paralysis process. Since these investigations the whole situation had been made more complex. His sentiments went in the direction of Dr. Dana's, and he thought we should be prepared to give all our attention to therapeutics, even though general paralysis was probable, and we should at least strive for a remission as if the disease could be cured. Whether these really curable conditions were accompanied by the typical changes of paresis and verifiable anatomically, he had serious doubts. On the other hand, he had not had any cases of general paresis that he could vouch for clinically that had not shown definite changes in the central nervous system, organic changes with participation in them

of blood vessels, neuroglia, derangement of certain elements in the cortex, etc. He had, however, in mind a patient of Dr. Howard's, at the Rochester State Hospital, who had "general paresis" for two years, and then passed into a paranoiac condition, with marked expansiveness and some paralytic symptoms of inconsistency, etc. The patient also had a convulsion once. When he was examined by Dr. Meyer, a few months before he committed suicide, there were still a certain number of symptoms that could safely be classed as belonging to general paresis. In this case there was only a residuum of the disease process to be found, both clinically and on microscopical examination. We must further admit that occasionally we did see cases of a protracted type, cases of general paralysis that could truly be described as "progressive" general paralysis, cases that became arrested from ten to fifteen years or even more. Hence we should not, *à priori*, exclude the possibility of a lasting remission at the outset.

Dr. DANA said that if we could recognize the earliest symptoms of general paresis, we might be able to arrest the process and the patient might become practically a healthy man, i. e., if the brain cells were not sufficiently destroyed by the parietic process to interfere with a sound mental action.

Dr. MEYER said that Nature was evidently vicious regarding that point. The important point about general paresis seemed to be that of finding out what made general paresis a progressive disease. If one could determine that, much would be gained. But at present nothing of that sort was at hand.

Dr. DANA argued that we had an allied condition in tabes; in tabes the disease process could be arrested and the patient have no more than simple tabetic pains.

Dr. HIRSCH believed that in general paresis, as well as organic diseases, the clinical symptoms preceded what was called the anatomical changes. It was a fact that in the very early stages, when the clinical symptoms were developing, the microscope did not reveal changes in the tissues.

Book Notices.

Lehrbuch der Arzneimittellehre und Arzneiverordnungslehre. Unter besonderer Berücksichtigung der deutschen und österreichischen Pharmakopoe. Von Dr. H. v. TAPPEINER, ord. Professor der Pharmakologie und Vorstand des pharmakologischen Instituts der Universität München. Fünfte neu rearbeitete Auflage. Leipzig: F. C. W. Vogel, 1904. Pp. viii-347. (7 M.)

In this fifth edition of Professor von Tappeiner's work there is a careful revision, with a judicious selection of the newer materials, which affords in a relatively small compass a reliable guide to materia medica and prescription writing. In considering the different drugs a therapeutic classification has been adopted, and a useful feature has been the appending after each group of a few model prescriptions. In these the metric system has been used throughout. There is a conservative and well written chapter on organotherapy and serumtherapy which deals sufficiently with the proved facts of

value, but which does not carry the student too far afield in the domain of mere speculation. In the section devoted to the therapeutics of iron a healthy skepticism is shown regarding the alleged superiority of the numerous organic preparations. The work is adapted to the German and Austrian pharmacopœias, and this will necessarily limit somewhat its usefulness in this country.

A Textbook of Quantitative Chemical Analysis. By Gravimetric, Electrolytic, Volumetric, and Gasometric Methods, with 72 Laboratory Exercises, giving the Analysis of Pure Salts, Alloys, Minerals, and Technical Products. By J. C. OLSEN, A. M., Ph. D., Professor of Analytical Chemistry in the Polytechnic Institute of Brooklyn, formerly Fellow of the Johns Hopkins University. New York: D. Van Nostrand Company, 1904. Pp. xix-513. (\$4.00 net.)

The author states in his preface that the present work has been prepared chiefly to meet his own needs in presenting the subject to his students. In furtherance of this, the arrangement and presentation of the subject matter meet the needs of the student rather than those of the experienced analyst. The author has had considerable experience in the teaching of chemistry at the Brooklyn Polytechnic Institute. Rather less space than we expected is given to the theory of solutions, the ionic theory of electrolysis being rather briefly treated of in a chapter on electrolytic methods. In addition to its value as a textbook, Dr. Olsen's work should serve as a reference book for the professional chemist, and we regard it as a useful addition to the literature of chemistry.

First Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. By the Director, ANDREW BALFOUR, M. D., B. Sc., etc., Fellow of the Royal Institute of Public Health, Member of the Epidemiological Society, etc. Khartoum: Department of Education, Sudan Government, 1904. Pp. iii-83.

In this instance the munificence of Mr. Henry S. Wellcome has enabled Egypt to have the services of so excellent a man as the director of the Research Laboratory of the Gordon Memorial College. There is an interesting account of the purposes and organization of the laboratory.

Before reaching Khartoum, the director was told that malaria did not occur there and that the *Anopheles* was unknown. Both these statements were found to be erroneous, and there is an account of mosquito work in the city and the Sudan. There are descriptions of biting and noxious insects other than mosquitoes, and of insects and vegetable parasites injurious to crops.

The printing is most creditable to the Department of Education of the Sudan Government, and the work is well illustrated.

The Alumni of the Medical Department of Dartmouth College are raising a fund of \$30,000 for the enlargement of the medical building. More than half of the money has already been raised, and it is hoped to begin work in the spring.

Miscellany.

Cancer of the Upper Portion of the Rectum.—Girard, in the *Revue de chirurgie*, for November 10, 1904, calls attention to the fact that cancer may be located so high in the rectum as to be beyond the reach of the examining finger, and may require abdominal palpation for its determination. An early diagnosis is difficult under this condition, and becomes still more so when the symptoms are few and inconspicuous. A bloody or mucous diarrhoea may not occur very frequently, constipation or obstruction may be wanting, and it would be reasonable to suppose that one was dealing with an ulcerative colitis.

At a later period perforation into the bladder may take place, with accompanying pneumaturia or fecaluria, or into other adjacent organs, and symptoms may be presented which make the diagnosis of cancer clearly evident. At such a time a radical operation would be useless and the best that can be done will be to form an artificial anus in the iliac region. In one of the author's cases the disease had remained latent a long time and had then caused an abscess to develop in the cæcovesical region with the usual phenomena of suppurative appendicitis and subsequently with perforation of the large intestine and the bladder. An artificial anus was made and a loop of the perforated intestine was excluded.

It may therefore be very difficult to recognize the nature and the exact situation of this disease until after complications have supervened. It may be necessary to perform an exploratory laparotomy, but before this is done one should make an examination with the rectosigmoidoscope or Strauss or some similar instrument. In one of the author's cases the patient himself suspected the condition and examined his stools with such thoroughness that he finally discovered a portion of tumor which when examined microscopically proved to be cancerous. An abdominal section was made and the diseased segment of rectum excised. The patient has remained without recurrence and without bad symptoms of any kind for more than two years.

Syphilitic Synovitis in Children.—Dunlop, in the *Edinburgh Medical Journal*, for December, 1904, thinks this disease is not so rare as has usually been supposed, and that it has often been overlooked, or treated as tuberculosis or rheumatism. It may be either congenital or acquired. The author classifies the disease as follows:

1. Cases which occur in infants subsequent to an epiphysitis by continuity.
2. Those in which a chronic effusion takes place into one or more joints, especially the knees, between the ages of 8 and 15 years, and in which the synovitis is the primary and chief affection. Both these forms are congenital.

Degenerative changes take place in the bones and cartilage with or without deformity. Suppuration into the joint may occur and the periosteum may be greatly thickened. The symptoms are those of inflammation and develop rapidly. The elbows, wrists, knees, and ankles are most frequently involved, both members being affected

at the same time, though the disease may be more severe in one than in its fellow. The prognosis is favorable if treatment is begun soon after the disease makes its appearance, especially if only one joint is involved. These symptoms refer to the disease as it occurs in infants who are the subjects of congenital syphilis, and they usually appear during the first three months of life.

In the second variety of this disease the most striking features are its insidious development, its chronic course, its symmetrical distribution, its freedom from pain and the mobility of the joints on passive movement; its association with other syphilitic stigmata, its amenability to treatment, and its tendency to relapse. The knees are most frequently affected, one usually more than the other. There is swelling from synovial effusion, but little or no pain or disturbance of function. It is often associated with other late symptoms of hereditary syphilis, especially with keratitis. Hutchinson's teeth, deafness, and nodes on the long bones are frequent accompaniments.

The condition seems to be a subacute synovitis caused by the syphilitic poison and without distinctive pathological lesions, but in some cases there are infiltration, hyperæmia, and gumma of the synovial membrane. Nodes may be felt in the capsule of the joint. Under treatment the new tissue undergoes absorption and organizes with thickening of the joint.

The diagnosis is based upon the bilateral effusion, the absence of pain, and the small amount of functional disturbance. The presence of other syphilitic stigmata, and improvement under anti-syphilitic treatment confirm the diagnosis. Treatment by rest, counterirritation, splints, and other measures used in simple synovitis have little beneficial effect. Improvement is usually rapid when mercury and iodide of potassium in combination are administered. Sublimate baths and the local use of mercurial ointment are also very efficient. A case may resist all forms of treatment for months and suddenly recover. The disease is very apt to recur if treatment is discontinued.

Remarks on Diseases of the Pancreas.—Bardenheuer, in *Fortschritte der Medizin*, for October 1, 1904, reports two cases which he calls acute interstitial pancreatitis, and which he was able to cure by means of an incision made on the right side of the body. In the first case there had been an injury, a fall on the right side against the edge of a beam having been experienced. Abdominal section having been performed, new growths of the stomach were found, especially in the region of the pylorus. The stomach was dilated, and so was the duodenum in its upper portion, the head of the pancreas was much enlarged, hardened, and hyperæmic, while the remainder of the pancreas was atrophic, pale, and fatty. The growths of the stomach were removed, a gastroenterostomy was performed, and the patient recovered. In the second case there were violent attacks of apparent cholelithiasis. A median section was made above the navel. Behind the stomach and the gastrocolic ligament a fluctuating tumor was observed, but there was no fatty necrosis. When the tumor was opened a quantity of blood and fluid resembling coffee grounds was evacuated.

At the back part of the cavity the pancreas of firm consistency and overlaid with necrotic tissue could be felt. Subsequently a fistula of the pancreas developed, from which there was a discharge of fluid containing trypsin. This fistula continued to discharge for several weeks, and necessitated the exposure of the pancreas by a lumbar section. In this operation the spleen was laid bare and extensive exudate was discovered in which the pancreas was embedded. The fistulous tract leading to the pancreas was defined, ligated, and divided with the Paquelin cautery. A cure resulted. The author believed that the acute pancreatitis in this case was due to changes in the vessel walls. The patient was very fat and gave a history of syphilis. An early operation in such cases, when there is a suspicion of hæmorrhage from the pancreas, should be performed in order to forestall fatty necrosis or peritonitis.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 13, 1905:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
Dist. Columbia—Washington.....	Jan. 1-7.....	2	
Illinois—Chicago.....	Jan. 1-7.....	16	
Illinois—Peoria.....	Dec. 1-31.....	7	
Louisiana—New Orleans.....	Jan. 1-7.....	5	
Massachusetts—Everett.....	Jan. 1-7.....	3	Imported.
Massachusetts—Hyde Park.....	Jan. 1-7.....	1	
Missouri—St. Louis.....	Dec. 25-Jan. 7.....	35	6
New Jersey—Camden.....	Jan. 1-7.....	1	
Ohio—Cincinnati.....	Jan. 1-7.....	7	
South Carolina—Charleston.....	Jan. 1-7.....	3	
South Carolina—Greenville.....	Jan. 1-7.....	6	1
Tennessee—Nashville.....	Jan. 1-7.....	6	
Wisconsin—Milwaukee.....	Jan. 1-7.....	3	
Smallpox—Foreign.			
Austria-Hungary—Prague.....	Dec. 11-24.....	24	
Brazil—Bahia.....	Nov. 29-Dec. 10.....	27	1
Brazil—Rio de Janeiro.....	Nov. 28-Dec. 4.....	296	108
Belgium—Brussels.....	Dec. 18-24.....	1	
China—Shanghai.....	Nov. 13-26.....	1	71
France—Paris.....	Dec. 18-24.....	17	
Great Britain—London.....	Dec. 18-24.....	9	
Great Britain—Newcastle-on-Tyne.....	Dec. 18-24.....	7	
Great Britain—Nottingham.....	Dec. 18-24.....	3	
Great Britain—South Shields.....	Dec. 18-24.....	3	
India—Bombay.....	Dec. 7-13.....		19
Panama—Colon.....	Dec. 26-Jan. 1.....	1	
Panama—Panama.....	Dec. 26-Jan. 1.....	1	
Russia—Moscow.....	Dec. 11-17.....	7	
Russia—St. Petersburg.....	Dec. 18-24.....	6	5
Turkey—Constantinople.....	Dec. 19-25.....	8	
Yellow Fever—United States.			
Texas—Galveston.....	Dec. 31.....	2 from Ss.	
		Horatio from Para,	
		via Barbados.	
Yellow Fever—Foreign.			
Brazil—Rio de Janeiro.....	Nov. 28-Dec. 11.....	2	1
Cuba—Havana.....	Jan. 6.....	3	2
		From Austrian vessel	
		Dora, from La Guayra	
		and Colon.	
Mexico—Coatzacoalcas.....	Dec. 25-31.....	1	
Mexico—Juchitan.....	Dec. 25-31.....	1	
Mexico—Yera Cruz.....	Dec. 25-31.....	1	
Panama—Panama.....	Dec. 25-31.....	1	1
	29-31.....	2	
Cholera.			
India—Bombay.....	Dec. 7-13.....	2	
India—Calcutta.....	Dec. 4-10.....		72
Russian Empire—Astrachan dist.	Nov. 23-29.....	6	
Russian Empire—Jelisavetpol			
district.....	Nov. 22-26.....	32	
Russian Empire—Samara dist.	Nov. 23-29.....	162	
Russian Empire—Sarator dist.	Nov. 23-29.....	40	19
Russian Empire—Trans-Caspian			
Territory and Central Asia;			
Serachs.....	Nov. 23-29.....	27	20
Russian Empire—Trans-Cau-			
casia; Baku.....	Nov. 14-23.....	29	10
Russian Empire—Trans-Cau-			
casia; Batum.....	Dec. 1-7.....	3	
Russian Empire—Trans-Cau-			
casia; Erivan.....	Nov. 23-29.....	1,033	661

Plague.

Arabia—Crater	Dec. 1-16.	47	47
Arabia—Maalla	Dec. 1-16.	2	2
Arabia—Hedjuff (Hospitals)	Dec. 1-16.	2	2
Arabia—Tawahl	Dec. 1-16.	1	1
Arabia—Shaukh Othman	Dec. 1-16.	3	4
Egypt—Port Said	Dec. 3-10.	1	1
Egypt—Tukh district	Nov. 27-Dec. 10.	3	3
Great Britain—London	Nov. 30.	1 from Ss.	
		Wobridge, from the	
		Rio de la Platte.	
India—Bombay	Dec. 7-13.	72	
India—Calcutta	Dec. 4-10.	12	
India—Karachi	Dec. 3-10.	27	22
Straits Settlements—Singapore	Dec. 20-26.	1	1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 11, 1905:

ATILES, PEDRO DEL VALLE, Acting Assistant Surgeon. Granted leave of absence for seven days from December 26, 1904, under paragraph 210 of the regulations.

BLUE, RUPERT, Passed Assistant Surgeon. Detailed as inspector of unseviceable property at the marine hospital, San Francisco, Cal. January 7, 1905.

EDWARDS, J. W., Acting Assistant Surgeon. Granted leave of absence for twelve days from December 20, 1904, and three days from January 1, 1905.

FRICKS, L. D., Passed Assistant Surgeon. Relieved from duty at La Guayra, Venezuela, and directed to proceed to New York, N. Y., and report arrival by wire. January 9, 1905.

GIBSON, F. L., Pharmacist. Leave of absence granted Pharmacist Gibson for thirty days from January 1, 1905, amended to read ten days from January 1st. Relieved from duty at Honolulu, T. H., and directed to proceed to San Francisco, Cal., and report to Medical Officer in Command for duty and assignment to quarters, relieving Pharmacist Charles Slough. January 4, 1905.

JACKSON, J. M., JR., Acting Assistant Surgeon. Department letter of December 8, 1904, amended so as to grant Acting Assistant Surgeon Jackson leave of absence for nineteen days instead of thirty days from November 26, 1904.

KORN, W. A., Passed Assistant Surgeon. Bureau letter of December 27, 1904, granting Passed Assistant Surgeon Korn leave of absence for seven days, amended so that said leave shall be for four days only.

SLOUGH, CHARLES, Pharmacist. Upon being relieved from duty at San Francisco, Cal., by Pharmacist F. L. Gibson, to proceed to Honolulu, T. H., and report to Chief Quarantine Officer for assignment to duty. January 4, 1905.

STEARNS, W. L., Pharmacist. To proceed to Washington, D. C., for special temporary duty. January 4, 1905.

TUTTLE, JAY, Acting Assistant Surgeon. Granted leave of absence for thirty days from January 9th.

WERTENBAKER, C. P., Surgeon. To report at Washington, D. C., for special temporary duty. January 10, 1905.

WETMORE, W. O., Acting Assistant Surgeon. Granted leave of absence for ten days from January 4th.

WHITE, J. H., Surgeon. Granted leave of absence for six days from January 17th.

Casualty.

Pharmacist F. R. HANRATH died at Cleveland, Ohio, January 7, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 14, 1905:

TAYLOR, J. S., Passed Assistant Surgeon. Detached from the Relief and ordered to the Ohio.

YOUNG, R. M., Assistant Surgeon. Resignation accepted, to take effect on January 21, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 14, 1905:

CHIDESTER, W. C., First Lieutenant and Assistant Surgeon. Left Fort Lawton, Wash., on ten days' leave of absence.

EBERT, R. G., Major and Surgeon. Left Vancouver Barrack, Wash., en route to Fort D. A. Russell, Wyoming.

MORSE, A. E., First Lieutenant and Assistant Surgeon. Ordered to accompany Field Artillery to San Francisco, Cal., and then to return to post.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Left Jackson Barracks, Louisiana, en route to the Army and Navy General Hospital, Hot Springs, Ark., for treatment.

STILES, HENRY R., Captain and Assistant Surgeon. Ordered to report to William H. Arthur, Major and Surgeon, president of the examining board, on January 17, 1905, at Washington, D. C., for examination for promotion.

Births, Marriages, and Deaths

Born.

PURNELL.—In Camp McGrath, Batangas, Philippine Islands, on Tuesday, November 1st, to Dr. Harry S. Purnell, United States Army, and Mrs. Purnell, a son.

Married.

BUSHON—DULANEY.—In Baltimore, Maryland, on Tuesday, January 3rd, Dr. John Henry Bushon and Miss Edith Roy Dulaney.

LOWES—MCKNIGHT.—In Mount Forest, Canada, on McMurdo—LE DUC.—In Philadelphia, on Wednesday, January 11th, Dr. Percy Fitzgerald McMurdo, United States Navy, and Miss Genevieve Le Duc.

WILSON—RADDANT.—In New York, on Saturday, December 24th, Dr. Arthur Starkey Wilson and Miss Metha Elizabeth Raddant.

Died.

CARMALT.—In New York, on Sunday, January 8th, Dr. Churchill Carmalt, in the fortieth year of his age.

CONVEY.—In Brooklyn, N. Y., on Saturday, January 7th, Dr. George V. Convey, in the forty-fifth year of his age.

COX.—In Nashville, Tennessee, on Friday, January 6th, Dr. W. R. Cox, in the eighty-ninth year of his age.

DAVIS.—In Brooklyn, N. Y., on Sunday, January 8th, Dr. William Harper Davis, in the thirty-third year of his age.

D'HOMERGUE.—In Brooklyn, N. Y., on Thursday, January 12th, Dr. Louis C. D'Homerque, in the sixty-eighth year of his age.

ELLISON.—In Benton Centre, N. Y., on Tuesday, December 20th, Dr. Albert Ellison.

ILIFF.—In Philadelphia, on Wednesday, January 11th, Dr. John Pearson Iliff, in the fifty-fifth year of his age.

LANDRUM.—In Mayfield, Kentucky, on Monday, January 9th, Dr. James D. Landrum, in the eighty-third year of his age.

MANLEY.—In New York, on Friday, January 13th, Dr. Thomas H. Manley, in the fifty-fifth year of his age.

McCORMICK.—In Yazoo City, Mississippi, on Tuesday, January 3rd, Dr. P. J. McCormick.

MERRIWETHER.—In Mathews, Alabama, on Sunday, January 1st, Dr. John Lucas Merriwether, in the fifty-sixth year of his age.

MILLER.—In Collinsville, Alabama, on Saturday, December 10th, Dr. J. Taylor Miller, in the fifty-eighth year of his age.

OATIS.—In Hazelhurst, Mississippi, on Friday, January 6th, Dr. C. E. Oatis.

TYGESSON.—In Hartford, Connecticut, on Friday, January 6th, Dr. Alfred Tygesson.

WELLS.—In New York, on Thursday, January 12th, Dr. Henry Martin Wells, retired medical director of the United States Navy, in the seventy-first year of his age.

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WHOLE NO. 1365.

Original Communications.

THE RELATION OF RADIOGRAPHIC APPEARANCES TO CLINICAL SYMPTOMS IN HIP DISEASE.*

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The following investigation was undertaken by the writers to determine what value radiographs possessed taken by themselves in the diagnosis of hip disease, and especially in the detection of early disease. In order to form a perfectly unbiased opinion each negative was examined by the writers and recorded by number and an opinion written in each case as to whether disease was present and as to the character of such disease. In doing this the writers were at that time ignorant of the name of the patient and of the clinical diagnosis. The clinical history was later looked up and the value of the opinion formed from the radiograph tested in this way. The correspondence of the x ray opinion and the clinical diagnosis and history were then recorded in each case. One hundred consecutive negatives of the hip joint were taken from the files of the Children's Hospital x ray department and investigated by this method. The writers are indebted to their colleagues for permission to report all cases coming to the x ray department.

It may be said that this method of examination brought the writers in contact with practically every obscure and difficult case of trouble in the hips that had been seen at the hospital in the last three or four years, for such cases were likely to be x rayed, whereas routine cases might not be. One fact is clear, already brought out by one of the writers¹ in a former paper, that there are

certain cases of lameness and disability in the hips that do not fall in clinically with tuberculous disease, and whose x ray appearances are no more definite than the clinical. They are classed in the doubtful cases.

The following questions were formulated at the beginning of the inquiry:

1. What proportion of cases diagnosticated as hip disease from the x ray, presented a typical clinical history, and what proportion of such cases did not have such a clinical history?

2. What was the later history of cases diagnosticated as normal from the x ray?

3. How late in the history of hip disease does a "normal" radiograph appear?

4. What are the characteristic appearances of the radiograph in hip disease?

5. What radiographic appearances go with shortening and deformity?

6. What similar conditions are found which the radiograph will differentiate from hip disease?

7. What are the sources of error in diagnosing hip disease from the radiograph?

The one hundred cases classed by the opinions expressed from the examination of the radiographs may be tabulated as follows:

	Cases.
"Normal" or "negative".....	20
"Hip disease" or "probable hip disease".....	61
"Old hip disease".....	4
"Destructive disease, not tuberculous".....	2
"Coxa vara".....	2
"Doubtful" or "questionable".....	4
"Abnormal, but not hip disease".....	2
"Probable hip disease" (proving to be abscess of groin)	2
Various diagnoses not borne out by clinical history.....	3

100

Normal appearances in the radiograph, 20 cases.

Eight cases proved to have been radiographed for other affections, such as Pott's disease or stone in the bladder, and the hips were included incidentally.

Seven cases were radiographed for suspected disease, but recovered so speedily that the affection was probably synovial.

* Presented at the meeting of the American Orthopaedic Association, Atlantic City, June 9, 1904.

¹ R. W. Lovett, *The Diagnosis of Hip Disease*, *Boston Medical and Surgical Journal*, August 14, 1902.

Two cases with a normal radiograph showed a typical history of hip disease.

In one of these (319) the duration of the disease at entrance had been six months, and in a year from the time of the radiograph, shortening and marked disease were present. In the other (71) some disability had existed for a year at the time of the radiograph, but clinical symptoms did not warrant a diagnosis. Two years after the radiograph, the patient had atrophy and permanent flexion, but no shortening.

Three cases with normal x ray appearances pursued a history not characteristic of hip disease. One (1179), four months after the radiograph, had some limitation of motion, but no shortening or atrophy. The second (154), a few months later, had motion to a right angle and no shortening, and a clinical diagnosis was withheld. The third (209) had atypical symptoms, and was diagnosed as rheumatism.

To judge then from these cases, the fact that the radiograph is normal is of much significance and should make one delay about diagnosing hip disease in such cases. The fact that the disease had been of six months' and a year's duration, in the cases where true hip disease existed with a normal radiograph, is not easy to explain.

HIP DISEASE.

Sixty-one cases were diagnosed as hip disease from the radiograph, in which the clinical history was typical and the subsequent course of the affection confirmed the opinion formed from the radiograph. The chief importance of these cases lies in the description of the signs in the radiograph upon which this opinion was based.

The various radiographic appearances seen in tuberculous disease of the hip are characteristic of this affection when taken collectively. Any one of them may be a factor in making up the Röntgen pictures of other pathological conditions, but, considered in combination, they tell a consistent story of a process in which tuberculosis is the (chief) causative factor.

In the early stages of the disease, when sensitiveness, pain on motion, and muscular spasm are usually well marked, it is often impossible to differentiate the Röntgenographic plate from that of a normal joint. With the onset of limitation of motion due to spasm, however, evidences of atrophy generally set in, and there appear for inspection the phenomena about to be described. These appearances vary, naturally, with the extent and duration of the disease, beginning with evidences of simple atrophy, passing on to bony thickening, erosion, cavity formation, and loss of

substance, to complete absorption, destruction, and ankylosis. These will be taken up seriatim for the purpose of clearer description.

I. ATROPHY.

The earliest changes seen in the radiograph are (a) diminution in the density of the shadow and (b) a relative diminution in the size of the shadow cast by the affected bone. Where one form of atrophy exists, the other is likely to be found. In one case observed by the writers a radiograph showed no abnormal appearances, but a second radiograph taken six weeks later showed a diminution in the density of the shadow of the affected hip, but no diminution in the size of the shadow. Of course, all that has been said as to relative density and size of shadow presupposes attention to proper technique in making the exposure.

(a) *Diminution in Density of Shadow.*—Exposed to Röntgen radiation, bone affected by early tuberculosis makes a photographic impression best described as "increased radiability." The shadow is thin and foggy and contrasts feebly with the surrounding soft parts. The shadow of the bone cortex is relatively a strong one, and stands out sharply from that of the medulla. The fine trabecular shadows stand out in the mass of thin fog, which fills the bone area. These appearances are clearly due to a photographic overexposure in the bone shadows caused by the lack in the bone of elements such as the calcium salts, which would normally offer a greater resistance to the passage of x radiation. The presence of increased radiability is usually more noticeable in the bones of older children or adults, where the proportion of calcium is normally greater.

(b) *Diminution in Relative Size of Shadow.*—The atrophy in size may be seen most strikingly in the pubic bone, lying in juxtaposition to its healthy fellow, in cases of unilateral disease. The atrophy of size is less evident in the head and neck of the femur, its presence there being often concealed by compensatory bony thickening.

Atrophy of both types involves most often the upper shaft of the femur, the acetabular portion of the ilium, and the os pubis.

As the radiographic evidences of bone atrophy are seen also in fractures where the circulation is impeded, in gonorrhœal affections, in various palsies, and as a manifestation of hereditary syphilis, each of these conditions must be ruled out if the radiographic plate presents atrophy alone.

As the majority of negatives examined by the writers were taken at other than the earliest stages of the disease it has been unusual in this



1.—Early stage of hip disease of joint on right of picture. Increased radiability of neck of femur.



FIG. 2.—Early stage of hip disease of joint on right of picture. Same appearances as in Fig. 1, with involvement of acetabulum.



FIG. 3.—Femoral and acetabular disease of joint on right of picture. Slight atrophy and increased radiability of epiphysis. Thickening of base of acetabulum.



FIG. 4.—Femoral disease of joint on right of picture. Erosion of head, thickening of neck, atrophy of bones.



FIG. 5.—Old hip disease of joint on left of picture. Ankylosis and atrophy. Gant osteotomy for deformity.

series to find atrophy alone, but generally with it the changes later to be described.

II. BONY THICKENING.

This is the best radiographic evidence of Nature's efforts at repair, and is most often seen, in the plate, to involve the neck, and less often the head of the femur. The writers have observed in this series of cases a shadow, projecting in from the pelvic side of the acetabulum; in the majority of cases in which this appearance presented itself, acetabular disease had been diagnosticated clinically.

III. DECREASED RADIABILITY.

Apart from the photographic fog seen in negatives presenting increased radiability, there may often be observed an indefinite cloudy appearance, which involves not only the bony medulla, but the cortex and periosteal structures as well. In cases of tuberculous coxitis, this cloudiness has been found by subsequent clinical experience to be due to the presence of thick serum, pus, or finely divided detritus. The occurrence of this form of decreased radiability without other evidence is often misleading and the writers have observed it in cases where the process was extra-articular, such as abscess of the groin.

IV. EROSION.

Where actual loss of bone substance exists in a hip, it is usually clearly evident in the plate, varying in all degrees from irregularities of the articular surfaces to the formation of cavities and vacuoles or complete destruction and absorption. Since the presence of these appearances alone is not sufficient evidence upon which to make a diagnosis, radiographically, of tuberculous hip disease, it becomes necessary, as before stated, to search for some other coexistent photographic appearances, such as have been above described.

"*Old*" hip disease was a diagnosis made four times from the x ray negative where the process was advanced and evidently of long standing. This opinion was borne out by the clinical history.

Destructive disease not tuberculous was an opinion expressed in two cases. In one (48) the diagnosis of osteomyelitis of both hips was borne out by the history. The second (124) proved to be a hip following typhoid.

Coxa vara was found in two cases and the clinical diagnosis was the same.

Probable hip disease was the opinion in two cases where the suggestion of the disease was conveyed by a very slight haziness about the joint. It was so slight that no opinion more positive than this was expressed. Examination of the

records showed that these cases had suffered from an acute abscess of the groin in no way connected with the hip, and that the cloud seen in the radiograph was undoubtedly due to the resistance to the rays offered by the pus lying superficial to the joint.

Questionable was the opinion expressed in four cases. In one (530) there were atrophy, thin shadow, and broadening of the joint line. The clinical diagnosis had never been made, although some disability in the hip had existed for years. In another (13) there was slight atrophy with some enlargement of the head and neck. The symptoms had disappeared in two months. In a third (663) there were thickening of the head and neck, and dislocation. Clinically there was a history of a limp of long duration and of a one inch shortening. No clinical diagnosis was made. In the fourth (721) there was slight atrophy with thickening of the head. The history was atypical and the boy speedily recovered.

It is interesting to note that the radiographic appearances in these cases were much alike, consisting chiefly of atrophy and enlargement of the head and neck of the femur.

Not hip disease, but not normal, was the opinion in two cases (748 and 752). The x ray appearances were slightly increased radiability and nothing else. At the time of the x ray examination both cases were suffering from some acute affection of the hip, but in a few weeks had wholly recovered.

In the other three cases, the x ray appearances did not agree with the clinical history. In two (58 and 520) what appeared to be marked signs in the hip went with the history of a slight affection, and in the third (496) an opinion was expressed that a destructive affection was osteomyelitis, while bacteriologically it had proved to be tuberculous.

Our conclusion as to the value of radiographs in the diagnosis of hip disease, and especially early disease, is that they are of great value in the hands of persons of average experience; that a radiograph free from abnormal appearances does not show that hip disease is absent or will not develop, but that in a case of doubtful clinical diagnosis a normal x ray is a matter of weight and makes the likelihood of speedy recovery greater than will radiograph with abnormal appearances.

The existence of slight atrophy of bone, and slight diminution of shadow, while on the other hand, not showing that hip disease was present in a case of doubtful clinical diagnosis, makes the likelihood of it greater and the outlook rather

more serious than a normal radiograph would do.

In only two cases was hip disease diagnosed where it was not present, and here the writers were misled by an extraarticular collection of pus. In three cases out of the hundred the opinion expressed was wholly wrong. In the remaining ninety-five, the opinion formed from the x ray was fairly well borne out clinically.

VESICORECTAL ANASTOMOSIS.

By BENJAMIN MERRILL RICKETTS, PH. B., M. D.,
CINCINNATI.

It has long been known that the urinary and alimentary tracts can be united during foetal, infant, or adult life in both animal and man by accident, disease, or surgical operation.

There are many conditions which require such an anastomosis for the purpose of diverting a part or all of the urine into the alimentary tract preferably into the sigmoid or especially the latter as low as possible, as the danger of kidney infection is lessened as the sphincter ani is approached.

While anastomosis in the following case was



FIG. 1.—Vesicorectal anastomosis from the vesical aspect. A, fundus of bladder; B, thickened bladder wall; C, sound emerging from bladder opening; D, undivided sphincter ani.

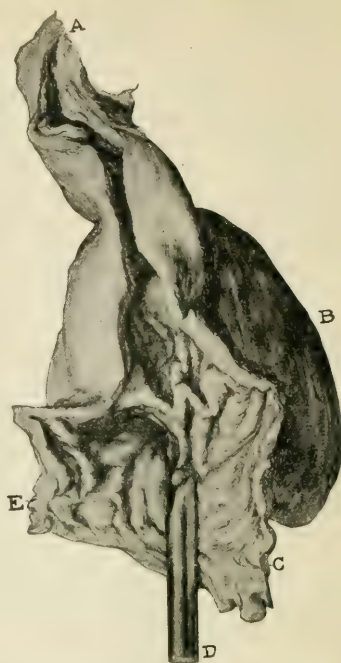


FIG. 2.—Vesical anastomosis from the rectal aspect. A, upper end of rectum; B, bladder; C and E, cut edge of sphincter ani; D, sound entering artificial opening in rectum.

purely accidental, resulting from pressure of the tube, it, together with its illustration, is appended, to show that it can and should be done in a certain class of cases.

The patient, aged sixty-seven years, had had prostatic hypertrophy for several years; on consultation with Dr. J. O. Blackerby, April, 1902, the bladder was found greatly distended, the urine dribbling, and the catheter could not be introduced through the urethra. There was no sugar, but there were albumin and pus in abundance.

The patient had been in bed two weeks, prepared to die at an early date.

Operation.—Under chloroform anaesthesia, a median perineal incision was made and the entire gland, together with its capsule, of twice the size of a guinea egg, was removed, the prostatic urethra included. About three and one half pints of thick, offensive urine with mucus escaped. An S shaped silver tube was introduced for drainage for several days, when urine was discovered to be escaping from the rectum, the flow from the incision gradually becoming less until at the end of ten months all the urine passed per rectum at intervals of three, four, and five hours.

The patient regained flesh and vigor and resumed his occupation (that of express agent). The urine caused no irritation of the rectum or any ill effect whatever, and the patient had com-

plete sphincteric control. The presence of pus and albumin continued until about January, 1904, when his physical condition became much impaired. He gradually failed until dissolution about May 10, 1904.

The necropsy was performed by Dr. Charles T. Souther and Dr. Blackerby eighteen hours after the body had been embalmed. There was marked emaciation, and rigor mortis was at its height. Examination was limited to the abdominal viscera. No omental adhesions were present. Inspection of intestines, liver, pancreas, spleen, and gall tract proved negative.

Nephritis was present in the right, and multiple abscesses were found in the left kidney. To prevent further mutilation, removal of the ureters was refused.

The bladder, together with the rectum and sphincter ani, were removed and the anastomosis was found to present the appearance shown in the illustrations.

There are many reasons to believe that infection of the kidneys antedated the removal of the prostate gland, and that the removal of the prostate prolonged life and made it more comfortable.

OVARIAN ANGEIOMA.

By BENJAMIN MERRILL RICKETTS, PH. B., M. D.,
CINCINNATI.

The rarity of ovarian angioma prompts the report of such a condition together with an illustration of the specimen.

Synonyms.—Angioma, erectile or vascular tumor. It may or may not be congenital and usually occurs in young girls.

In simple angioma the vessels are increased in number or size, or both, or their walls alone may be thickened by the formation of tissue elements. In this event angiomalacia with or without subsequent infection may occur. The ætiology and pathology are unknown.

CASE.—Miss P., white, aged fifteen years. At seven years of age she began to have pain in right lower pelvis. This continued, with irregular periodicity, until the age of fourteen years, when she menstruated for the first time. This occurred twice with increased severity and indication of appendicular disease. About this time she was operated upon for disease of the appendix, which was removed by a competent surgeon in one of the larger cities November 17, 1902. Pain of the same character and degree continued, especially before and during her irregular menstruation, until April 14, 1904, when I was called in consultation with Dr. J. H. Barker, who had seen her for the first time five hours before, suffering with severe pain in the right side. The diagnosis of



FIG. 3.—Dr. Ricketts's case of ovarian angioma.

ovarian hæmatoma was made and the abdomen opened in the median line three hours later, consuming fifteen minutes. The appendix had been removed without leaving any adhesions whatever. The belly had united perfectly. The left ovary was normal, but the right was found to be about the size of a guinea egg, and somewhat the shape of an acorn. The outer end was enlarged, red, and soft, and there were two deep rents in it due to the pressure incident to its removal.

This patient had been seen by Dr. Thomas Minor and Dr. William Gillespie several times from the age of ten to fifteen years. Dr. Gillespie had on several occasions administered veratrum viride which had always given relief. This is significant because of its influence upon the circulatory system. Recovery was uneventful.

Harvard Medical School Scholarships.—The faculty of the Harvard Medical School has announced the award of scholarships open to first year men as follows: The David Williams Cheever scholarship of \$250 to W. J. C. Sharpe, '04; the Lewis and Harriet Hayden scholarship of \$200 to E. D. Brown, University of Pennsylvania, '99; two Joseph Eveleth scholarships of \$200 each to H. S. Bernstein, '04, and F. H. McCrudden, Massachusetts Institute of Technology, '00; John Foster fund of \$50 to E. D. Bond, '00.

A NOTE ON BROWN-SEQUARD'S PARALYSIS, WITH REPORT OF A CASE IN WHICH THE PARALYSIS FOLLOWED A GUNSHOT WOUND IN THE NECK.*

By ALFRED GORDON, M. D.,

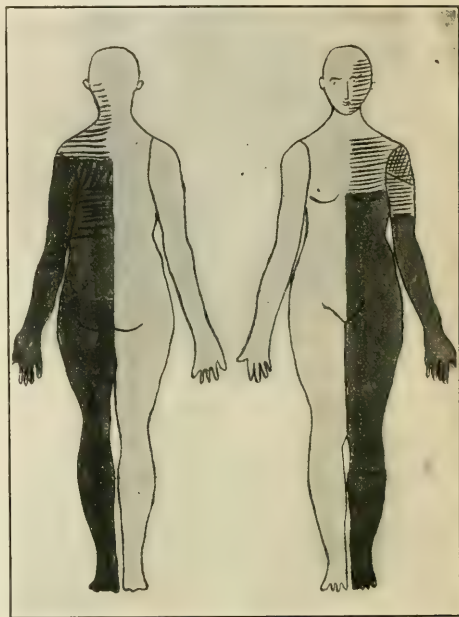
PHILADELPHIA,

INSTRUCTOR IN NERVOUS AND MENTAL DISEASES, JEFFERSON MEDICAL COLLEGE; ASSISTANT VISITING NEUROLOGIST TO THE PHILADELPHIA HOSPITAL; NEUROLOGIST TO THE DOUGLASS MEMORIAL HOSPITAL.

The symptom group obtained from a hemisection of the spinal cord had been known from the time of Galen; but Brown-Séquard, particularly in his classical description based upon clinical observations and numerous experiments, has given us an exact picture of the sensory and motor disturbances in mammifera; he had also shown that in man traumatic or other lesions which produce a breach of continuity of one half of the cord produce identical disturbances. In 1846, while experimenting on animals, like the dog, the rabbit, and the guinea pig, he noticed that a hemisection of the cord led to the following symptoms limited to the portion of the body which is innervated by the segment below the level of the section: (1) A motor paralysis of the side of the lesion; (2) an anæsthesia of the opposite side of the body. In addition to these main symptoms he observed also a few minor symptoms, viz.: (1) A hyperæsthesia of the paralyzed side; (2) a small band of anæsthesia situated immediately above the hyperæsthetic area; (3) also sometimes a narrow area of hyperæsthesia immediately above the anæsthetic band. Conjointly with the hyperæsthesia there is also (4) a distinct loss of muscular sense which is not present on the opposite side of the body; (5) exaggeration of tendon reflexes on the paralyzed side or even on both sides; (6) a vasomotor paralysis on the paralyzed side, which is shown by an increase of the temperature as compared with the opposite side; (7) finally, visceral symptoms (incontinence of urine and fæces); the latter depends upon the segment involved. When the cervical cord is injured, other symptoms will be observed in addition to those mentioned, namely: Disturbance of respiration, dilatation of the pupil on the side of the lesion, also enophthalmos (paralysis of the sympathetic nerve). This classical symptomatology which was observed on animals can also be observed in man, when the continuity of one half of the cord is interrupted either by a tumor or syringomyelia, or by a localized focus of myelitis or hæmorrhage (hæmatomyelia), by pressure from another source, or finally and

most frequently by a traumatic injury. The patient I have before you presents Brown-Séquard's syndrome, which made its appearance subsequent to a traumatic injury of the spinal cord. His history as taken at the Jefferson Hospital is as follows:

On the twenty-ninth day of December, 1903, patient was shot in the neck, the bullet penetrating the right side, posterior to the sternomastoid muscle in its middle third. There was no loss of



* The black portion indicates thermoanæsthesia and analgesia; the portion shaded in lines indicates thermohypesthesia and hypalgesia.

consciousness. Patient was removed to the Hahnemann Hospital directly after the accident, and two days thereafter was operated on for the removal of the bullet. Through the courtesy of that institution (3-26-04) the following facts were elicited from notes taken at the time the patient was under their care. Diagnosis: Gunshot fracture of the fifth cervical vertebra (Dr. Van Lennep). History of the illness: On Wednesday, December 30, 1903, at 2 a. m., patient was brought to the hospital with a wound in the region of the right side of neck close to the region of the jugular vein. The left pupil was larger than the right, but both reacted. The right lower extremity he could not move, and later the right upper extremity was also involved. The bullet wound was explored, but no trace of bullet was found. An incision was made over the cervical spines, the fifth cervical spine being found readily movable. The vertebral arch was pulled away with forceps,

* Read and patient exhibited before the Philadelphia County Medical Society.

as well as the transverse process on the right side. The track of the bullet was found to extend downward, entering the posterior mediastinum. The patient made a good recovery after the operation and was discharged February 13, 1904.

At present he presents a scar, surrounded by powder marks, over the region of the middle third of the sternomastoid muscle on the right side, and also a scar about 4 inches in length directly over the ligamentum nuchæ. Patient states that his right arm and leg were paralyzed. The leg began to improve on the twenty-fifth day after he was shot, so that now he is able to walk, although some dragging is noticed in walking. There is still some impairment in power of various portions of the affected limb. There is some foot drop, the knee jerks are markedly exaggerated, ankle clonus and Babinski's sign are distinct. No marked spasticity, however, is noticed. The right upper extremity is practically useless. About two months ago patient noticed returning motion in the little finger, which has improved, and he is now able to move the other fingers as well as to flex and extend the right hand at the wrist. The paralysis is flaccid, although there is some resistance to passive movement at the elbow. All the muscles of the upper extremity are somewhat wasted, but the atrophy affects particularly the supra and infraspinatus, the pectorales, and the trapezius muscles. All the tendon reflexes are exaggerated. On the opposite side of the body there is no indication of impairment of the motor power. The knee jerk, however, is somewhat exaggerated, and there is a doubtful Babinski's sign. Examination for sensations reveals the following peculiarities: While the sense of touch is preserved, the temperature and pain sense are very much impaired. The left upper extremity, beginning on all its aspects at a level of 14 cm. below the acromion, the thorax below the mamillary line, and the abdomen on the left, finally the entire left lower extremity on all its aspects, are totally thermoanæsthetic and analgetic. Above the mamillary line to the clavicle, also partly on the left side of the face, there is some diminution of sensations of pain and temperature. Over the deltoid muscle there is a slight hyperæsthesia, and immediately below a small area of hypalgesia. The disturbance of sensations is strictly and mathematically limited to the middle line of the body. The right half of the body is absolutely normal to all forms of sensation (see figure). The only sensory disturbance to notice on the right side is the astereognosis of the hand. The pupils are unequal, left larger than the right; slight drooping of the right eyelid; and slight enophthalmos is present on the right side.

To sum up, we have here a motor paralysis on the right side and a sensory paralysis on the left side. This is a symptom group which we observe in experimental physiology, when a hemisection of the spinal cord is made on animals. It is true that in the latter case we have a few additional symptoms, namely, a slight band of anesthesia on the paralyzed side, a vasomotor paralysis of the same side, visceral disturbances;

but these symptoms are not always present in man. Nevertheless, the fundamental symptoms concerning the localization of motor and sensory disturbances are present here in their entirety. It is therefore a case of typical Brown-Séquard's paralysis. A number of cases reported as examples of Brown-Séquard's paralysis do not all present the typical symptoms such as they were observed experimentally in animals; in some of them the paralysis is only partial, in some the sensory disturbances of the opposite side are not clearly cut. In fact, the pure type of this group of symptoms is rarely met with. In my case the main symptoms are present in their entirety and in the perfectly typical form, so that from a physiological standpoint it can be considered as one of exceptional value.

The morbid manifestations in traumatic hemisections of the spinal cord are limited to the lower extremities when the injury is below the ninth thoracic vertebra. In injuries at the level of the upper and middle thoracic vertebræ the thorax is also partly involved. An entire half of the body will show sensory and motor disturbances when the lesion is above the sixth cervical vertebra; in such cases there may also be present symptoms of paralysis of the sympathetic system. As in a large majority of cases the injury occurs in the thoracic region, the disturbances are usually confined to the lower extremities. My case, therefore, can be placed among those that are rarely met with. There are two points in the history of my patient's condition which deserve our attention.

An injury to the spinal cord is usually considered, with very good reason, of a very serious import because of the permanence of the lesions of the central nervous system; and in cases in which we suspect a hemisection we are naturally inclined to give the gravest prognosis. From a medicolegal standpoint it is highly important to be able to appreciate properly the true condition of the victim of an assault. It will be an error to think that when paralysis follows a hemisection of the cord, the patient will remain permanently incapacitated. The truth is that in a large majority of cases great improvement and even functional recovery follow. The reason of it lies in the question of regeneration of nervous elements, which in the state of our present knowledge is accepted as proved.

Clinical experience shows that in lesions below the sixth cervical vertebra the patient has great chances for improvement, while in cases above that level the prognosis should be reserved because of a possible appearance of disturbance of respiration. Our case is interesting from this

point of view, that the injury affected the cervical cord at the level of the fifth vertebra, and the patient escaped immediate serious trouble and even great improvement followed in the lower extremity.

It may perhaps be of some interest to see if our present knowledge of the fine anatomy of various tracts will explain the curious combination of symptoms. As to the motor paralysis in our case, it is easy to understand. A section or a lesion produced in the right half of the cord by the bullet injured the pyramidal tract below the decussation, as the injury was at the level of the fifth vertebra. The very same condition will explain the various reflex phenomena mentioned above (exaggerated reflexes, Babinski's sign, ankle clonus). Far more difficulty we experience in explaining the crossed hemianæsthesia. In order that a lesion of one side of the cord should give an involvement of sensations on the opposite side, we must suppose that either the sensory fibres themselves cross each other all along the cord or their collaterals decussate. Anatomy teaches us that the cells of the spinal ganglia send sensory prolongations which bifurcate: one branch is distributed at the periphery in the skin; the other branch serves to form the posterior root and enters the cord. The latter divides in the cord into two branches: one ascending (long), the other descending (short). These two do not decussate in the cord. The sensory impressions which come from the periphery are transmitted through these longitudinal branches, and also through the collaterals which those fibres give up. It is principally Ramón y Cajál that made us familiar with those collateral fibres. Among the latter there is particularly one variety that concerns us in the case under consideration, namely, the collaterals of the posterior commissure; after they have crossed the median line, they become distributed in the posterior cornua of the opposite side. The paths for sensations of pain and temperature are fibres coming from the posterior cornua of the opposite side. It is, therefore, evident that a destruction of one half of the cord will unavoidably produce a sensory disturbance on the opposite side. I hasten, however, to add that so simple as the question of sensory distribution may appear, it is far from being solved, as the anatomical data are not yet in entire accord with the clinical and experimental facts. In our case the pain and temperature sense are mainly involved. The lesion can, therefore, be approximately but with a great degree of probability placed in the right side of the cord affecting the pyramidal tract and the posterior cornu on the same side.

THE SIGNIFICANCE OF ABULIC SYMPTOMS IN CASES OF MENTAL DISEASE.*

By ROBERT H. CHASE, M. D.,

PHILADELPHIA,

SUPERINTENDENT, FRIENDS' ASYLUM FOR THE INSANE.

In presenting to you to-night a problem in psychiatry, I am conscious that in these days when the problems of medicine have grown so complex, one has little time to devote to the technical discussions of his neighbor, especially if they be in a field foreign to his own thought and study. Holding this in view, then, I shall endeavor to avoid a too formal presentation of my theme, hoping to gain your interest in some measure by calling your attention to a few special features of general application.

The term *abulia* designates, in a general way, a weakening or a diminution of the will force of the individual. It finds expression in hesitation, indecision, and in many forms of powerlessness, as well as in the defective energy of attention; in the normal state it is seen for instance in the inertia of convalescence and in the lassitude of spring-time. This mental inaptitude has long been familiar to physicians, who observe it in various forms of mental and nervous disease. Besides *hysteria*, where it strongly prevails, it is common in all of the forms in which the chief characteristic is inactivity of the mind. It is particularly conspicuous in *melancholia*, *dementia præcox*, and in the depressive types of general paresis; in some conditions of *neurasthenia* and *psychasthenia*; in the intoxication of opium and alcohol; in the retardation of manic-depressive insanity; in short, among patients generally suffering from weakness or exhaustion of the mental processes.

For the convenience of study the subject may be divided into systematized, localized, and general *abulia*. It is not my present purpose to go fully into these subdivisions, but only to point out some of the salient facts as we proceed. Systematized *abulia*, as the term implies, is not a lack of will power in general acts, but in a particular act or a system of special acts. It is not an easy task to differentiate systematized *abulia* with accuracy. The difficulty may be appreciated when one remembers that there are other ways by which a particular act may be suppressed, as in some instances by a fixed idea or in others by *amnesia*. In an elucidation of the question it is helpful to bear in mind that every volitional act contains two principal parts, *i. e.*, the sensory and motor. When an isolated act has passed out of memory, it is not easy to say which side of the arc is impaired. Certainly these phe-

* Read before the Philadelphia County Medical Society, December 14, 1904.

nomena "not-knowing" and "not-being-able," as they are called, are closely related, and in the normal man they are almost wholly confounded. But in certain mental cases we are obliged to make a distinction. A person who knows what should be done, but who cannot find in his mind the means of effecting it, who has simply forgotten the way of going about it, is not identical with the patient who does not give himself the trouble to conceive the act and makes no effort toward it. In the first instance he is amnesic, in the second, abulic. From a prognostic standpoint it is a matter of importance. As an example, *astasia abasia* is a form of amnesia of the motor images and not a form of abulia, properly so called. Some authors believe that the "not-willing" variety is met with more frequently in the generalized abulias and the "not-being-able" in the systematized forms. This is equivalent to saying that the latter are generally amnesias.

Of the systematized abulias Janet, an eminent French writer of the Charcot school, gives the abulia of sleep. This may seem odd to us for we do not generally speak of sleep as a volitional act, or connect it in any way with the will. But nevertheless the will, according to this author, plays an important part in this function. Certain persons who enjoy a great power of will over themselves fall asleep when they wish, no matter at what time of day or night. Napoleon was noted for his control of sleep, and his celebrated phrase is well known: "When I wish to interrupt a certain affair," he said, "I shut up its drawer and open that of another. They do not mingle with each other, and never trouble or fatigue me. If I think I wish to sleep, I close all the drawers and straightway I'm asleep." It is a familiar fact among hypnotists that sleep is suggested like any other act. This tends to show that sleep is a form of action under the control of the will, which may be influenced by our ideas. In view of the prevalence of disturbances of sleep in mental and nervous diseases this aspect of it is not without interest. In many of these cases the difficulty of inducing sleep is very great. The root of the trouble often lies in a lack of capacity on the part of the patient to learn how to become sleepy. When in consequence of fatigue the abulia is increased, we find in them also that the insomnia increases in equal proportion. Furthermore, a patient of this character cannot awaken by herself after sleep, or being only half awake does not seem to have the power to be wholly in one state or the other. This experience, in a mild form, is not an uncommon event even in normal persons. Who has not found himself in the half awake state, following a night's sleep, gently enthralled by a dreamy reverie, from which he is unable to awaken

until a motive idea as a stimulus calls the will to action.

The general abulias, which apply at the same time to both action and thought, are practically of more importance. General abulias of the motor type are of all degrees of intensity from slight hesitation of voluntary acts to extreme indecision and powerlessness. This condition cannot be explained by any form of paralysis nor can it be attributed to a fixed idea. In the milder forms such acts become painful, slow, of short duration, and are interrupted with innumerable delays. The patient takes an interminable time to dress, to sew a few stitches, or write the simplest letter. She experiences especially a great pain in coming to a decision and in beginning any new work. To succeed in doing anything at all, these patients are obliged to divide and subdivide acts which appear to others very simple, and notwithstanding the greatest deliberation they never succeed in doing anything of a complex nature.

One of the forms of general abulia is the intellectual type. Before considering this class of abulias I need first to recall to mind certain functions of the will. It should be remembered that the will has not only a motor action, as applied to muscular reaction, but it is intimately associated with the production and expression of our ideas. In fact, such authors as Wundt and Bustian regard this intellectual function of the will as the essential rôle, and that its acts are only its outer manifestations. This intellectual action of the will is commonly called attention. Its principal result is the synthesis or the combining of the lower mental processes such as sensations, precepts, memory images, etc., in such a way as to make us comprehend them. In other words, the attention acting in unison with the apperceptive tendencies of the mind gives us the "intelligence of things." It is obvious that the attention is a very important constituent of mind and it plays an equally prominent rôle in mental disease.

For many years it has been a well recognized fact that the feelings are the first element of mind to indicate a disturbance at the onset of mental breakdown. But it has not been generally known that nearly coincident with this change in the feelings we have in the volitional sphere a disturbance of the attention, as an early symptom in many cases of insanity. This is seen in the marked weakening of voluntary attention and as an immediate consequence the patient may become confused, restless, and maniacal. Again, one of the special functions of attention is its protecting influence on the higher mental mechanism. As we are constituted, myriads of sensations are constantly crowding in upon the sensorium. Now it is just here that the attention

performs its marvelous office. It stands as a screen, as it were, defending the delicate fabric of mind from this terrible assault. Were it not for its protection, no human mind would be able for long to maintain its integrity. When voluntary attention in the process of disease has become much weakened in an individual case, then not infrequently ensues the train of symptoms which we have described; the patient passes abruptly into a state of delirium.

The defects of attention were pointed out as long ago as 1834 by Leuret, by Billod in 1843, and by many recent writers. Guge, of Amsterdam, having seen analogous modifications of attention in his observations of adenoids gave them the name of *aproxexia*; a name which has been so generally well received that it has been applied to this disorder of attention when occurring in mental and nervous diseases. *Aproxexia* in mild form can often be detected by asking the patient to read a few lines from a book or newspaper. Usually the patient being told to read aloud, does so correctly, although with monotony, but when finished it is found that she understands nothing that she has read. To be sure she pronounces the words clearly and comprehends the meaning of each one separately, but the sense of the paragraph escapes her wholly.

This disorder is a particular defect of attention and is not due to trouble of sensation or perception or to the association of ideas in the ordinary sense. Some authors have attributed it to defective memory, but experiments with these cases prove that the trouble does not arise from amnesia. If *aproxexia* increases, this lack of recognition will show itself not only in reading, but in the simple perception of outward objects. This psychological phenomenon is seen in the babble and rhyming of acute maniacal states of the insane. In them it is not unusual that they fail to recognize their surroundings and mistake for others the persons whom they casually see. Apprehensive of harm they read into the unfamiliar objects about them agencies which portend them ill. Sometimes this trouble is shown, not in the perception of visual images, but in the perception of auditory sensations. As I said before, the primary symptom of mental breakdown may be shown by this trouble and as it becomes more severe the disease may pass into melancholia or maniacal excitement. When the power of attention is simply diminished a number of complex disturbances may be observed: (1) Attention is very slow and very difficult to fix; when let alone the patient gives herself up to silent or babbling reverie.

(2) When the patient is persistently urged to fix her attention the effort is attended with much suffering, the result of extreme anxiety, which frequently produces a very severe headache. The patient who fears these headaches avoids the exercise of atten-

tion as much as possible. A young man of this class said: "When I am with intimate friends I do not try often to pay attention, I just let myself go."

(3) These subjective symptoms which occur during the exercise of attention are accompanied by objective symptoms, such as involuntary motor disturbances, and in hysterical subjects the development of new anæsthesias. In the effort of attention these patients are prone to exhaust the small amount of mental force which they possess. If she is anæsthetic only on one side she becomes so on both; the sense of smell is lost and the visual field contracts. Sometimes under forced effort blindness may temporarily ensue. Not only the sensations, but also the movements are neglected. In this way grimaces, tics, jerks of arms and limbs may occur of which the person may not be aware. In the absent minded absorption of maniacal attacks in the insane the phenomena of echolalia may be frequently seen. It is a variety of subconscious act, which has its explanation in this defect of the power of attention. While speaking of this disturbance of movement, attention may be called to the involuntary movements that take place in children when learning to write or in the performance of other unfamiliar acts of a complex nature. In some susceptible persons this tendency is more than usually conspicuous, showing itself in odd mannerisms and in peculiar eccentricities of conduct. It is a striking characteristic of persons of feeble mind. Any one who has heard Blind Tom in the remarkable exhibitions of his musical talents will remember this feature in him while listening to a new score which he was expected to play at once by ear. The full vigor of his mind, being absorbed in a strong effort of attention, left the reflex actions of the lower centres unguarded by proper inhibition.

(4) This very painful attention just referred to does not usually last long in abulic patients; it oscillates, ceases, returns for a moment, and after a variable time disappears. Some patients simply turn their eyes away from their work, say they cannot continue, complaining of severe headache. With others great exhaustion comes on as they cannot do anything or feel anything for awhile. In a recent case (D. E.) after an effort to read for a short time complained of pain in his eyes, which watered, and without further warning temporary blindness supervened.

The same exhaustion may become manifest not in the senses but in the intelligence itself. Janet tells of one of his abulic patients who, becoming much interested in a scientific explanation she was making, was seized after a few moments' effort with complete *aproxexia* from which she did not recover until the next day. In this case she suddenly

stopped, fixed her eyes intently with complete immobility on the ground. She had the appearance of being deeply absorbed in thought, but she was not; she was in one of her customary crises. It is a condition of automatic reverie, supervening as a result of the total exhaustion of voluntary attention. This phenomenon in a mild form is often experienced in the normal state of health by a person who may be more or less fatigued. Suddenly the eyes become involuntarily fixed and immobile and are fastened on the ground with intense gaze as though in deep thought. But it is a deceptive appearance for the mental state is the reverse of that of absorbed attention. This automatic reverie is common at least in elderly people. The soothing influence of a cigar or pipe conduces to it; it is the state that supervenes just before one loses oneself in sleep. There are persons, especially past middle life, who, while not particularly religious or spiritually minded, find much enjoyment by attending a Quaker meeting. The obvious explanation is that under this worthy guise they find opportunity to indulge in this pleasant form of reverie; it gives also a clue to that unbecoming habit of sleeping in meeting which gives devout Friends so great concern. Another result of exhausted power of attention is to throw certain patients into violent attacks of motor excitement. Janet gives the case of a little boy who was sent to his physician from school because he had convulsions every time he was made to give strict attention to his studies. Bevan Lewis observed a case of general paresis that developed convulsions on being pressed to solve a difficult problem in mathematics.

Patients who have a moderate degree of aprosexia succeed finally in understanding, they form ideas of things but they are ill formed; they lack clearness and stability; they grasp the idea imperfectly and it soon escapes them. Hence, doubt is one of the characteristic symptoms in states of mental abulia. This fact explains the prevalence of obsessions among the nervous and insane. This doubting spirit is seen not only in the objects of sense but it also applies to memory and fancy. These patients represent to themselves the past badly and the future equally so. They doubt what they have done and what they are going to do. One doubts about the past and has false remorse; another has imaginary fears; one accuses everybody of falsifying and another accuses himself in like manner. Finally, another characteristic of aprosexia should be mentioned. It consists in an impression of novelty in which things take on a strange or unfamiliar appearance. Objects and persons take on a strange or curious aspect, which constantly excites their surprise or apprehension. This astonishment is often

the starting point of a series of questions, and when the patient is predisposed to obsessions they get easily in this way into the nervous doubting state, termed "*folie du doute*," or doubting insanity.

THE PATHOLOGY AND TREATMENT OF DIABETIC GANGRENE OF THE LOWER EXTREMITY.

By HORACE J. WHITACRE, B. S., M. D.,

CINCINNATI.

(Concluded from page 116.)

PATHOLOGICAL CONSIDERATIONS.

There is a certain uniformity in the pathological findings in the cases that have just been related, which will call for particular mention. A diabetic and a senile type of gangrene have been described by all writers on surgery for a very long time, the underlying cause of the one being considered to be the constitutional disease, of the other a senile arteriosclerosis. In 1891, Haidenhain presented a series of cases of diabetic gangrene in which he found a uniform involvement of the smaller arteries of the affected extremity, and from these findings he decided that too little attention had previously been given to the condition of the arteries in these cases, and that this arteriosclerosis was probably a most important factor in the production of diabetic as well as senile gangrene.

A majority of writers since this time have either made mention of this view expressed by Haidenhain, or have given endarteritis obliterans the leading place among ætiological factors.

My study of the nine cases reported has led me to believe that diabetic gangrene is very largely dependent upon endarteritis obliterans, and that in the absence of such arterial change this complication will not occur in diabetes mellitus.

In five of my cases the arteries were examined at different levels. In all of these cases the obliteration was complete at the ankle. In four cases the posterior tibial artery was narrowed to the diameter of an ordinary pin, by new connective tissue, and in three of these the obliteration was made complete by fresh blood clot. In two cases the obliteration was almost complete in the lower portion of the popliteal, and in five cases the popliteal artery showed such advanced change that it would have been unsafe to ligate at this point. In four cases the femoral artery was far from normal, yet in no case did secondary hæmorrhage occur.

In one case the popliteal artery alone was examined, but this artery showed a change equal to that found in those cases in which both the pos-

terior tibial and dorsalis pedis arteries were entirely obliterated at the ankle. In the case in which recovery ensued without amputation neither artery could be felt at the ankle at the time I saw the patient, but Dr. Kreidler has since informed me that pulsation returned in these arteries later. The radial and the temporal arteries gave undoubted evidence of a general arteriosclerosis, and I feel certain that this patient suffers from this disease in an advanced form.

It will be seen that all my cases of diabetic gangrene have shown an endarteritis obliterans in an advanced form, and that in all of the cases examined the main arteries were entirely obliterated at the ankle. We should expect an arterial lesion of this degree to cause gangrene certainly when unassociated with other lesions, and it seems to me that this very fact will argue strongly against any decided influence of the diabetes *per se* in producing gangrene.

I am not prepared to state that diabetes may not reduce the vitality of the tissues to this degree—indeed, Case V. would seem to favor this view—but I am prepared to state that in every one of the cases in which I have been able to examine the arteries, I have found a sufficient reason in the vessels to explain the gangrene. Haidenhain gives three conditions under which spontaneous gangrene may occur:

- (1) A deficient supply of normal blood (senile).
- (2) A normal supply of an abnormal blood (noma).
- (3) A deficient supply of an abnormal blood (diabetic).

It must certainly be granted that the diabetic condition may hasten an impending gangrene, but there seems some danger of giving this factor a more prominent place in the ætiology than it merits.

A significant fact in this connection is the extreme rarity of gangrene in young diabetics, and I am inclined to believe that the arteries were not examined in some of these cases in which this complication has been reported in such patients. It is a well established fact that endarteritis obliterans can occur in youth.

The conclusion will therefore be drawn, that the gangrene in the above reported cases was caused chiefly by the arterial lesion, and that the diabetes acted only in a contributory, and perhaps unimportant, manner.

Another observation should be made at this point. It will be noted that only one of the cases reported presented the usual symptoms of diabetes mellitus. Increase in the amount of urine,

great thirst, voracious appetite, and emaciation were regularly absent, except in this one case, and with one other exception none of these patients had felt ill previously to the appearance of the gangrene. Indeed, none of them would have been considered diabetics had the gangrene not suggested an examination of the urine.

A discussion of the ætiology and the varieties of diabetes does not fall within the scope of my paper, but I am impelled to express, at this point, a belief that the glycosuria found in the cases which have been reported represents a chemical interference with carbohydrate oxygenation, somewhat different from that found in true diabetes mellitus. Certain writers on diabetes have described a variety occurring in elderly people, which may continue for years. I do not feel competent to offer an explanation for this particular variety of glycosuria, or to classify our present knowledge on diabetes, yet it has seemed to me probable that the same arterial change which has been found in the smaller peripheral arteries of my cases is likewise present in the pancreas, and that this obliterating endarteritis might influence the nutrition of the specific cells of this organ in such manner that its internal sugar splitting secretion is either diminished or destroyed. I am unable to present histological facts in this connection, inasmuch as a post mortem examination was refused in both my fatal cases, yet I believe that such study is much needed, and that when this information is joined with the chemical facts now being announced, a "diabetes of elderly people" will have a separate classification. I am, furthermore, of the opinion that such elderly diabetics will not suffer from gangrene of the foot unless they at the same time suffer from an endarteritis obliterans. It is a point of some interest to note that the sugar disappeared from the urine of the three patients who recovered after amputation and that it did not recur on regular diet.

TREATMENT.

The treatment of diabetic gangrene of the foot will divide itself naturally into the expectant and the operative. When the gangrenous process is confined to one or more toes, the expectant line of treatment should be used, in the hope that Nature will establish a line of demarcation, that the gangrenous toe will be cast off, and that recovery will take place without operation. This termination is entirely possible, and such plan of treatment should be continued in every case until it has been demonstrated that extension to higher parts is inevitable. When the gangrenous process extends to, and involves, the dorsum or the sole of the foot, operation becomes imperative.

Two general principles dominate the expectant line of treatment:

(1) Bacterial infection.

(2) A deficient blood supply.

Bacterial infection is the serious danger in this condition. The tissues in and around the gangrenous area have long suffered a progressive diminution in their blood supply, until their vitality has reached a very low value. Indeed, the vital resistance of certain cells is so low that a contusion that would pass unnoticed in health causes death of the part. Now, inasmuch as the question of bacterial invasion of the tissues is largely one of overcoming Nature's forces of vital resistance, it becomes apparent that bacteria will find in such an area a most favorable soil. An infection in such tissues usually extends rapidly, particularly along fascial planes, and promptly causes serious constitutional symptoms.

It is clearly impossible to improve greatly the fighting power of the tissues, and we must therefore direct our efforts chiefly to the exclusion of germs. To this end, the entire foot and particularly the toes are scrubbed with soap and water. The danger of inflicting injury during this process will be much lessened if a pledget of cotton is used in washing. If there is any evidence of existing infection, or if the surrounding skin shows inflammatory reddening, a wet antiseptic dressing should be applied to the entire foot. I have employed aluminum acetate for this purpose. After twenty-four or forty-eight hours the wet dressing should be replaced by a perfectly dry dressing. Moisture is essential to germ development, and mummification of the gangrenous tissues becomes a rational step in the treatment. Indeed, it has long been an established fact that these patients do best when the gangrenous tissue is rapidly reduced to this condition. It is a common experience to see such mummified toe separate from the living tissues in a perfectly clean cut and apparently aseptic manner and to leave a satisfactory stump. In order to bring about this condition of mummification I have used large amounts of borated talcum powder on the entire region, and when there is a secretion present have ordered enough changes of dressing daily to maintain a dry condition. The dead and loosened epidermis must usually be peeled off before much progress can be made.

Next, the arterial condition must be considered. When the main arteries of the foot have become entirely obliterated, as in the cases reported, efforts to improve the circulation and the nutrition would seem to be futile. Such will probably be true in a majority of the cases, yet

there are certain measures which should be used because of the possible good, that they may do. Thus, the foot should be elevated sufficiently (six or eight inches) to obtain the effect of gravity in venous return. Again, a dilatation of the superficial vessels and a normal temperature should be maintained in the threatened tissues by enveloping the entire foot in cotton and placing hot water bottles around it.

The constitutional treatment of the diabetes should be carefully directed, for two reasons: First, it may aid in arresting the progress of the gangrene; and, second, such treatment will put the patient in better general condition to stand an amputation should this become necessary. The patient should, of course, remain continuously in bed. A strict antidiabetic diet should be prescribed, and the patient urged to drink water in large amounts. Among drugs which have been recommended for diabetes arsenic has perhaps the best claim to acceptance.

While it would seem that the recent discoveries in this disease should have given us more suggestions for treatment, it is at the same time possible that we have, in reality, a very valuable suggestion in that theory which explains the glycemia and glycosuria upon a basis of a defective oxygenation of the glucose which is thrown into the blood from the liver. If the fault is entirely or largely one of deficient oxygenation, then we must seek for those measures which stimulate this function. Arsenic is probably efficient because it acts in this way. It increases the number of red blood cells and the amount of hæmoglobin in them. Iron would seem to be a correct drug, for the same reason. Massage and exercise would probably act in the same way.

Codeine, opium, antipyrine, acetanilide, and other drugs have been used. Tyson has suggested that these drugs probably act by influencing glucose metabolism in the distal capillaries. In my recent cases I have used the following formula, the authority for which I am unable to give:

- | | | |
|-------|---------------------------------------|----------------------|
| (1) ℞ | Antipyrine | } aa grns. xv; |
| | Sodium bicarbonate | |
| | T. i. d., for three days. | |
| | Said to reduce the sugar 50 per cent. | |
| (2) ℞ | Quinine dihydrochloride..... | grns. x. |
| | S. One dose on rising, for six days. | |
| (3) ℞ | Sodii arsenitis..... | 5 c. grms.; |
| | Aquæ | 30 cc. |
| | S. One drachm, for six days. | |

Formula 1 is given but once, while formulæ 2 and 3 are given alternately for a considerable period of time.

I am not convinced, however, that this formula gives any better results than arsenic. Tyson believes that small doses of arsenic will be more efficient than large doses, and advises a dose not to exceed three drops of Fowler's solution or one thirtieth grain of arsenious acid, three times a day.

It is very doubtful whether constitutional treatment can influence the arterial condition in the type of case that I have reported. The iodides may be expected to give marked results when either the endarteritis or the diabetes is of syphilitic origin.

OPERATIVE TREATMENT.

When a gangrenous process of this type has extended to the dorsum of the foot the dangers to the patient become very great, and it is the opinion of a majority of surgeons that an amputation should be done. The questions that will interest us in this connection will be the site of amputation and the technique.

I believe that the specimens here presented leave little doubt as to the proper site for amputation. I will recall the fact that in five of my cases the popliteal artery was so seriously damaged that amputation at this level would have been unsafe. I have made two mistakes in this connection. The first was made in the first case of this kind that I treated. I thought only of the diabetic condition and amputated at the ankle. The flaps promptly sloughed, as did also the flaps of a second operation above the knee. This patient fortunately recovered. My second mistake was less pardonable. I amputated through the upper part of the leg, and in spite of seriously damaged arteries, persuaded myself that a fairly free capillary bleeding from the divided tissues meant an efficient circulation. This patient endured the first amputation well, but died as a result of the second.

I am, therefore, convinced as a result of both pathological and clinical experience, that the lower third of the femur is the site of election for amputation in these cases.

Certain points in the technique seem worthy of mention. Dr. Ochsner has advocated amputation without a tourniquet, for the reason that a diseased femoral artery may be injured by its application. Inasmuch as diabetic gangrene would seem to belong in reality to the senile type, I have followed this suggestion in operating on this type of case with satisfaction. Dr. Ochsner has further suggested that the injury to the divided tissues should be reduced to a minimum, and that no sutures should be applied. These measures recommend themselves at once as rational and essential.

The operative treatment of diabetic gangrene was formerly condemned because of its high mortality, but accurate asepsis has diminished the dangers of such operation to such a degree that amputation is now believed to be correct when the gangrenous process has extended to the dorsum of the foot.

Six cases of gangrene associated with sugar in the urine are reported above. In one case recovery ensued under the expectant plan of treatment. Amputation was done in five cases. In three of these recovery ensued, and in two death within a week after operation. As has been previously stated, one of these deaths might have been prevented by a primary amputation above the knee. My own experience seems, therefore, to be in accord with the general results, and I am encouraged to apply this treatment in all suitable cases.

The following conclusions will be drawn:

- (1) An endarteritis obliterans is the main etiological factor in so called diabetic gangrene.
- (2) In the absence of such arterial change it is believed that gangrene of the lower extremity will not often occur in diabetes.
- (3) The form of diabetes presented in this type of case varies considerably from true diabetes mellitus.
- (4) An expectant line of treatment should be followed so long as the gangrene is confined to the toes.
- (5) Amputation above the knee should be done as soon as the gangrene process involves the dorsum of the foot.

A Case of Alleged Prescribing by a Druggist.
—Counsel for Louis Berdy, who conducts a drug store on Madison Avenue, asserts that the law which gives the County Medical Society the fines imposed on persons prosecuted by its agents is unconstitutional, and says he will carry the matter to the Court of Appeals. A woman visited Berdy's store, saying she was ill, and it is alleged she was given medicine there. Berdy was held by a police court, and the case went to the Court of General Sessions. His counsel now seeks to have a ruling from a higher court. In his argument the lawyer asserted that benefits such as those conferred upon the County Medical Society have already been pronounced unconstitutional, citing the case of *Frederick Fox vs. the Mohawk and Hudson River Humane Society*, decided in February, 1901. Berdy's counsel said: "The fines are the property of the State and the special law gives them to a private corporation, for which the machinery of the courts acts as a collecting agency. The society now enjoys an unconstitutional monopoly. So far as druggists advising customers is concerned, I believe they have as much right to do so as grocers or dry goods merchants have to extol the merits of the articles they have on sale."

PRELIMINARY NOTICE OF A NEW AND SIMPLIFIED DOUBLE STAIN FOR *BACILLUS TUBERCULOSIS*.

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In the clinical examination of material for tubercle bacilli, much time is spent in the technics requisite to secure total decolorization of all bacteria, excepting *Bacillus tuberculosis*.

Acting upon the theory that the retention of carbol fuchsin stain within the tubercle bacilli is due to the chemical affinity of the fatty acids, described by Koch, for the dye, it appeared feasible to me to subject the bacilli to mordant action without removing the color. It appeared reasonable to me that most other bacteria would lose their color before the tubercle bacilli would be attacked.

Deeming Labarraque's solution (sodium hypochlorite) serviceable as a mordant, I began a series of experiments which are of interest and give promise of minimizing the time necessary to stain tubercle bacilli without sacrificing definiteness or accuracy.

A thin smear of sputum, for example, is prepared according to ordinary methods, dried in the air, and fixed by passing three or more times through a flame. Carbol fuchsin is poured on the smear and heated to the steaming point (boiling is to be avoided) for about one minute. Thus far the technics is that ordinarily followed. Instead of using Gabbet's solution (sulphuric methylene blue) or decolorizing with acid alcohol and counterstaining with Bismarck brown, the smear is drained of excess of carbol fuchsin stain, washed in distilled water, and then plunged repeatedly into Labarraque's solution until the slide presents a uniform brown appearance. The slide is thoroughly washed in distilled water to remove any excess of hypochlorite solution, dried between blotting or filter papers, and examined with a $\frac{1}{12}$ immersion lens. The bacilli tuberculosis appear as red rods, solid or beaded, upon a brown field. Other bacterial forms, with the possible exception of *B. smegmæ* and *B. lepræ*, are brown in color—the red having been altered to this hue by the action of Labarraque's solution. The *B. tuberculosis* alone retains the red stain of carbol fuchsin.

The general appearance of the specimen thus stained is that of a truly double stained specimen that has been stained with carbol fuchsin, decolorized with acid alcohol, and counterstained with Bismarck brown.

By this new method of staining, there is a great saving in the time generally spent in decolorizing and counterstaining, and there is no sacrifice of diagnostic accuracy.

601 WEST ONE HUNDRED AND FORTY-EIGHTH STREET.

REMARKS ON SOME ABUSES IN THE INTRANASAL SURGERY OF TO-DAY.*

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At the meeting of the British Medical Association, held in the city of Montreal in September, 1897, during the discussion of certain ultraradical methods of intranasal operative procedure advocated by some of my English colleagues, I took occasion to protest in somewhat vigorous terms against the then indiscriminate and thoughtless employment of surgical measures within the nasal passages and the appalling and useless sacrifice of tissue and function which many of them entailed. While sounding a note of warning against certain methods which were surely destined to bring the modern surgery of this region into disrepute, I at the same time emphasized and deplored the fact that the sudden craze for operation that had developed across the seas had caught its inspiration and derived its leadership from this side of the Atlantic; and in response to the expression of surprise on the part of some of the members who had taken part in the debate, that more serious consequences had not followed in its wake, I ventured to express the opinion (speaking with all reverence) that, in the absence of other and adequate explanation of the phenomenon, the apparent infrequency of accident and fatality following the reckless use of knife and chisel was due to the operation of that mysterious force in nature which is known as the grace of God.

I do not think that the members of this association can accuse me of irresolute timidity or lack of the proper conception of the importance of radical procedures, when necessary, in the surgery of the upper air tract. In dealing with conditions that demand surgical attention I believe in the gospel of thoroughness. It is not therefore against the legitimate surgical measures employed in the nasal passages that I wish to speak, but against their abuse. The practices which I deprecated in 1897 persist, and persist in an aggravated form, to-day to the serious injury of our

* Remarks made before the American Laryngological Association, June 2, 1904.

specialty in the eyes of conservative men, and it is, therefore, against the reckless and indiscriminate performance of surgical procedures in the nasal and accessory cavities that I wish once more to enter a formal protest.

In doing so, I shall not go into an elaborate bill of particulars, but simply indicate very briefly the structures that have suffered most in the frantic rush for operation, prefacing my remarks with the statement that they are intended for a well known class of operators that are found everywhere, and are therefore not common to any community.

Burke's dictum, that you cannot indict a whole nation, is equally applicable to laryngologists the world over, and it is therefore manifestly unfair to hold the body politic of laryngology in any community responsible for the surgical antics of the fools who rush in where angels fear to tread. These latter gentry, the product of no particular land, are those who do the most injury. They clear out the nasal passages as if they were opening up a primeval forest. They saw and chisel and burrow through everything in sight, never forgetting to apply in this particular field the injunction of the Irishman at Donnybrook: "If you see a head, hit it."

Everywhere, in matters relating to intranasal surgery, there will, in the nature of things, always be honest difference of opinion. In a question of this kind it is difficult to eliminate the personal equation. From the wild enthusiast (who is by no means always the young and inexperienced) who sees an indication for operation in the slightest want of absolute symmetry or in the least departure from the perfect image as seen in diagrams and anatomical plates, to the surgical nihilist, who, either through ignorance or timidity, or both combined, hesitates to grapple with the responsibilities of the situation, each will have his say in monotonous and perpetual controversy until the end of time.

In the therapeutics of the nasal and accessory cavities the most brilliant advances and results have been achieved in the domain of surgery. Indeed, it may be laid down as a general proposition that success in the treatment of nasal disease largely depends, other things being equal, on the amount of legitimate surgery in the case. Our surgical cases are, as a rule, our most successful and therefore our most satisfactory cases.

With these preliminary observations let me proceed at once to the discussion of the subject proper of my remarks.

THE NASAL SÆPTUM.

Perhaps the most vigorously assailed of all the intranasal structures is the sæptum. No organ

in the body, not even the uterus, has been subjected to more unnecessary assault. I am speaking within the limits of the strictest conservatism when I say that fully two thirds of all operations on the sæptum (including, of course, those done by all classes of operators) are operations unnecessarily performed. The nasal sæptum is the surgical objective of every beginner in laryngology, and the "sawing out of a sæptal spur" is usually his first baptism of blood. The tyro, when uncertain what to do, seemingly takes as his rule of practice the paraphrase of an ancient law of whist, in case of doubt, smash the sæptum. What matters it if nature has decreed that asymmetry of the anterior nasal passages in the adult should be the rule? Every bulge, every irregularity of the cartilage or bone, every spur, to the amateur, is legitimate prey.

Unless the irregularity is of such a character as to cause serious obstruction and thereby cripple function, most of the spurs met with are perfectly harmless. Small spurs, especially those projecting into the inferior meatus, by acting as protective barriers against the entrance of foreign matter, may be actually productive of good to the individual. Thousands of people go through life in perfect health and comfort with large spurs of the sæptum, which, fortunately for their possessors, have remained undiscovered. Even when such deformities come in contact with opposing surfaces, the mere fact of such contact should not necessarily constitute an indication for surgical treatment. In this latter case much harm has been done by the pernicious doctrine of so called "pressure contact." According to this luminous conception, when the apex of a spur impinges upon the opposing turbinated body, there is immediately set in motion a train of symptoms (too numerous to mention), of which hypertrophy of the opposing structure and interference with "nasal drainage" are among the most conspicuous. Hypertrophy from what? Now as to deflections, dislocations, and deformities of the sæptum other than distinctly localized projections or spurs, the operation to be performed will depend upon the nature of the deformity. No single method is applicable to all cases, and it will sometimes be necessary to resort to several different procedures in individual cases before the deformity is overcome. In this particular field we find the greatest divergence of opinion as to what is best to be done. Nearly every rhinologist has his pet operation, known, or not known, by his name, some more or less ingenious and original in design, others masquerading in the guise of novelty and originality, but in reality as old in principle as the art of surgery

itself. Even a partial list of the operations performed on the sæptum would rival in length the catalogue of the ships in the Iliad or the genealogical records of Deuteronomy. Many of these, though correct and ingenious in principle, are far from satisfactory in practice. Some are unnecessarily complicated, others require a ridiculous number of instruments for their completion. In not a few instances of "successful" performances of some of them, the patient is in a much more serious plight than he was before the work on him began. When, as is not infrequently the case, long continued, disagreeable after effects follow the establishment of a "cure," I am forcibly reminded of the Irishman's definition of the grippe—that it is a disease in which you are six months sick after you have got well.

A great deal of time and trouble, in many cases, may be saved both as regards the treatment of the sæptum itself and also the after-treatment, the subsequent management of the case, in operating by a method the principle and practice of which were advocated and practised by me many years ago,¹ viz.: the removal of portions of the external wall, and notably the inferior turbinated bone of the obstructed side (or portions thereof) as a substitute in suitable cases, for operation upon the sæptum itself.

Since my original article was published, I have received several communications from various laryngologists in this country, notably from the late Dr. Jarvis, of New York, in which they have stated that the principle had not only given them great satisfaction, but had also extricated them on more than one occasion from great difficulty and embarrassment. The method is applicable in cases in which sufficient reason exists for not operating on the sæptum. Its principle may also be extended in its application to other surgical procedures within the nasal passages.

The crying need in operation on the sæptum is greater simplicity of performance. With a comparatively speaking small armamentarium, backed by a *quantum sufficit* of good, common, surgical horse sense, the surgery of the sæptum is not a complicated problem, but one which can be worked out with comparative simplicity and satisfaction. Not to multiply illustrations, what a variety of work, for example, and what delicate work can be successfully done without accident, without interruption of the duties of the individual, and without disagreeable after results by the simple means of the surgical drill in its various forms?

THE TURBINATED BONES AND BODIES.

Another wholly indefensible practice in the intranasal surgery of to-day is the wholesale removal of the turbinated bodies and bones. With some this seems to be a well recognized routine method of practice, and special apparatus have been devised for the purpose, which go under the euphonious and appropriate names of "spoke-shaves," "plows," and the like.

In dealing with obstruction or disease of any kind in the inferior meatus, the physiological fact should be forever borne in mind that, while all portions of the nasal and accessory cavities are thoroughly supplied with air in the act of respiration, the main currents do not stream through the inferior meatus, but pass in a curvilinear path through the region of the middle meatus. Considerable obstruction therefore may exist in the inferior meatus and yet respiration go on normally and with perfect ease. Hence mere obstruction or blocking of this channel, as some would have us believe, by no means negatives the idea of perfect physiological discharge of function on the part of the nasal passages. This is not only theoretically but clinically true. The fact also must not be lost sight of that, apart from its other and varied functions, the inferior turbinated body is the richest of all the intranasal structures in that curious erectile body that plays such a manifest and manifold destiny in the physiology of the organism. The removal or destruction of this important area cannot fail to be followed by deleterious consequences, and to the absolute truth of this statement the dry, secretionless, crust laden nasal passages of the victims of too much strenuous surgery often bear eloquent and silent witness.

No one questions the frequent necessity of the complete or incomplete sacrifice of the middle turbinate bone, notably in the case of accessory sinus suppuration and the radical cure of tumors of the nasal and accessory cavities, and, in occasional cases, as a substitute for operation on the sæptum. But to make it responsible for a host of woes unnumbered, and to attack it surgically from a purely theoretical standpoint, is vicious both in principle and practice. Especially preposterous is its removal for the alleged cure of the disease falsely called hay fever. In dealing with this structure, it should always be remembered that its anterior end is one of the chief buttresses against the admission of foreign matter to the air passages, the principal point at which filtration of the external air takes place. It should, therefore, not be assailed on indifferent and insufficient pretext, or sacrificed on the altar of fantastic hypothesis.

¹ On Removal of the Inferior Turbinated Body of the Obstructed Side as a Substitute for Operation on the Deflected Sæptum in Certain Cases. *New England Medical Monthly*, 1884. IV, p. 249.

THE ACCESSORY CAVITIES.

No one will dispute the fact that these cavities are often unnecessarily entered, and sometimes with harmful results. Especially is this true in the case of the antrum and frontal sinus. The sheltered position and comparative inaccessibility of the sphenoidal sinus have been a godsend to that cavity when the amateur operator has been abroad.

The cavity that has, however, suffered most at the hands of the incautious operator is the antrum. It is certainly curious, to say the least, how some operators can have seen so many cases of antral suppuration. The condition is common enough, to be sure, and examination after death reveals the fact that it is more common than would appear from purely clinical experience; but its relative frequency as compared with other diseases in the experience of some practitioners is well nigh past all understanding.

How often these cavities have been carelessly punctured or opened will never be known. Such cases do not find their way into print.

Granting that our methods of diagnosis in antral suppuration are still defective, and that it is often impossible to establish with positiveness the existence of the disease except by exploratory puncture (a procedure itself not infallible), it nevertheless behooves us even in such a simple matter, especially in acute cases, to exercise at least a little caution in such a seemingly simple matter as the puncture of the antral wall. It is a great mistake to assume that the detection of antral suppuration cannot be positively determined without exploratory puncture. In many cases there is not only presumptive, but actual, evidence of the existence of pus without the aid of needle, drill, or trephine. It is a good rule to follow to attempt in the first instance to make the diagnosis without exploratory puncture, and should the latter be necessary, as it undoubtedly is in a large proportion of cases, to be ready in the event of the discovery of pus, to proceed at once to operation, thoroughly cleansing and disinfecting the cavity after its contents have been removed. It is such an easy matter to thrust an instrument through the antral wall that it has become with some a routine practice to resort at once to that procedure in all cases of suspected antral suppuration.

While in nine hundred and ninety-nine cases out of a thousand it is perfectly harmless and safe, yet it sometimes happens (in solitary exceptional cases, it is true) that matters of grave import ensue. This happened, for example, in the dispensary of one of our large hospitals in a

case in which incautious and repeated attempts at exploration of the antrum were made. No pus was found, but the patient developed a septic empyema of that cavity, which resulted in general septicæmia and death. In this case the fault lay, doubtless, in an infected instrument and individual carelessness; but it should be remembered that such accidents are not impossible when there is not the strictest adherence to antiseptic rules.

How often has the frontal sinus been opened to find little or nothing pathological in its interior is a question that never will be answered. Even the ethmoid does not always escape. A short while ago I was consulted by a young man from the south to have his ethmoid removed for the cure of chronic bronchitis and asthma. He had consulted a leading surgeon laryngologist in one of our largest northern cities, who had informed him that his ethmoid was badly diseased in both nostrils, and proposed attacking that organ from without through the antrum. On careful examination of his case, I found a few sonorous and sibilant râles scattered throughout the chest, and a bad chronic catarrh of the nasal passages and pharynx with the profuse thick mucopurulent secretion which is characteristic of that condition. The sinuses were healthy, and, after prolonged search, I could find nothing whatever abnormal about the ethmoid. Here, then, was a case in which a well known surgeon proposed to go through a healthy antrum to remove an ethmoid which was not diseased.

If, now, we cast about for the cause or causes of this anomalous condition of affairs, we will, unfortunately, not have very far to go. Reduced to its simplest terms, the basic cause of the reckless intranasal surgery that is seen to-day is ignorance, an ignorance begotten of a lack of the proper preparatory general education which is an absolute preliminary necessity to the proper conception and practice of any special branch of medical knowledge, and the careless way in which, in many quarters, laryngology is both studied and taught.

I was once consulted by a physician who had just been appointed laryngologist and instructor in laryngology in a hospital and postgraduate school in a distant city of the Union. He came to me with the confession that, although he was supposed to be qualified for the position, he, nevertheless, was practically ignorant of what was expected of him, and that he had therefore come to me to take a special course of study which would equip him for the work before him. Out of curiosity, I asked him how much time he pro-

posed to give to special study. He said he thought he could cover the ground in six weeks. When I had recovered from the shock to my respiratory centre administered by his reply and had told him that, after graduation, I had had a two years' service in the medical and surgical wards of a large general hospital, during which time I had incidentally familiarized myself with laryngological technique, that I had subsequently spent over two years abroad in the completion of my special studies, and that finally I had spent still another year at work in other special departments of medicine before I considered myself thoroughly equipped to go before the public as a practitioner of laryngology, I never shall forget the expression of his face. He was polite enough not to give vocal expression to the emotions which stirred his soul, but he left me firmly convinced, I am sure, that any one who would require so much time for the completion of his special studies must be the most unreceptive ignoramus and the most stupendous colossus of stupidity of either ancient or modern times.

I know of another instance in which a man doing general practice was suddenly promoted to a professorship of laryngology in a large medical school who, at the time of his appointment, was actually not only unacquainted with the ordinary technique of a laryngological examination, but was also ignorant of the names and uses of the instruments employed in the surgery of the nose and throat. He attended a six or eight weeks' course in a postgraduate institution, at the expiration of which time he took his seat in the faculty of the college as clinical professor of laryngology.

These cases may be isolated and exaggerated, but the very fact of the possibility of their existence is in itself appalling and calamitous.

This brings us to the consideration of the particular type of laryngologist to whom these remarks are chiefly addressed. Let us glance for a moment at the manner of his evolution. He graduates from an institution at which he has received a fairly good, bad, or indifferent medical training. He decides at once to take up a special study. He may start out with or without any preliminary training or knowledge. The field of laryngology is alluring, and he immediately repairs to a postgraduate school or a teaching hospital; or it may be, instead of attending either, he decides to follow the practice of some operator whose chief, and often only, patent of authority consists in his having performed a certain operation a fabulous number of times. He takes a "course" of a few weeks' duration. It is always an "operative" course. Life is too short

to pass the time in such frivolous pastime as the technique of examination or the art of diagnosis; to fritter away the golden hours in the study of the commoner diseases of the climate which are in the future to constitute the bulk of his practice. His mind is set on higher things. He expects the course to be started with some such surgical procedure as extirpation of the larynx or curettement of the sphenoidal sinus. Operations such as these should constitute, in his judgment, the principia of his special education. He is surfeited with operations. At the same time, he quickly absorbs from teacher and textbook graphic descriptions of methods mapped out with mathematical precision and in seductive diagram on paper or on the blackboard, but which he learns in his later experience do not always pan out successfully on bone and cartilage. Why should he not attempt these procedures so artistic in design and, according to the accompanying narrative, so uniformly certain of the best results? Why should he restrict the theatre of his performances, when he is assured by teacher and textbook that in the bright lexicon of promise reserved for the amateur operative laryngologist there is no such word as fail? He sees difficult operations performed a score of times by a master hand, guided by special skill and the light of long experience. Why should he not proceed at once to attempt the same? All that he needs is the necessary apparatus. He is a perfect gold mine to the instrument maker. He returns home with a trunkful of all kinds of instruments for the removal or destruction of each and every portion of the respiratory tract, and with a head hot for their immediate use. He knows it all. He must establish his reputation by some spectacular surgical achievement. His motto and golden rule is the martial maxim of Danton, "*L'audace, encore l'audace, toujours de l'audace.*" He therefore does not hesitate to do a window resection of the septum for the cure of a cough, which subsequent examination may show to be due to pulmonary tuberculosis, or to remove the middle turbinated bone for any miscellaneous group of symptoms with which the patient may be affected.

In one of John Hare's exquisite little plays, that charming actor is interrupted in his character sketch by his leading artist with the observation, "I know that man. He lives in Sheffield." All of you know the man I have just described. He, too, perhaps, lives in Sheffield; but he also lives in London and in Paris and in Berlin and in New York. He also lives in Baltimore.

Another influence unfortunately on the in-

crease which has brought the practice of intranasal surgery into disrepute is the performance of the minor operations on the nasal passage by the practitioner at large, who has acquired a smattering of the subject, usually chiefly from the perusal of textbooks and attendance on a few dispensary clinics. While it goes without saying that any capable man may, by devoting special attention to the subject, acquire a sufficient amount of manual dexterity to do the ordinary operations on the nose, the fact that he does general practice, of course, is not incompatible with the possibility of their successful performance; still it is a notorious fact that such is not usually the case, and it may be safely said that nine tenths of the general workers who practise intranasal surgery are not qualified for the work, and in their disastrous attempts to go beyond their ken is found a most conspicuous illustration of the adage that a little learning is a dangerous thing. Instances of this sort may be multiplied indefinitely. One illustration will alone suffice.

There is an impression widely prevalent among mankind that almost any one can edit a newspaper or manage a hotel. Almost coextensive with this belief among the medical profession is the conviction that every general practitioner of medicine is thoroughly qualified to remove the hypertrophied lymphoid tissue in the nasal pharynx, the falsely called "adenoid" growths of childhood and later life.

In the hands of the expert, with proper instruments and technique, the operation for their removal is simple, safe, and in ordinary cases, such as the soft lymphomata usually met with, easily performed; and when completely and carefully done, there is no operation more satisfactory, not only in its immediate, but also remote results. But I need not remind you that there are abundant instances in which its removal is not so simple a matter, and often considerable skill is necessary to complete success.

These growths should be removed without complications or evil results. Personally, I have not met with any serious accident, beyond a few cases of alarming hæmorrhage, in their extirpation, a record which I attribute largely to the fact that I always use the forceps to the exclusion of all other instruments, except in cases in which the density and other peculiarities of structure call for other modes of instrumentation. But abundant evidence exists of accident, and even fatality, following attempts at their removal, and even in the practice of those of large experience. If results of serious import follow this operation by the skillful workman, how much more likely

are they to occur at the hands of the amateur who is not trained for the work? For, although a divine Providence seemingly assists at most operations of the kind, if statistics could be compiled of all the operations done by this latter class of operators and the ultimate results brought to light, the amount of damage done would appear in the form of a revelation. It is the old, old story, as in other parts of the body, of a simple surgical procedure brought into disrepute by indiscriminate and careless performance. Although the operation is in itself a simple one and in the majority of instances easily carried out, I know of few operations commonly performed in the air passages that are more easily badly done.

Let me not be misunderstood. In the narrow limits to which I have confined these remarks, it has not been my object to decry in the least degree the many excellent measures which modern ingenuity has devised for the surgical treatment of intranasal affections. No one resorts to them with more alacrity than myself when the necessity for their adoption is apparent. It is not my object to stir up strife, to impute unworthy motives to any one, or to arrogate to myself any superior wisdom in the surgical management of these diseases. Nor do I wish to shift to other shoulders all the blame. I, too, in my earlier days, have fallen by the way. Indeed, it was once facetiously said that the street in front of my office was paved with the turbinated bones of my victims.

All I desire to do is to outline as briefly as possible certain abuses which have gradually crept into the practice of our art, and which, unchecked, are sure to redound to its certain and enduring disadvantage.

The amount of reckless surgery done in the nasal passages will never be known or chronicled in the pages of medical literature, but it can be found in its abiding place in the book of the recording angel. It is high time for us to clarify the atmosphere of our ideas on this subject and for authority to call a halt. We, who are teachers of laryngology, should wake up to the responsibilities of our position and see to it that our pupils shall not leave our institutions or post-graduate schools until they are taught, on the one hand, conservatism and moderation in the surgical treatment of the simpler affections of the upper air tract, and on the other hand, thoroughness and completeness when brought into the presence of situations of graver emergency. The problem, though difficult, is not impossible of solution. The cure for the evils I have been discussing is largely educational. All are liable

to error, even the youngest of us. While impressing upon our students the absolute necessity for surgical measures in proper cases, we should at the same time make the dangers of their indiscriminate performance fully apparent. In this way only can we be reasonably sure of accomplishing the desired result. The error of first impression derived from teacher and textbook is often difficult of eradication. In the lecture room, in the clinic, in our daily walks with the student, let us make that first impression a good one.

The time has come for the higher education of the student of laryngology. I have given at length in my chairman's address at the meeting of the American Medical Association in 1901² an outline of what should constitute the study of laryngology in the university and in the higher medical education. With such a preliminary training the student is in a position to take up his life work in earnest. When the laryngologist is not made and turned out in a few weeks or months, when he approaches his special studies after a broad and liberal medical education, when he views his subject from a loftier standpoint and in the light of high ideals, then we shall see the passing of the fraternity of carpenters who have brought discredit on our specialty, and a well ordered intranasal surgery will not only take its commanding and rightful place in the estimation of the medical profession, but will also be a great and enduring blessing to the public at large.

Mortality of Michigan During December, 1904.

—The total number of deaths reported to the department of State for the month of December was 2,782, corresponding to a death rate of 13.0 per 1,000 population. This rate is higher than that for the preceding month, which was 11.6 per 1,000, but lower than the rate for December, 1903, which was 14.1 per 1,000. By ages, there were 519 deaths of infants under one year of age, 133 deaths of children aged one to four years, and 922 deaths of elderly persons aged 65 years and over. A considerable increase is shown for the rate of mortality of infants and the aged as compared with November. Important causes of death were as follows: Tuberculosis of lungs, 176; other forms of tuberculosis, 26; typhoid fever, 51; diphtheria and croup, 50; scarlet fever, 12; measles, 5; whooping cough, 10; pneumonia, 234; diarrheal diseases of infants, 42; meningitis, 35; influenza, 34; cancer, 148; accidents and violence, 181. There were two deaths from smallpox, one in Blair township, Grand Traverse county, and one in Jackson City, Jackson county.

²The Study of Laryngology in the University and in the Higher Medical Education. *Journal of the American Medical Association*, July, 1901.

A RECURRENT PERINEPHRITIC ABSCESS OF TWENTY-SIX YEARS' STANDING AND PRESENTING A CLINICAL PICTURE OF ADDISON'S DISEASE.*

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Last year I presented before this association a case by which I aimed to show the importance of a complete examination and detail record in the study of cases, and I take pleasure in citing to you at this time one more forcibly emphasizing these points.

It is not often our good fortune to take a history of a malady extending over a quarter of a century, interposed with numerous diagnoses and prognoses and, by the "lancing of a boil," veritably annihilate the seemingly fatal symptom complex; yet such in brief is the case about to be presented.

It is not the purpose at this time to discuss the various theories regarding the pathology of Addison's disease any more than to call to mind the summary of the recorded morbid anatomical lesions of the adrenals and adjacent sympathetic structures of Rollison, as follows:

1. Fibrocaseous, due to tuberculosis.
2. Simple atrophy.
3. Chronic interstitial inflammation, leading to atrophy.
4. Malignant disease invading the capsule, including Addison's case of malignant nodule compressing the suprarenal vein.
5. Blood extravasated into the suprarenal bodies.
6. No lesion of the bodies themselves, but pressure or inflammation involving the semilunar ganglia.

Nor does it seem wise to dilate upon the possibility of unilateral pressure as a cause of this remarkable symptom complex, since three out of Addison's original eleven cases were apparently due to lesions of the gland on one side. It does, however, seem important at this time to emphasize the fact that in this case the mischief was apparently due to pressure and probably without interstitial or parenchymatous change in the gland itself, as indicated by the rapid dissipation of the characteristic symptoms and also by the remissions, to which reference will be made later.

When first seen, this patient was suffering from dysentery, and this fact, taken with the asthenia, emaciation, small rapid pulse, and apparent anemia, pointed to a "snap" diagnosis of tuberculous dysentery.

Subsequent inquiry revealed the fact that he had been told that he had an incurable "muscular wasting." The peculiar bronzing of the face and hands

* Read before the Rocky Mountain Interstate Medical Association.

was, however, something more than a cachexia. The following record was then taken:

Mr. J. A. M. Aged 45 years; born in Ohio; had been in Colorado a little over one month, came on account of his health, though not lung trouble.

Family history: Mother and father were born in Ohio; both were dead, the former as a result of rheumatism, and the latter from apoplexy, at 72 years of age. He had two sisters and three brothers living in good health. One brother dead (cause unknown); one sister died of "croup;" examination negative as to tuberculosis, tumor, or cancer, and other chronic diseases, including nervous and mental disease.

Previous history: Enjoyed good health as a child outside of the usual diseases of childhood, of which he remembers especially whooping cough. He did not have scarlet fever or diphtheria. He stated that his growth and development were those of the average child of his age, and he was quite certain that he was not noticeably fat. In 1876-'77 he had an attack of "fever and ague," and in 1878 a congestive chill (?), which, from his description, would seem to have been pleuritic (?). About 18 years ago he passed some gravel.

Present condition: About 26 years previously he noticed that his left eyelid began to droop and later the right, and that at the same time his arms and hands were becoming weak; he first noticed that he "had no grip in his hands." This weakness increased gradually, progressed very slowly, finally involving his legs, which, like the arms, became very weak, though they did not diminish in size to any great extent.

In May, 1893, while eating he suddenly became unable to swallow, which difficulty persisted until about November of the same year, when, with the slow return of this faculty, he became stronger. Previous to this attack, however, though weak, he worked, though he would frequently drop things, e. g., he could not milk, or when ploughing he would have to use both hands at the corners.

After the onset of these attacks he would become weaker and weaker for two or three months, then gradually improve, very slowly, reaching his climax in about two years. He had had three attacks (previous to the present one) about four years apart, and in the interval he would become quite strong, though his hands would never regain their proportionate strength, and he stated that in the present attack his hands are stronger than in the beginning.

He became exceedingly well two years before, and believing himself to have recovered, he was married.

The present attack began in February, 1903, as before, by a drooping of the left eyelid, followed by the right, and at the same time he noticed a "drawing sensation" in the calves of both legs; from this time he grew gradually weaker until June, 1903, when he suffered from a chill resembling a malarial attack (i. e., chill, sweat, vomiting, followed by sleep). He was in bed about twelve days, then up and around until the last of September, when while in the yard he fell as though struck on the head, and in falling struck the back of his head; he was unconscious for about five minutes. He recalled having fallen once before. He knew he was falling each time, but could not avoid it, and he thought the unconsciousness was due to the fall. While con-

siderably weaker after this he was in the main the same as before, and in October and November he seemed stronger. In November he contracted a "grippy" cold, which he stated responded unusually well to treatment.

In January, 1904, he began to complain of pain in the right side, especially in the lumbar region, accompanied by a chill and a difficulty in speech; he could but mumble on attempt to speak. He had also during this time some difficulty in swallowing. Some time later he indicated his desire for a drink, which, when brought, he found he could swallow, and later he was able to speak clearly and had done so ever since. Until a dysentery began, about May 30th, he was gradually improving. He had had several similar attacks of dysentery.

Examination, June 15, 1904: He was a man about six feet tall, well built, and showed no marked atrophies in any muscle or group of same, though they were not as firm as usual, which could be readily accounted for by disuse. There was a seeming wasting of the thenar eminences, though the adductors of the thumbs showed as much strength as the rest of the hand muscles. He showed a slight bronze tint, especially on the face and dorsal surface of the hands, and very slight over the entire body. He was anemic in appearance and the sclerotics were bluish white in color. There were no evidences of disease in either lung.

The heart was normal in size and position, the action regular, though markedly weak and rapid, and without murmur. Pulse was small, running in character and very weak. Rate of pulse, 102; temperature, 100.5 F.

The liver dullness in the mammillary line began at the right nipple and extended two inches below the rib. There was considerable tenderness in the right hypochondrium, though not as great as in the right lumbar region.

He responded to all inquiries promptly and with clear enunciation.

In walking he moved slowly on account of weakness and the pain from which he was suffering in his right side, though there was no ataxia to be seen in his gait. He stood without swaying with his eyes open or closed. Dynamometer: R. 49, L. 20 (inner register, Tiemann dynamometer). He was right handed. Reflexes: Knee jerks, R. present and also on reinforcement. L. same; ankle clonus, absent; tendo achillis, R. present. L. same, not as great as right. Deep reflexes of the forearm, R. present. L. same, and about normal, as well also the biceps, triceps, and deltoid; masseter, absent; tongue was protruded in the median line; mouth was retracted equally and he was able to whistle, though at times he stated he had been unable to do so.

Special senses: Eyes, all external ocular motion was normal and equal. Pupils were equal and responded equally to light and accommodation. Fields were apparently normal. Discs were clear in outline and normal in color; the veins were slightly larger than the arteries.

Hearing: (watch) R. 12-24, L. 1-24. Tuning fork was heard best in the left ear. Aerial conduction was almost equal to that of bone in the left ear. R. normal (i. e., Rinne positive).

Speech was unaffected. Taste was present and equal, and there was apparently no disturbance in smell.

Sensory phenomena: All forms of sensation, including tactile, pain, pressure, postural, joint, and thermic, were present and equal.

Urine: Very turbid and yellow in color when filtered; odor foul and pungent; acid in reaction; sp. gr. 1028. No albumin, sugar, or bile; microscopically, almost entirely pus with very few blood corpuscles. Cover slips stained with carbol fuchsin and methylene blue revealed no tubercle bacilli, but there were staphylococci and a few chains of streptococci. The quantity excreted in 24 hours was 48 ounces. Urea (in 24 hours) 28.8 grammes (644.3 grains). A blood count was not made and the record of blood pressure was likewise omitted.

A diagnosis of perinephritic abscess was made and he was referred to Dr. Sherman T. Brown for operation.

[NOTE.—The patient's wife, under date of December 12th, states that he is improving steadily, being able to walk a mile without fatigue, and to carry a ten quart pail of water in either hand. In her opinion his color is better (referring to the bronzing). The tubes draining the cavity are still three inches in length—they had been about nine—and are discharging freely.]

Considering the myasthenia, tachycardia, pigmentation, especially of the hands and face, though absent in the mucous membranes and sclerotics, the gastrointestinal symptoms, and the absence of persistent bulbar disturbance, one must admit the resemblance to a case of Addison's disease. The transient attacks of ptosis and aphasia, while not usually a part of such a clinical history, do occur as shown in the case cited by Phillips (1) of simple atrophy of the adrenals, verified by autopsy.

The remissions, to which reference has been made, were accounted for by the recurrence of the abscess, which at the height of each attack, in all probability, ruptured into the pelvis of the kidney and consequently drained through the bladder, a process which was in progress when examined, though the urine at the previous examinations, I am informed through the kindness of his former physician, Dr. Pickard, contained no pus when examined by himself and Dr. Church, of Chicago.

The chills mentioned as malarial in character, and the congestive chills spoken of as supposedly pleuritic, were, one or other, noted some time in each attack. These with the increased liver dulness, pyuria, and the finding, by cystoscopic examination, that this pus was coming from the right kidney only, were reasons for the diagnosis of perinephritic abscess.

At the operation, the numerous old adhesions and the extent and course of the burrowing bore testimony to its having existed a great length of time.

Since operation the improvement has been rapid, steady, and continuous, the pigmentation, however, remaining. His rapid increase in strength is remarkable, he having walked 26 squares in a forenoon two months after. He has been taking ferruginous tonics with strychnine, to which it was deemed advisable to add two grain doses of dessicated suprarenal substance.

In the study of this case it is observed that the same general symptoms are present in nearly all conditions involving the ductless glands or their sympathetic ganglia. Most noteworthy, in the present case, is its similarity to a case of asthenic bulbar paralysis or myasthenia gravis, in which, however, there is seldom, if ever, pigmentation. Hun states (2) the important positive symptoms in establishing a diagnosis to be (1) a chronic paresis, affecting muscles supplied by many motor nerves, both spinal and cranial (ocular and bulbar); (2) rapid tiring; (3) variation in the intensity of the symptoms; and (4) the electrical myasthenic reaction. Of almost equal importance are the negative symptoms: the absence (1) of fibrillation; (2) of muscular atrophy; (3) of the electrical reaction of degeneration; and (4) of sensory symptoms.

The pathological findings in this interesting symptom complex seem to have excluded the central nervous system, though changes in and about the thymus gland are becoming more constant, as is shown in Hun's case as well as in that of Weigert. A case of Oppenheim's (3), a sarcoma of the anterior mediastinum, and that of Goldfram's in which a lymphosarcoma of the upper lobe of one lung was found, are interesting, and since Weigert's work, a considerable proportion of autopsies have shown conditions similar or analogous to the conditions described by him.

Another condition, apparently closely related, is that of exophthalmic goitre, or Basedow's disease. Nine cases of myasthenia reported by Kalischer (4), Goldfram (5-6), Karplus (7), Charcot and Marinesco (8), Murri (9), Hey (10), and Finzio (11) presented symptoms of Basedow's disease more or less pronounced (exophthalmia or goitre or both).

On the relation between Addison's disease and Basedow's disease Gowers states (12) that an affection of the abdominal sympathetic, similar to the constant affection of the cervical sympathetic, would explain the pigmentation, and the occasional watery diarrhoea seems also to show that the abdominal nerves are sometimes involved.

The heart action in all conditions is seemingly increased in rate and in exophthalmic goitre the volume is increased, in myasthenia little affected, but sometimes increased, while in Addison's disease it is almost constantly lowered.

The foremost symptom, myasthenia, which in itself would presuppose an electrical myasthenic reaction as described by Golly, may under the light of future investigation prove to be an expression of disease of the ductless glands or their sympathetic communications, and with the association of the ocular, or more particularly the palpebral nerve, the character of circulatory disturbance, the presence

or degree of pigmentation, with the gastrointestinal symptoms, we may definitely localize the seat of such disturbance.

In closing, there may be added to these observations two queries: Has the languor or fatigue so frequently observed in chronic Bright's disease an explanation in the sympathetic communication of the renal plexus? And may not the asphyxia which so often closes the scene in these cases, as in the diseases under discussion, be as likely due to this association as to uræmia?

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Therapeutical Notes.

Treatment of Foreign Bodies in the Ear.—According to the *Medical Press and Circular*, for December 28, 1904, these are habitually divided into two classes—live bodies and inanimate bodies. The former consist generally of fleas, grasshoppers, or earwigs, which penetrate into the ear during sleep, while others are bred in the ear, from eggs deposited by flies, and these eggs produce worms or larvæ. Inanimate bodies are as variable as those found in the nose—pearls, shoe buttons, pebbles, beans, grains of every kind, plugs of cotton wool, paper, etc. These may remain some time without causing any trouble, but generally they provoke buzzing, vertigo, nausea, vomiting, headache, and sometimes epileptiform convulsions; symptoms that resemble cerebral disease (meningitis). Children have been treated for this affection.

If the foreign bodies are angular, pointed, infected, if they are capable of becoming swelled by humidity, if they are insects or their larvæ, they provoke violent inflammation with suppuration of the external meatus. The tympanum itself soon gets inflamed and otitis of the middle ear with all its complications sets in.

The treatment of these foreign bodies should

always begin with repeated injections which, if persevered in, frequently succeed. If the body can be reached easily, a forceps or a crooked hair-pin may be able to extract it. If, on the other hand, the symptoms are grave and threatening from penetration of the tympanum, the situation renders more radical means imperative. Either extraction should be made under chloroform or an attempt will be made to enter the middle ear and remove the obstruction.

Syphilis of the Eye.—Galezowski in the *Recueil d'ophtalmologie*, for September, 1904, states that interstitial keratitis begins as an infiltration, followed by vascularization with inflammation, and, finally, a period of regression; it is common in both the inherited and acquired disease. Chorioiditis and chorioidoretinitis commence insidiously. The symptoms are cloudy vision and muscæ; photophobia is not a marked symptom. Vision may be suddenly lost for days or weeks and restored completely, but recurrence of these attacks leads to blindness. The author has had the best results from mercurial inunction. He never uses more than 30 grains daily, rubbed in for five minutes, and continued for several months. He is not in favor of subcutaneous injections, and does not use iodides.

Bornyl Valerianate.—In recent times O. Engels has used bornyl valerianate in numerous cases of neurosis of the most varied character, including that of children, and he has been able to confirm its excellent effect on which L. Hirschlaff had already reported. It is especially useful in traumatic neurosis, hysteria, neurasthenia, epilepsy, nervous disorders of the stomach, and also in gynæcological cases. It may be mentioned particularly that it stimulates the appetite, and is free from all disagreeable secondary symptoms.

Intramuscular Injections in Infantile Syphilis.—Imerwol, in *Semaine médicale*, for June 22, 1904, recommends this treatment, and points out that ingestion by the mouth is often contraindicated by gastrointestinal disturbance, also that mercurial inunction frequently causes irritative lesions of the skin in young infants. The author employs a 5 per cent. solution of sublimate, and has used this in forty cases with satisfactory results. The number of injections was from three to five.

Treatment of Sciatica.—A simple yet effective method of relieving this painful affection, says the *Medical Press and Circular*, for December 28, 1904, will be found in the following:

- | | |
|---------------------------------------------------------|------------|
| R Nitrate of strychnine..... | 2 grains; |
| Water | 3½ ounces. |
| M. A Pravaz syringe to be injected daily in the region. | |

Gonorrhœal Endometritis.—Siredey is cited in *Nouveaux remèdes*, for November 24, 1904, as recommending the use of picric acid in the proportion of 12 parts to 1,000 of water, the solution being carefully sterilized and kept so. A uterine douche tube is used.

NEW YORK MEDICAL JOURNAL

AND

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DR. OSLER'S COLLECTED ADDRESSES.

Though for many years, ever since he took up his residence in our country, there has never been a time when Dr. William Osler has failed to receive the ready homage of the American profession, still there is much in the old saying that angels chiefly show their wings as they take their departure. Dr. Osler has not yet left us, but the time is close at hand when he is to exchange the present scenes of his activities for others far distant. We are to lose his presence and his personal glow, but never shall we forget his influence for good or cease to drink in the wisdom of his teaching.

The *quadam selecta* of such a man can never fail to keep up the genial effect of his individuality, and we are glad therefore that some of his notable addresses have been collected and printed in a volume.¹ It is a handsome book of nearly 400 pages, containing eighteen addresses. If it is chiefly by indirection that these addresses deal with the actualities of medicine, the hammer of Thor does not glance in Dr. Osler's hands. There is never any ambiguity in what is said, and there is not a particle of doubt as to its application. All his teachings are wholesome, and they are all powerfully enforced.

Were this all, the book would be read indeed, but it would then be put away for occasional reference.

But the beauty of Dr. Osler's style is such that many will leave the volume at their bedside along with the ten great works that he himself recommends to the physician for daily reading. And it will not be the least among them or the one on which the most dust will collect. To be sure, it was not needed to cap our realization of what Dr. Osler has done, but it will be prized as a graceful collation of many of his best thoughts. When its gifted author has left us—not for all time, we hope—we can study its pages and fancy that we are still in his magnetic presence.

CORRELATION IN MEDICAL TEACHING.

We have often called our readers' attention to the benefit to be derived in practice from adaptation in therapeutics, whereby the devices that have been found satisfactory in some special department of medicine are applied, *mutatis mutandis*, in other fields of work. Such adaptation may be almost endless, and, if intelligently carried out, it is sure to multiply one's therapeutic resources well nigh immeasurably. A somewhat comparable plan in teaching has lately been very forcibly advocated by Dr. R. J. Terry, professor of anatomy in the Medical Department of Washington University, in an article published in the department's *Quarterly Bulletin*, Vol. iii, No. 2. Dr. Terry's article is entitled *Class Work in Practical Anatomy*.

Dr. Terry clearly points out—with special regard, of course, to the study of descriptive anatomy—how a great deal of the hard work commonly imposed on the memory may be saved by associating purely anatomical study in the way of dissection with the study of the embryology, histology, physiology, and pathology of the several regions and organs of the body as they are gone over in a well arranged course. It is easy to see the advantages of such a plan. Let us suppose, for example, that the contents of the thorax are under examination in the dissecting room. It ought to be easy to make the study of their embryological development, their microscopical structure, and their functions coincident with that of their gross anatomy and their relations to each other and to other parts. And we see no particular reason why the didactic instruction in medicine and surgery should not at the same time be concentrated on the diseases and

¹ *Equanimitas, with Other Addresses*, Philadelphia, 1904.

injuries of the heart, the pericardium, the lungs, the pleura, the great blood vessels, and the mediastinum. It is probable that much time would thus be saved, and it seems incontestable that the teaching would be far more vivid, more likely to fix the student's attention, and sure to be accurately retained in the memory for a much longer time than if such a correlation was ignored. We presume that some approach to this system of anatomical study is carried out in many of our schools at present, but we are inclined to think that it might be more closely followed to advantage.

THE PHYSICIAN AS AN INVESTOR.

II.

One of the most important questions that confront the fairly successful physician is that of how to invest his savings. Inexperienced as he is in matters of business and finance, the matter of investment is to him usually a very formidable problem. Even the occasional physician who has had a business experience or possesses a fairly good knowledge of business is likely to be in a quandary as to what to do with his savings, because of the fact that he is so preoccupied with his profession that he has little time or opportunity to seek profitable or safe investments. Whatever the cause may be, it is a trite observation that the physician has, on the average, very little wisdom or skill in the direction of finance. He is as unfortunate in the disposition of such moneys as he may accumulate as he is in the collection of his just dues.

Real estate is usually considered the most conservative of all investments. The physician who knows this general opinion is likely to invest in real estate holdings after very little study of the situation and the locality in which he invests. In my opinion, the proposition that real estate is the most conservative form of investment for individuals who are not engaged in real estate traffic is very fallacious, or at least open to serious consideration. The individual who has an accurate knowledge of real estate values in various localities and the time and talent necessary to make quick turns of his holdings is hardly a fair criterion for the guidance of the physician whose facilities for the accurate valuation, buying, and selling of real estate are confessedly meagre.

The purchase of unimproved real estate is a very hazardous undertaking for the average doctor. Property that can be bought in locations in which a speedy rise in value is to be expected is usually snapped up by professional speculators, and the outsider is rarely able to get into the market before the prospective increase in valuation has been largely discounted. The prospective increase in value having been discounted, and the profits having been taken by the men who went in "upon the ground floor," subsequent investors are usually faced with a choice between selling at a sacrifice and holding for a prolonged period for a rise in value. It is a question which of these two horns of the dilemma is the worse. A small present loss is often insignificant as compared with the immense additional cost incidental to holding unimproved property for a few years. Burdensome and often unfair and dishonest taxation, improvements, and the loss of interest on the money invested compound the cost of the property very rapidly. This increased cost of real estate holdings more than keeps pace with a fair legitimate increase in valuation. I have had the experience of holding excellent residence property for a period of ten years, and have found that, although the property had doubled in value, it had really cost more at the end of the period during which it was doubling than the increased nominal valuation. The outlay was real, a sale at the alleged increased valuation was problematic. First, catch your buyer.

In buying unimproved property, the investor would do well to purchase corners in eligible localities, and, if possible, along section lines, in the case of city property. One of the greatest dangers in the buying of vacant property is the chance of inferior improvements or buildings used for disreputable purposes being erected in the near neighborhood. Inside property adjoining corners is especially dangerous in this respect. I have had very disagreeable experiences in this direction.

If the physician desires to buy property for investment, he should by all means buy improved property, preferably that which is used or is likely to be used for business purposes. He should be very cautious in buying new buildings for rental, for the possible profits are pretty thoroughly

squeezed out by the builder in the process of sale. It is essential in buying a piece of property to study the character of the surrounding improvements and that of their occupants. It is also essential in estimating the value of property to quietly make careful inquiries as to the values of surrounding property. Having ascertained the values of the locality in general, the prospective buyer should make confidential inquiry of some reputable loan broker as to the amount of money he would be willing to lend upon the property under consideration. Figuring this as fifty per cent. of the valuation of the property, and taking into consideration the yearly rentals and expenses of the building, it is possible for the prospective investor to form a fair estimate of values.

When dealing with the real estate agent, the prospective investor should discount all statements relative to the income and expense account of the building. So far as the income is concerned, it must be remembered that leases are very often "padded;" for example, tenants are given six months' rent free in consideration of having a lease at a high rental for the succeeding year, or rebates are given monthly. Certain builders and real estate speculators make a business of this sort of thing. It is safe to add at least one third to the expense account of a building as estimated by the builder. It is also wise to discount by from twenty to thirty per cent. the estimate of gross income. This discount is justified by the "dead beats" and suddenly impoverished among the tenants and by vacancies.

The most dangerous form of investment is in residence property. This brings up the question of the physician's owning his own home. It is a noteworthy fact that many of our shrewd business men do not own their own homes, or at least do not purchase homes until well along upon the tide of success. When they do invest, they take very good care that the shrinkage of values has already occurred at the expense of the original owner. It is well known that upon one of our fashionable avenues in Chicago the man who is ambitious to own a \$100,000 residence can purchase one of this kind for about half the original cost. The proportionate shrinkage is not so great in residences of a more modest type; still it is sufficient to warn the home buyer that he had best have a care in making his

investment. It is a safe proposition that the man who builds a residence worth from \$18,000 to \$25,000 has lost twenty per cent. of its cost the day he moves into his new home. There is such a wide variation in tastes among people who can afford residences of this description that the original owner is very fortunate if he can find some one with tastes so similar to his own as to be willing to reimburse him for his outlay in the purchase of a residence.

In a general way, the physician should remember that the equities of new buildings, whether residence, apartment, or business, are tremendously swollen by the builders or speculators who submit them to him for purchase. In many instances, by a combination of a dishonest loan broker and a wily real estate speculator or builder, the alleged equity is on paper only, the loan fully covering the original cost of both land and building. The chances for shrinkage in values here, in the hands of the purchaser, are only too obvious.

To refer again to the question of the physician's owning his own home. I believe it is better, in general, for the physician to rent a piece of residence property upon a long lease for at least the first ten years of his practice, save in localities where the mere ownership of a residence counts, as in smaller cities or towns. The ownership of a home cuts very little figure with the specialist in a large city, most of whose patients know little and care less of the location of the physician's residence, and are even ignorant of the locality in which it is situated.

One of the chief objections to the early purchase of a home is that, as the family and demands of the family of the physician increase, and the tastes of his family change, the choice has to be made between discomfort and moving into more commodious quarters. The sale of the original home is nearly always made at considerable loss, and the expense of a new and more pretentious establishment is generally such as to make it a burden upon the physician. It should be remarked in passing that the physician who rents may without losing caste live in a modest dwelling. When he builds or buys his own residence, however, he feels that he is expected by his clientèle and neighbors to make a more pretentious appearance than before.

This is one of the varieties of social blackmail of which the physician is a victim.

The best form of real estate investment for the physician is in first mortgages. Great care should be taken to deal only with reliable mortgage bankers, and to carefully inspect the property upon which the mortgage rests. When the loan has been made by conservative parties, the possible shrinkage in real estate values has been already discounted, as only fifty or sixty per cent. will ever be lent by judicious investors. The steady collection of interest and the compounding of moneys thereby obtained are a very much safer and more profitable investment on the average than buying real estate outright. The bother, worry, and expense of handling property, whether improved or unimproved, and the chances of employing dishonest agents to manage the holdings, are assumed by the owner and not by the mortgagee. The latter has decidedly the best of the bargain.

Next to first mortgages, reliable bonds are the best investment. Of these the government bond is the type and the safest of all. The interest, however, on the government bonds is so small that it is a very important item save with very large investors. Good railroad and municipal bonds and, in a few instances, corporation bonds come next in order. The financial condition of the municipality or corporation issuing the bonds should be looked into very carefully before purchase is made.

So far as stocks as an investment are concerned, and despite the fact that there are stocks upon the market which are apparently sound and profitable, the next advice that I would give is that given by Artemus Ward on the question of marriage: "Don't." The small stockholder in every stock company or corporation is at the mercy of the big fellows, and those who have enjoyed basking in the smiles of the big ones in corporations will certify that those smiles are deadly for all who are not within the sacred inner circle of manipulation. There are very few large stock corporations in the United States that have not been watered to the point of financial pernicious anemia. The average man loves to be robbed. The physician has more brains than the average man in other directions and should rise above the dead level here.

G. FRANK LYDSTON.

ORGANOTHERAPY OF THE PAST.

Attention is being called in pharmaceutical circles to the changes which are taking place in the field of therapeutics, and the subject is not without interest for members of the medical profession. A writer in a recent number of the *American Druggist and Pharmaceutical Record* touches upon the mediæval uses of the substance of animal organs in medicine, and coming down to a later period mentions the rise of organotherapy and ootherapy, the great notoriety which the use of certain animal juices obtained in Brown-Séquard's day being shown to have its counterpart in the practices of the early empirics. It is but a short step from Brown-Séquard to the present day physician who uses a large number of the active substances of animal organs, the names of which it is not necessary to enumerate here. A still further development is to be found in the synthetic chemical products which are being turned out from time to time in the great German dyeworks, to which we owe so much in the production of definite chemical preparations. The subject, we think, offers an interesting field of inquiry for either the pharmacist or the physician possessed of the historical sense and the knowledge of chemistry and medicine necessary to draw right conclusions.

DEATH OF A VALUABLE CLINICAL SUBJECT.

In the death of Magdalena Gelly the students of the Viennese hospitals have lost a valuable clinical subject as well as a teacher. This woman had acquired by practice a singular control of the muscles of the pharynx. She was able to undergo prolonged laryngoscopic examinations without reaction of the vocal cords, could produce at will spasmodic contraction of the Eustachian tube, and owing to a special sensitiveness of the mucous membranes she was able to tell students when they were at fault in properly catheterizing the tube. She would even introduce foreign bodies into the respiratory passages and allow the advanced students to practise their removal. She made her living in this manner, charging two florins for each clinical session.

Fox River Valley, Wis., Medical Society.—Dr. A. C. Mailer was elected president of the Fox River Valley Medical Society to succeed Dr. J. R. Minahan, of Green Bay, on January 17th. Other officers chosen are: First vice-president, Dr. Edward Sawbridge, of Seperison, Mich.; second vice-president, Dr. W. A. Gordon, of Oshkosh; secretary and treasurer, Dr. J. S. Reeves, of Appleton.

News Items.

Society Meetings for the Coming Week:

TUESDAY, January 31st.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, February 1st.—New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital; Harlem Medical Association of the City of New York; New York Genitourinary Society; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, February 2nd.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medicopsychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 3rd.—Practitioners' Society of New York (private); Clinical Society of the New York Post-Graduate Medical School and Hospital; Manhattan Clinical Society; Baltimore Clinical Society.

SATURDAY, February 4th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

Change of Address.—Dr. Winfield Ayres, to The Sydenham, 616 Madison Avenue, New York.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 21, 1905:

	January 14.		January 21.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	189	6	194	4
Diphtheria and croup	307	43	360	40
Scarlet fever	281	17	289	14
Smallpox	3	..	..	..
Chickenpox	202	..	179	..
Tuberculosis	338	160	404	153
Erythroid fever	56	9	50	12
Cerebrospinal meningitis .....	..	26	..	30
	1,376	261	1,476	253

Dr. George H. Baker, of Long Branch, has been elected president of the Albany Medical College Alumni Association of New York city and vicinity.

National Association for the Study and Prevention of Tuberculosis.—Dr. Livingston Farrand, professor of anthropology at Columbia University, has been named as head of this association for the current year.

Brooklyn Hospital.—The following officers have been elected: President, Theodore L. Frothingham; vice-president, Henry E. Pierrepont; treasurer, Edward Merritt; secretary, Francis L. Eames.

Skene Memorial Fund.—An anonymous donor has given \$5,000 to found the Alexander J. C. Skene Memorial Fund, the income of which is to be devoted to the purchase of books, journals, etc., relating to Dr. Skene's specialties, obstetrics and gynecology.

New York Skin and Cancer Hospital.—Dr. Bulkley's usual clinical lecture at the New York Skin and Cancer Hospital will be replaced on Wednesday, February 1st, by a lecture by Dr. Boleslaw Laponski on The Treatment of Syph-

ilis, and on Wednesday, February 8th, by a lecture by Dr. Charles Mallory Williams on The Treatment of Acne.

Gift of Mrs. Roosevelt to St. John's Hospital, Long Island City.—A basket of gold wicker, four feet high and filled with flowers made of feathers and of stuffed birds and gay butterflies and bugs, has been given to St. John's Hospital, Long Island City, by Mrs. Theodore Roosevelt. The President's wife asked that it be placed on the altar of the hospital.

Physician Injured in a Hockey Game.—Dr. J. C. MacKenzie, of the Bellevue Hospital staff, was seriously injured in the hockey game between the Brooklyn Skating Club and Hockey Club of New York teams, played in St. Nicholas Rink on January 17th. The injured player was a member of the New York team and was carrying the puck toward the Brooklyn cage when in a scrimmage the handle of an opponent's stick struck and tore a gash in his right cheek near the nose. He was carried from the ice, after his wound had been temporarily dressed, and taken to the hospital.

Gouverneur Alumni Society.—A regular meeting of this society was held at the Academy of Medicine, Wednesday, January 25, 1905, at 8.15 p. m. The meeting was a "symposium" on Cerebrospinal Meningitis. The following programme had been arranged: The Pathology of Cerebrospinal Meningitis, by Dr. Harlow Brooks; A Report Upon 60 Cases of Cerebrospinal Meningitis, by Dr. Francis Huber and Dr. P. W. Monroe; Ear Complications Met With in Cerebrospinal Meningitis, by Dr. Christopher J. Colles. Discussion by Dr. Francis Huber, Dr. John Huddleston, Dr. Frederick Huber, Dr. E. Libman, Dr. R. Van Santvoord, and others. Gouverneur Hospital furnished exceptional opportunities of studying the recent epidemic of Cerebrospinal Meningitis, and the papers presented were most interesting. J. T. Joseph Bird, M. D., president; Orrin S. Wightman, M. D., secretary.

PHILADELPHIA.

Marriage.—Dr. Percy Fitzgerald McMurdo and Miss Genevieve Le Duc were married on December 11th. Dr. McMurdo is a surgeon in the United States Navy, and has just been ordered from League Island to Baltimore.

Municipal Hospital Census.—The following is the census of the Municipal Hospital for December, 1904:

	Remaining from November.	Received.	Discharged.	Remaining to January 1st.
Diphtheria	58	89	77	16
Scarlet fever	115	57	55	4
Smallpox	6	3	6	0
Other diseases	1	0	1	0

Scientific Society Meetings for the Week Ending February 4, 1905.—Tuesday, January 31st, Medicolegal Society. Wednesday, February 1st, College of Physicians. Thursday, February 2nd, Obstetrical Society, Medical Society of the Southern Dispensary. Friday, February 3rd, American Philosophical Society.

For the Benefit of the Jefferson Medical College Hospital.—The Woman's Auxiliary of Jefferson Medical College will have a Bohemian afternoon at Horticultural Hall on February 4th. A vaudeville performance will be given; tea and light lunch will be served; and the Jefferson Orchestra will furnish music.

German Hospital Trustees Meet.—The annual meeting of the trustees of the German Hospital was held January 9th. Albert Schoenhut and Otto E. Wolf were elected to fill the vacancies caused by the deaths of C. T. Wornwag and E. G. Reyenthaler. The Reverend F. Wischan was re-elected a member of the board, on which he has served for twenty-two years.

Officers of the Samaritan Hospital.—At the annual meeting of the Samaritan Hospital, held January 7th, the following officers were elected:

President, the Reverend Russell H. Conwell; vice-president, Cyrus S. Detre; treasurer, John Little; secretary, William B. Craig; trustees, the Reverend Russell H. Conwell, John O. Bowman, Cyrus S. Detre, John Hamilton, J. Edward Moore, J. Newton Peck, John R. Young, John Little, Grant C. Osbourne, William B. Craig, Samuel S. Darmon, James I. Comly, Herman G. Hutt, John A. Presper, Jr., Frank W. Hoyt; superintendent, Charles A. Gill; chief nurse, Miss Margaret J. Maloney.

New Building for the Home for Incurables.—The Philadelphia Home for Incurables opened a new ward for men suffering from cancer on January 11th. There are at present about 150 patients in the institution, which is situated at Forty-eighth Street and Woodland Avenue, twenty-one of whom have some form of malignant tumor. The new building is of brick, containing three stories and a basement. There are sixteen rooms for patients, four for nurses, a smoking room, two dining rooms, and special diet kitchens.

Deaths.—Dr. Edwin Hellyer died on January 16th, at his home, 2341 East Susquehanna Avenue. Dr. Hellyer graduated from the Long Island College Hospital in 1864. He has been prominent in the charitable organizations of that portion of Philadelphia in which he lived; he was president of the Northeastern Soup Society for ten years; he was also a member of the Thirty-first Ward Sectional School Board. He was a member of the Philadelphia County Medical Society.

Dr. Edward Howard Craven died at his home, 1442 Franklin Street, on January 19th. Dr. Craven was a graduate of the Jefferson Medical College.

Dr. Samuel J. Weaver, of Bethlehem, Pa., died on January 18th, aged 54 years, of angina pectoris.

Dr. A. G. Wortman, of Effort, Pa., died on January 18th.

Dr. B. C. Pennington died on January 1st at his home in Atlantic City, N. J. Dr. Pennington was one of the vice-presidents of the American Medical Association, and was president of the Atlantic County Medical Society.

Dr. James M. Eagleton died of heart disease at Ocala, Florida, on January 4th, aged 70 years. Dr. Eagleton was a practising physician in Phila-

delphia for many years after his graduation from the medical department of the University of Pennsylvania. He went to Ocala, Florida, only a short time ago.

Benjamin West Frazier, Sc. D., of the faculty of Lehigh University, died in South Bethlehem on January 4th. Dr. Frazier graduated from the University of Pennsylvania in 1859. He was a member of the American Philosophical Society and of the American Association for the Advancement of Science.

The Section in Ophthalmology of the College of Physicians offered the following programme at its meeting on January 17th:

Dr. William Campbell Posey: (1) Keratitis Disciformis, with the report of a case; (2) A Further Note Upon a Case of Gunshot Wound of the Orbit; Dr. Charles A. Oliver, A Study of Simultaneous Contact Color Images; Dr. H. F. Hansell, The Treatment of Infection Following the Extraction of Cataract; Dr. C. A. Veasey: (1) A Case of Papilloma of the Lacrymal Caruncle; (2) A Case of Leucosarcoma of the Chorioid; Dr. William M. Sweet, Exhibition of a Case of Double Perforation of the Sclera by a Piece of Brass; Dr. J. Norman Risley (by invitation), An Unusual Form of Opacity, Resembling Xanthelasma of the Cornea.

Jewish Medical Charities.—During December 83 patients were admitted to the Jewish Hospital.

One thousand and fourteen patients were treated at the Mathilde Adler Loeb Dispensary during December.

Nineteen patients were admitted to the Jewish Maternity Hospital, 532 Spruce Street, during December. Thirteen births occurred during the same month.

The Health of the City.—During the week ending January 14, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	82	13
Scarlet fever.....	59	1
Chickenpox.....	121	0
Diphtheria.....	81	10
Cerebrospinal meningitis.....	2	2
Measles.....	14	1
Whooping cough.....	5	0
Tuberculosis of the lungs.....	68	52
Pneumonia.....	71	84
Erysipelas.....	6	2

The total death rate for the week was 500, in an estimated population of 1,438,318, corresponding to an annual death rate of 18.08 per 1,000 population. The total infant mortality was 105; 95 under one year, and 10 between one and two years. There were 39 still births; 18 males and 21 females. The following deaths from other transmissible diseases were reported: malarial fever, 1; tuberculosis other than tuberculosis of the lungs, 10; puerperal fever, 1; diarrhoea and enteritis under two years, 17. The temperatures were rather high for the time of year. On the 12th there was a dense fog early in the morning which interfered greatly with traffic, both in the city and on the river. The fog was caused by a rather sudden rise in temperature. A number of accident cases were treated in the various hospitals in the city, which were due to falls on icy pavements.

Medical Society Programmes.—The following was the programme of the meeting of the Phila-

delphia County Medical Society, held January 25th:

Dr. John B. Roberts, Specimens Illustrating the Need of Early Intervention in Surgical Diseases of the Abdomen; Dr. H. C. Masland, A New Saw Especially Adapted for Cranial Surgery; Dr. B. C. Hirst, The Limitations and Possibilities of Electricity in the Treatment of the Diseases of Women; Dr. T. H. Weisenburg, The Toxic Changes in Brain and Spinal Cord Due to Carcinoma.

The following was the programme of the Pathological Society of Philadelphia, held January 26th:

Dr. W. M. L. Coplin, Some Improvements in the Petri-Dish-Plate-Gelatin Method of Mounting Gross Specimens; Dr. W. M. L. Coplin, Celluloid Strips and Sheets for the Orientation of Gross Preparations in Such a Way as to Facilitate the Removal of Parts for Microscopical Study and the Subsequent Identification of the Areas from Which Such Blocks of Tissue Have Been Removed; Dr. Leo Loeb, Some Recent Contributions to the Study of the Coagulation of the Blood; Dr. H. C. Wood, Jr., The Clinical Means of Increasing the Coagulability of the Blood; Dr. R. P. McReynolds, Interstitial Fibroid Complicating Pregnancy; Dr. B. M. Anspach, Fibroid Tumors as a Complication of Pregnancy; two cases.

The following was the programme of the Society of Normal and Pathological Physiology, held January 16th:

Dr. H. C. Wood, Jr., The Comparative Germicidal Action of Salts of Antiseptic Acids; Professor Edward T. Reichert, A Schematic Eye, an Instrument for the Luminous Demonstration of the Functions of the Various Parts of the Eye, of Normal and Abnormal Refraction, and of the Application of Glasses Throughout the Whole Range of Disorders of Refraction.

The following was the programme of the meeting of the University of Pennsylvania Medical Society, held January 20th, at Dr. Alfred Stengel's office, 1811 Spruce Street:

Dr. Robert N. Willson, Syphilis with Late or Absent Secondary Eruption; Dr. R. Tait McKenzie, The Renaissance of Physical Education.

The following was the programme of the section in gynecology, College of Physicians, at the meeting held January 19th:

Dr. C. C. Norris and Dr. B. M. Anspach (by invitation), Report of 56 Consecutive Ovarian Cystomata, with Special Reference to their Complications and Malignancy; Dr. E. A. Schumann (by invitation), Secondary Metastatic Implantation of Carcinoma in the Vagina; Dr. J. C. Hirst, Vaginal Atresia Complicating Labor; Dr. R. P. McReynolds, The Use and Abuse of the Uterine Curette

Philadelphia County Medical Society.—The annual business meeting of the Philadelphia County Medical Society was held on January 18th in the lower hall of the College of Physicians. The by-laws were amended so that the society may elect as many vice-presidents as there are branches and central body. This gives the society five vice-presidents at present. The following officers were elected:

President, Dr. James M. Anders; vice-presidents, Dr. M. Howard Fussell, Dr. Albert M. Eaton, Dr. Hilary M. Christian, Dr. Franklin Brady, Dr. M. B. Hartzell; secretary, Dr. William S. Wray; assistant secretary, Dr. Ross H. Skillern; treasurer, Dr. Collier L. Bower; censor, Dr. Judson Daland; district censor to the executive council of the Medical Society of the State of Pennsylvania, Dr. Albert M. Eaton; delegates and alternates to the Medical Society of the State of Pennsylvania, Dr. Roland G. Curtin, Dr. John B. Roberts, Dr. Henry Beates, Jr., Dr. F. M. Perkins, Dr. Charles P. Noble, Dr. B. F. Stahl, Dr. A. M. Eaton, Dr. Samuel L. Wolfe, Dr. M. B. Hartzell, Dr. D. O. Kercher, Dr. Franklin Brady, Dr. Thomas H. Fenton, Dr. Alfred Stengel, Dr. James M. Anders, Dr. J. Chalmers Da

Costa, Dr. William M. Welch, Dr. A. O. J. Kelly, Dr. A. G. E. Hinkle, Dr. Herman B. Allyn, Dr. George B. Dunmire, Dr. R. N. Willson, Dr. Charles H. Frazier, Dr. R. M. Goepf, Dr. James H. McKee, Dr. Richard W. Deaver, Dr. M. H. Fussell, Dr. W. H. Good, Dr. John M. Swan, Dr. C. A. E. Codman, Dr. Jay F. Schamberg, Dr. William N. Bradley, Dr. G. A. Bardsley, Dr. L. H. Bernd.

The president, Dr. Anders, on taking the chair, made the following appointments on committees: Directors for two years, Dr. W. Easterly Ashton and Dr. J. Allison Scott; publication committee for three years, Dr. Francis T. Stewart; committee on increase of membership, Dr. David Riesman for five years. The following resolution was adopted:

Whereas, The State of Pennsylvania has not, up to the present time provided adequate accommodation for the care and treatment of its tuberculous sick. And

Whereas, The plans now in projection throughout the State, even when successfully executed, will provide for but a mere fraction of the number of those who need skillful care and medical direction, both for the saving of their lives and the protection of the community. And

Whereas, Experience has shown that by properly directed open air treatment the great majority of cases of incipient tuberculosis can be permanently cured, and that a large percentage of the daily new infections can be avoided if such patients are removed from close association with others not yet infected. Be it

Resolved, That the Philadelphia County Medical Society does hereby petition the legislature of the State of Pennsylvania, (1) for the appropriation of a certain sum of money, not less than \$500,000, to be devoted to the establishment of State camps, sanatoria, hospitals, and dispensaries for the tuberculous sick of the Commonwealth of Pennsylvania; and (2) for the setting aside of portions of the State Forestry Reserve with a view to accommodating the buildings that may be deemed necessary for the care of tuberculous patients, and for their scientific study and treatment. Further, be it

Resolved, That the president of this society be authorized and instructed to appoint a committee of three from the membership of the society to cooperate with similar committees that may be appointed from other societies in urging upon the legislature the need of State aid in the suppression of tuberculosis.

The North Branch of the Philadelphia County Medical Society elected Dr. A. B. Hirsch, chairman, and Dr. T. Turner Thomas, clerk, for the ensuing year.

The West Philadelphia Branch elected Dr. Herman B. Allyn, chairman, and C. A. E. Codman, clerk, for the coming year.

GENERAL

The Buildings of the New Hampshire School for Feeble Minded Children, which were recently burned, are to be rebuilt as soon as possible.

Leflore County, Miss., Medical Society.—This society has elected the following officers for the ensuing year: President, Dr. S. A. Eggleston, of Shellmound; vice-president, Dr. J. H. Lucas, of Greenwood; secretary-treasurer, Dr. D. S. Humphreys, of Greenwood; censor, Dr. S. L. Bristor, of Greenwood.

Dr. Francis Edgerton, of Middletown, Conn., died on January 10th, aged 67 years. He was a graduate of Wesleyan University and Columbia College, and was a former president of the Connecticut Medical Society. During the civil war Dr. Edgerton was assistant surgeon of the Twenty-first Connecticut Volunteers.

The Orange Mountain, N. J., Medical Society elected these officers at the annual meeting, January 21st: President, Dr. Richard C. Newton, of Montclair; vice-president, Dr. D. E. English, of Millburn; secretary, Dr. Richard D. Freeman, of South Orange; treasurer, Dr. J. Minor Maghee, of West Orange.

Dr. Ophelia Blinn, one of the pioneer women physicians of Chicago and a graduate of the Woman's Medical College of Philadelphia, died at the County Infirmary at Dunning, Ill., last Friday, aged 60 years. She had been ill several years.

Physicians in the United States Senate.—When the term of Senator Ball, of Delaware, expires on March 3rd, the medical profession will be left with but one representative in the United States Senate, Senator Jacob H. Gallinger, of New Hampshire.

The Plattsburgh Physicians' Club, of Plattsburgh, N. Y., was recently organized to promote by frequent meetings the professional and social welfare of the medical men of that vicinity. The officers elected were: President, Dr. F. Madden; secretary, Dr. T. Avery Rogers.

New York State Hospital for the Care of Deformed and Crippled Children.—It is stated that this institution will shortly be removed from Tarrytown to the Milburn mansion on Treason Hill, West Haverstraw, Rockland County, a site that offers many advantages.

Jefferson County, N. Y., Medical Society.—The following officers have been chosen for the ensuing year: President, Dr. E. S. Willard, of Watertown; vice-president, Dr. Potter, of Mannsville; secretary, Dr. F. R. Calkins, of Watertown; treasurer, Dr. C. M. Rexford, of Watertown.

President Garfield's Physician Dead.—Dr. S. R. Beckwith, who was President Garfield's family physician at the time of his assassination, died in Atlantic City, on January 20th, aged 72 years. Before going to Atlantic City he had resided in New York, Washington, Cleveland, and Cincinnati. He leaves a son, Dr. J. T. Beckwith, surgeon to the Atlantic City Beach Guards.

Iberville Parish, La., Medical Society.—At a meeting of the Iberville Parish Medical Society the following officers were elected to serve for the ensuing year: President, Dr. A. A. Allain, of Bayou Goula; vice-president, Dr. W. E. Barker, of Plaquemine; secretary and treasurer, Dr. W. L. Grace, of Plaquemine; censors, Dr. E. J. Kearny, of Plaquemine, and Dr. Paul Landry, of Whitecastle.

Larimer County, Colo., Medical Society.—The newly elected officers of the Larimer County Medical Society are: President, Dr. P. J. McHugh; vice-president, Dr. C. M. Haviland; secretary, Dr. E. Stiver; treasurer, Dr. W. A. Kirkland. Dr. E. Stiver was appointed a delegate to the State association meeting in Denver, and Dr. J. J. Halley, Dr. Mary D. Rieckly, and Dr. J. E. Dale were named as a committee on admissions.

University of Kansas.—There has been introduced into the Kansas legislature a bill allowing the University of Kansas to give clinical instruction in medicine at the various State hospitals and also at Kansas City, where a hospital site and some \$25,000 have been given for it. We are informed by Dr. George Howard Hoxie, of Lawrence, that if this bill becomes a law, the medical

school of the university will give its scientific and didactic work at Lawrence in the regular laboratories and then send out its students in sections to take practical work in the hospitals.

Baltimore Medical and Surgical Association.—At a meeting of this association, held on January 9th, the following officers were elected: President, Dr. C. Urban Smith; first vice-president, Dr. Charles O'Donovan; second vice-president, Dr. Nathan Winslow; secretary, Dr. Lee Crutchfield; treasurer, Dr. W. B. Perry; executive committee, Dr. James M. Craighill, Dr. Arthur Hebb, and Dr. D. Streett; committee of honor, Dr. John Neff, Dr. John W. Linthicum, and Dr. John I. Pennington.

Dr. William T. Councilman, professor of pathology in the Harvard Medical School, according to the public press, disputes the findings of the Roswell Park Commission in its study of cancer, which were to the effect that cancer can be cured by a serum. According to the despatch, Dr. Councilman stands by the findings of the Harvard experts, who recently came to the conclusion that cancer is amenable only to surgical procedure.

Dr. Charles E. Putnam, of Jersey City, was painfully injured a few days ago while attempting a rescue at a fire. As he was driving by a house which was ablaze, a woman called to him that her child was in the building. The doctor sprang out of his carriage and entered the burning structure. He made his way to the second floor, but, being unable to find the child, started to return to the street. While groping through the smoke to find the stairway, Dr. Putnam missed his footing and fell the entire length of the stairs. He was badly cut about the head and received painful bruises. The child was later found at a neighbor's residence.

Typhoid Fever in Chicago.—Typhoid fever is normally a disease of rural rather than of urban populations. For many years, under the abnormal conditions of Chicago's water supply, the reverse was true of this city compared with the country surrounding it. Even so, about 20 per cent. of all the fatal cases of typhoid occurring in Chicago were found to have been contracted outside the city. This was during a period, 1894 to 1903, when the average typhoid mortality was 3.54 per 1,000 of population. Last year, 1904, the rate was only 1.93; the lowest in the records of fifty-four years. The ratio of extraurban cases must necessarily have increased and it is a matter of interest to know to what extent. This can be learned only through the cooperation of the attending physician, and to this end attention is called to the health department's circular letter and postal card, which are duly mailed to every doctor reporting a typhoid fever death. Prompt replies will be appreciated by the Registrar of Vital Statistics.

Statement of Mortality in Chicago for the Week Ending January 21, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear popu-

lations of 1,990,750 for 1905, and of 1,932,315 for 1904:

	Jan. 21, 1905	Jan. 14, 1904	Jan. 23, 1904
Total deaths, all causes.....	691	542	517
Annual death rate per 1,000.....	15.47	14.19	13.95
By sexes—			
Males.....	331	300	300
Females.....	280	242	217
By ages—			
Under 1 year.....	117	106	91
Between 1 and 5 years.....	159	99	85
Over 60 years.....	131	127	104
Important causes of death—			
Acute intestinal diseases.....	23	20	24
Apoplexy.....	19	24	13
Bright's disease.....	15	34	32
Bronchitis.....	18	24	24
Consumption.....	77	52	66
Cancer.....	19	23	18
Convulsions.....	9	16	10
Diphtheria.....	9	11	7
Heart diseases.....	37	32	47
Influenza.....	22	20	4
Measles.....	5	2	
Nervous diseases.....	20	13	29
Pneumonia.....	120	108	106
Scarlet fever.....	3	2	3
Suicide.....	13	13	8
Smallpox.....	1	1	
Typhoid fever.....	9	7	9
Violence (other than suicide).....	26	25	16
Whooping cough.....	3	4	
All other causes.....	111	111	101

A County Medical Society on Record as Against Contract Practice.—The Mercer County Medical Society of New Jersey has recently taken positive action regarding lodge and society contracts. We are indebted to Dr. D. B. Ackley, of Trenton, for a statement from which the following facts are copied: The lodge practice in Trenton, which is the capital of New Jersey, as well as the county seat of Mercer County, has existed for thirty years. During this time the lodges and societies, which furnish free medical advice to their members and their members' families for the nominal sum of one dollar per year each, have increased from two to twenty. Such practice interferes with the general work of a physician, as well as subtracting from his dignity and causing him to offend against the code of ethics. The Mercer County Medical Society appointed a committee of three to investigate the practice. The committee has secured the signatures of every physician in Trenton to an agreement not to accept contract practice in any form; to refuse to renew contracts with lodges and societies when the term for which they have already agreed shall expire; and strictly to abide by the code of ethics of the American Medical Association and by the decision of the County Medical Society in regard to such practice. The inception of the plan to abolish the practice was due to the men holding the contracts in question. This action of the Mercer County Society is a step in the right direction, and is to be recommended to the physicians in any other community in which similar abuses exist.

Medical Society of the State of New York.—The ninety-ninth annual meeting of this society will be held on January 31, February 1, and 2, 1905, in the City Hall, Albany, N. Y. Programme:

Tuesday, 9.30 a. m. Executive Session; Opening Prayer; President's Inaugural Address; Report of the Committee of Conference; Reports of Officers and Committees; Executive Business. Papers: Dermatitis Seborrhoeica and Its Relation to Alopecia, and Other Conditions, by L. Duncan Bulkley, M. D., of New York; To What Extent Are Cyclicles Necessary in Determining the Refraction of the

Eye and in the Prescribing of Lenses, by Frank Van Fleet, M. D., of New York; Rheumatism and the Eye Muscles, by Francis Valk, M. D., of New York; Loss of Vision from Disuse of the Eye (Amblyopia ex Anopsia), by D. B. St. John Roosa, M. D., of New York; The Simulation of Appendicitis by Cholelithiasis, by George C. Lempe, M. D., of Albany; Biliary Drainage in Operations on the Gall Bladder and Biliary Ducts, by Eugene A. Smith, M. D., of Buffalo; Report of a Case of Vasomotor Disturbance Caused by Exposure of Sunlight, by Samuel B. Ward, M. D., of Albany; Report of a Case of Angioneurotic Oedema, by Clayton K. Haskell, M. D., of Bath; The Status of Supra-renal Therapy, by Samuel Floersheim, M. D., of New York; Aortitis, by Thomas E. Satterthwaite, M. D., of New York.

Tuesday, 2.15 p. m. Papers: The Antitoxine Laboratory, by Herbert D. Pease, M. D., of Albany; Recognition of Incipient Pulmonary Tuberculosis, by John H. Pryor, M. D., of Ray Brook; Phosphaturia, by James Pederson, M. D., of New York.

Tuesday, 3.30 p. m. "Symposium" on Cerebrospinal Meningitis: Pathology and Bacteriology of Cerebrospinal Meningitis, by W. T. Councilman, M. D., of Boston; Symptomatology and Diagnosis, by H. L. Elsner, M. D., of Syracuse; The History of Cerebrospinal Meningitis in America, by Abraham Jacobi, M. D., of New York; The Treatment of Cerebrospinal Meningitis, by C. G. Stockton, M. D., of Buffalo; The Eye Symptoms of Cerebrospinal Meningitis, by A. E. Davis, M. D., of New York.

Tuesday, 8.30 p. m. Senate Chamber: Address by Charles Harrington, M. D., of Boston; President's Address, by Hamilton D. Wey, M. D., of Elmira.

Wednesday, 9.15 a. m. Papers: The Correction of Nasal Deformities by Subcutaneous Operation, by John O. Roe, M. D., of Rochester; The Middle Turbinate in Diseases of the Accessory Sinuses, by J. A. Stucky, M. D., of Lexington, Ky.; Inferior Turbinate Bone, Its Function, Diseases, and Treatment, by Wendell C. Phillips, M. D., of New York; Treatment of Chronic Otitis Media, with Illustrative Cases, by W. Sohler Bryant, M. D., of New York; The Family Physician, by Robert F. Bush, M. D., of Horseheads; The Various Methods of Opening the Skull for the Removal of Tumors of the Brain, by Charles H. Frazier, M. D., of Philadelphia; Railway Spine, by Edward B. Angell, M. D., of Rochester; Report of Two Cases of Gastrectomy, with Exhibition of Patients, by Willis G. MacDonald, M. D., of Albany; The Relation of Pelvic Conditions to Nervous Disorders, by A. L. Beahan, M. D., of Canandaigua.

Wednesday, 2.15 p. m. Papers: The Non-sequitur in Medicine, by H. A. Fairbairn, M. D., of Brooklyn; Poisoning by Potassium Bichromate, by Francis Eustace Fronczak, M. D., of Buffalo.

Wednesday, 3.00 p. m. Genitourinary "Symposium." John Van der Poel, M. D., of New York, chairman. The Aetiology of Hypertrophied Prostate, by L. Bolton Bangs, M. D., of New York; Some Observations on the Technics of Perineal Prostatectomy, by George R. Fowler, M. D., of Brooklyn; Personal Experiences in Prostatic Surgery During the Last Two Years, by Willy Meyer, M. D., of New York; Suprapubic Prostatectomy, by Howard Lilienthal, M. D., of New York; Prostatism, Without Prostatic Enlargement, Its Diagnosis and Treatment, by Charles H. Chetwood, M. D., of New York; by invitation: Has the Catheter a Place in the Treatment of Chronic Prostatic Hypertrophy? by Paul Thorndike, M. D., of Boston; Conservative Perineal Prostatectomy, Results of Two Years' Experience, by Hugh H. Young, M. D., of Baltimore; a paper (title to be announced), by Francis S. Watson, M. D., of Boston.

Wednesday, 7.30 p. m. President's Reception at the Hotel Ten Eyck. Annual dinner at 8.30 p. m.

Thursday, 9.30 a. m. Business Session and Reports of Committees. Papers: Concerning the Treatment of Infantile Marasmus, by Heinrich Stern, M. D., of New York; Researches on the Blood of Epileptics, by B. Onuf, M. D., and Horace L. Grasse, M. D., of Sonoma; Three Unusual Cases of Aneurysm, by William C. Krauss, M. D., of Buffalo; A Few Thoughts Regarding Our Work, by H. A. Gates, M. D., of Delhi; A Case of Extensive Carcinoma of Tongue and Neck, Presenting Points of Special Interest, by William Seaman Bainbridge, M. D., of New York; Prophylaxis in Pregnancy and Labor, by T. Avery Rogers, M. D., of Plattsburgh.

Pith of Current Literature.

PRESSE MEDICALE.

December 7, 1904.

1. The Serofatty Membrane of the Heart, By P. POIRIER.
2. Prophylaxis Against Typhoid Fever by Means of Wright's Vaccine, By L. NATTAN-LARRIER.
3. Does Conjugal Diabetes Exist? By A. MARTINET.

1. **The Serofatty Membrane of the Heart.**—Poirier objects to the classical description of the pericardium that it is the description of the pericardium of the cadaver transformed by post mortem changes. He deems several points to be erroneous and states that the errors can be verified by the examination of frozen bodies and by radioscopic examination of the living.

2. **Prophylaxis Against Typhoid Fever.**—Nattan-LARRIER describes the adoption by the British War Office of Wright's method of vaccination against typhoid fever, the relative frequency of typhoid fever in the vaccinated and unvaccinated in the British army in all parts of the world, and the relative mortality in the two classes. Professor Wright, of Netley, has recently published a work on the subject.

3. **Does Conjugal Diabetes Exist?**—The frequency with which husband and wife suffer from diabetes causes Martinet to question whether such occurrences are purely coincidental.

December 10, 1904.

1. Indications for Prostatectomy, By E. DESNOS.
2. The Progress of Vaccination, By M. LABBÉ.

1. **Indications for Prostatectomy.**—Desnos says that the presence of an enlarged prostate is not a sufficient indication for its removal, in spite of the brilliant results which have been obtained, but that surgical intervention should be confined to those cases in which there is great torture or pain and the operation is possible, necessary, and promises to be efficacious.

2. **Progress of Vaccination.**—Labbé speaks of the progressive practice of vaccination in France and its colonies, of the manner of obtaining vaccine, the choice of subjects, and, though the transmission of tuberculosis in this way is very rare, he points out the necessity of guarding against the danger.

December 14, 1904.

1. The Œsophagosalarv Reflex, By H. ROGER.
2. Cardiac Lesions and Renal Affections,

By F. BRONOWSKI.

1. **The Œsophagosalarv Reflex.**—Roger has demonstrated by experiments on dogs that the introduction of a foreign body into the Œsophagus provokes an abundant secretion of saliva and thus the presence of a reflex which he calls by the foregoing name.

2. **Cardiac Lesions and Renal Affections.**—Bronowski tabulates the great frequency of renal complications in heart lesions and concludes that the cardiac lesions, by modifying the composition

of the blood and producing stasis in the kidneys, lessen the vitality of the latter and render them more susceptible to the action of toxins, auto-toxines, and noxious germs and to the beginning of serious disease within them.

SEMAINE MEDICALE.

December 14, 1904.

A Contribution to the Study of Localization in the Hypoglossal and Facial Nerves,

By C. PARBON and J. PAPINIAN.

Study of the Hypoglossal and Facial Nerves.—Parbon and Papinian have made sections of, and studied the changes in these nerves after the tissues at their peripheral ends had been destroyed and death had been caused by cancer in the suprahyoid region. In addition they try to establish the relations which existed between these changes and the peripheral lesion.

December 21, 1904.

Pubic Osteotomy by Gigli's Method,

By Professor R. DE BOVIS.

Gigli's Method of Pubic Osteotomy.—Bovis says the idea of pubic osteotomy is ancient and refers to a saw devised for the purpose by Aitken, of Edinburgh, in 1775. Gigli's operation consists of the section of the pubic bone in the vicinity of the symphysis by means of a filiform saw, invented by Gigli, when such intervention is indicated in obstetrical cases. Bovis describes the technics and gives the histories of two successful cases of his own.

December 28, 1904.

The Dangers Attending the Use of Camphorated Naphthol in Ordinary Practice, By CAZIN and HALLION.

Dangers from Camphorated Naphthol.—After a collation of the reported cases of death and of serious intoxication from camphorated naphthol, Cazin and Hallion describe a number of experiments which they have performed on rabbits and dogs which demonstrate that in these animals at least toxic action may be produced by absorption of the drug through serous membranes, although no lesion of the blood vessels is present.

REVUE DE MEDECINE

December, 1904.

1. Is There Such a Thing as Banti's Disease?

By GILBERT and LEREBoullet.

2. Concerning the Accelerating and Retarding of the Pulse by Means of Counting in a Loud Tone of Voice, Rapidly and Slowly, By BERNHEIM.

3. Syphilitic Diseases of the Heart, By CECIKAS.

4. Concerning the Organic Origin of Certain Phobias, By HARTENBERG.

5. Multiple Spontaneous Gangrene of the Skin, By TRUFFEL.

6. A Case of Primary Cancer of the Liver, By TOLOT.

1. **Is There Such a Thing as Banti's Disease?**—Gilbert and Lereboullet answer this question, after having analyzed the evidence, by saying that there is not. The cases which have been reported under this title show once again that the spleen

is a satellite of the liver, that it is rarely the subject of disease by itself, and that when it is diseased there is usually a preexistent lesion of the liver. This is called by the authors the hepatic spleen. This causal lesion in the liver, in the biliary apparatus or in the veins, which is more or less distinct, must be detected as early as possible. Treatment should be addressed to this condition rather than to the hypertrophy of the spleen.

5. Multiple Spontaneous Gangrene of the Skin.—Truffi narrates two cases of this condition and draws the following conclusions from his consideration of them: 1. The gangrenous focus may be located in the hypodermis with or without participation of the derma and the epiderma. 2. The necrosis of the tissues is caused by a constriction of the small peripheral vessels. 3. The formation of the necrotic plaque can be prevented by the aid of revulsive therapeutic measures, or it can at least be made very superficial. 4. The keloids which result from the cicatrization of the postgangrenous ulcerations will sometimes undergo spontaneous resolution.

REVUE DE CHIRURGIE.

December, 1904.

1. Note on a Case of Fistula of the Thyroglossal Canal,
By CORNIL and SCHWARTZ.
2. Vicious Arrangement of the Ascending Colon Caused
by Descent of the Right Kidney, By ALGLAVE.
3. Operative Wounds of the Thoracic Canal in the Cer-
vical Region, By LECÈNE.
4. Perforation of the Stomach Resulting from Ulcer,
By GROSS and GROSS.
5. Cancer of the Thyroid, By DELORE.

2. Vicious Arrangement of the Ascending Colon Caused by Descent of the Right Kidney.—Alglave draws the following conclusions: 1. The first remedy for such accidents is nephropexy by which one will relieve the ascending colon which is the initial and principal seat of the accidents under consideration, on account of the faulty position which is imposed upon it by the prolapsed kidney. 2. Nephropexy will not remedy the intestinal disturbances in all cases. It will sometimes fail to overcome a fold of the colon which may be held firmly in place by epiploic adhesions. 3. If nephropexy does not suffice to relieve the fold of the colon with its adhesions, the latter must be removed and the position and calibre of the tube restored as nearly as possible to the normal. 4. In very bad cases it will be necessary to exclude the offending loop of intestine and perform transverse ileocolostomy or ileosigmoidostomy. 5. This procedure may be called for in cases in which the liver is prolapsed as well as the kidney, and in which nephropexy will not relieve the displacement of the intestine which may be caused by the liver.

3. Operative Wounds of the Thoracic Canal in the Cervical Region.—Lecène concludes as follows: 1. These wounds are not frequent, neither are they exceptionally rare. 2. There are two classes, in one of which the wound is observed in

the course of the operation which has been performed, while in the other the symptoms indicating such a wound do not appear until several days later. 3. In the first case a clear milk-like fluid is seen flowing into the wound in rhythmical jets. 4. In the second case there is a discharge of lymph or chyle from the drainage tube or from the wound. There may also be thirst, emaciation, oliguria, and general asthenia. 5. In the 22 cases collected by the author all the patients but one recovered. 6. If the wound is discovered during the operation the peripheral end of the divided tube must be tied. This will cause no particular disturbance. The suturing of the thoracic canal has been performed but once, and can only be done when the wound is incomplete. If the wound is not discovered for several days the wound should be tamponed. Reopening the wound and ligating the vessel is a difficult procedure, and one that will seldom be imperative.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

November 20, 1904.

1. Contribution to the Study of Cardiac Phenomena in
Malaria, By P. GALLENGA.
2. Characteristics and Significance of the Pyloric Fossa
(To be continued), By STEPHANO FOCCA.
3. Local Anæsthesia with Adrenalin-Cocaine,
By GIUSEPPE GUALDRIN.
4. Thyroid Treatment for Ophthalmic Hemiorbita,
By P. CONSIGLIO.

1. The Heart in Malaria.—Gallenga reports three cases of malarial infection in which he observed symptoms of cardiac insufficiency which resembled closely those seen in acute endocarditis and myocarditis accompanying infectious diseases. A study of these cases convinced him that the cardiac disturbances were not merely the result of changes in the innervation of the heart, but were indications of a severe involvement of the myocardium. There is no doubt that the myocardium may be affected in severe cases of malarial infection, especially in the æstivoautumnal type. These changes are usually functional only at first, but later on they may become anatomical, and more permanent. If the proper treatment be applied to the malarial infection, however, these cases may be favorably influenced. The functional disturbances of the heart may, however, continue for a long time after the malaria has been cured, and it is common in such cases to find a weak and irregular pulse, weak cardiac sounds, cyanosis, etc. The practical conclusion is that malarial patients with cardiac complications should not merely be treated as malarial cases, but should also receive the proper treatment for their cardiac condition. They should be treated as convalescents from an endocarditis, and the proper cardiac remedies should be employed. The condition described is often taken for the effect of anæmia, but this is a mistake. Another important point is that we should avoid too large or too frequent doses of quinine in the treatment of malaria, especially when the heart is involved. Moderate doses of quinine at intervals of three hours (half a gramme hypoder-

mically, for example) are just as efficient and less dangerous than the enormous doses sometimes given.

4. **Thyreoid Extract in Ophthalmic Hemis-
crania.**—Consiglio advises the use of thyreoid ex-
tract in hemisrania. He describes a case of very
severe recurrent migraine in which he used this
method of treatment with success. The patient was
a woman aged 40 years, who since childhood had
been subject to extremely severe hemicranias, ac-
companied by injection and irritation of the con-
junctiva of the eye on the corresponding side, a
dilatation of the pupil, and blepharospasm. The
attacks of migraine in this case recurred with great
regularity about every twenty-eight days and usually
preceded the menstrual periods. The correspondence
of the menstruation and the migraine in this case
was very complete. The woman had no attacks of
migraine during pregnancy and lactation, but de-
veloped the same attacks after weaning her infant.
At the age of 36 years, her flow became irregular
and the attacks followed suit. It was then that
thyreoid treatment was thought of. The theoretical
basis for this treatment in such cases is that the at-
tacks of migraine are caused through vasomotor
changes induced by the circulation of certain toxins
in the body, which are derived from an insufficiency
in the function of the thyreoid gland, or from a
disturbance in the balance of internal secretion be-
tween that gland and the ovaries. Tablets of thy-
reoid extract were, therefore, given to this patient,
with the result that within two months, not only
was the menstrual function restored to regularity,
but the attacks of migraine totally disappeared.

ROUSSKY VRATCH.

December 11, 1904.

1. The Treatment of Tumors of the Bladder,

By LEOPOLD CASPER.

2. Hypertrophic Myosalpingitis,

By E. D. ROUSZKI.

3. The Operative Treatment of Pyloric Stenosis,

By N. E. STERNE.

1. **Tumors of the Bladder.**—Casper's article reviews the recent advances in the methods of treating tumors of the bladder with the aid of the cysto-
scope. The diagnosis is no longer difficult, but it is not yet possible with the aid of the instruments at hand to differentiate readily between the benign and the malignant tumors. Of course, the study of the case as a whole will come in here, as it always does in doubtful cases. The treatment is divided into the palliative and the radical. The palliative treatment consists of the use of narcotic drugs for the pain and tenesmus. An enema containing one gramme of antipyrine, ten or twenty drops of tincture of opium, and fifty grammes of water may be used for this purpose. The arrest of hæmorrhage is not easy, and most of the astringents which have been recommended as vesical injections are of no use. If the hæmorrhage does not stop when the patient is at perfect rest, we must treat the bladder locally. The organ is emptied and not more than one hundred c.c. of a solution of silver nitrate (1:1000 or 1:500) are injected, in order not to distend the walls unduly. The author does not recommend adrenalin solutions, and warns

against the use of gelatin solutions for the arrest of vesical hæmorrhage. A catheter à demeure, however, often stops the bleeding—always in benign tumors—because it gives rest to the bladder. The operative removal of benign tumors may be easily performed with the author's new cystoscope, which is provided with a snare that passes around the base and takes off the growth. Several sittings may be required when the growth is large. The method is not dangerous and the author reports successful removals in thirty cases. He makes the proviso, however, that the growth must be benign, and that it must be situated favorably for snaring. Many cases of benign growths have been permanently cured by this method. For malignant tumors, the only operative treatment is high cystotomy and removal of the growth, together with a portion of the bladder. This operation gives a high mortality and is not always successful if the patient lives. Some patients develop intractable fistulæ. The tumors situated at the bottom of the bladder are especially difficult to treat. In such cases palliative measures can do a great deal. The use of narcotics, among them the newer sedatives, may be employed. Heat in every form also gives relief, especially hot baths, compresses, and irrigations with hot silver nitrate solutions.

2. **Hypertrophic Salpingitis.**—Rouzscki thinks that the subject of diseases of the Falloppian tubes has not been thoroughly worked out in spite of the exhaustive investigations of Martin and others. The classification of diseases of the salpinx is not satisfactory, and but little is known concerning the condition which Rouzscki describes; namely, hypertrophic salpingitis accompanied by a growth of muscle tissue in the walls of the tubes. He reports two cases of this type and seeks to establish its characteristics. He defines myosalpingitis, on the strength of his own cases and of the observations recorded in literature, as an inflammatory condition of the salpinx characterized by an increased thickness of the muscular layers, without any enlargement in the lumen of the tube. The name hypertrophic myosalpingitis is suggested as offering a contrast with chronic hypertrophic interstitial salpingitis. The disease occurs for the most part in young women at the height of sexual life, and not in middle-aged women. Schauta thinks that this is because there is a retrograde degeneration of the muscular structures in the tubes after the climacteric, just as sometimes occurs in fibroid tumors. The right tube seems to be most frequently affected. The cause of the primary inflammation is undoubtedly microbic in character, and possibly it is gonorrhæal in most instances. The hypertrophy also is due to an increased contraction of the tubes, owing to the obstruction of the peritoneal opening or the accumulation of material within the tube. Only in one recorded case was the peritoneal opening patulous. The hypertrophy is, therefore, largely mechanical in origin. The symptoms of hypertrophic salpingitis differ in no way from those of other forms of the disease, and are accompanied by the com-

plicating conditions of endometritis, oophoritis, and peritonitis, local or general. A prominent feature is the coincidence of the attacks of pain, etc., with the menstrual periods, and the presence of pain on one side only when one tube is hypertrophic. The only treatment possible is the removal of the affected tube.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 21, 1905.

1. The Treatment of Acute Anterior Poliomyelitis by Nerve Transplantation,
By WILLIAM G. SPILLER and CHARLES H. FRAZIER.
2. Intestinal Obstruction in Children,
By JOHN F. ERDMANN.
3. Choice of a Time of Election in Mastoid Operations. Some Considerations Arising from the Difficulties of the Choice. Prospective Results, By D. A. KUYK.
4. Two Cases of Objective Aural Tinnitus Due to the Action of Tubopalatal Muscles,
By WALTER A. WELLS.
5. Osmology and Pharmacodynamics,
By HEINRICH STERN.
6. Some Problems of Presbyopia,
By GEORGE M. GOULD.
7. The Usefulness of the Ophthalmometer,
By F. C. HEATH.
8. Internal and External Hæmorrhoids, with Special Reference to Their Treatment,
By LEWIS H. ADLER, JR.
9. Preoperative and Postoperative Treatment of Surgical Cases,
By L. SEXTON.
10. The Mechanism of Streptococcus Infection,
By GUSTAV F. RUEDIGER.
11. Cysts of Bartholin's Glands, with Brief Remarks on the Anatomy of the Normal Gland Structure,
By THOMAS S. CULLEN.
12. Some New Views Respecting the Horopter,
By GEORGE T. STEVENS.
13. Dengue in the Isthmian Canal Zone, Including the Report of the Laboratory Findings,
By W. NEWCOMB CARPENTER and RICHARD LIGHTBURN SUTTON.

1. See this *Journal*, Vol. LXXX, page 187.
2. See this *Journal*, Vol. LXXX, page 329.

13. **Dengue.**—Carpenter and Sutton conclude: (1) Dengue is one of the few fevers in which a leucopenia persists from the first. (2) Blood examinations are of great value in differentiating between malaria and dengue. Even though no parasites be found, a slight leucocytosis with decided increase in the percentage of large mononuclears and transitionals is indicative of the former, while a leucopenia, with a normal differential leucocytic count or varying degrees of a small mononuclear lymphocytosis and a marked eosinophilia late in the disease, is characteristic of the latter. (3) Albuminuria is seldom seen in an ordinary attack of dengue, and then only in small amounts. The exact opposite is true of yellow fever. (4) The period of convalescence in dengue is almost invariably ushered in by a pronounced small mononuclear lymphocytosis which persists for several days. (5) It is suggested that the causative agent is a small diplococcus or a delicate bipolar staining bacillus

closely resembling Pfeiffer's organism. It is probably transmitted by the respiratory tract, and its virulence is much increased by the presence of the essential meteorological factors and by overcrowding.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 10, 1905

1. The Humane Treatment of Malignant Disease from a Surgical Point of View, By JOHN C. MUNRO.
2. A Brief Consideration of Some of the Results of the Surgical Treatment of Cancer of the Stomach,
By R. H. FITZ.
3. A New Method of Performing Gastroenterostomy,
By ALFRED H. GOULD.
4. Points Pertaining to the Management of Diabetic and Non-Diabetic Glycosuria (*To be continued*),
By HEINRICH STERN.
5. The Brown Tail Moth Eruption,
By HARVEY P. TOWLE.

1. **Malignant Disease.**—Munro reports a number of apparently hopeless cases of carcinoma which were either cured or greatly benefited by surgical intervention. Two of the cured cases were suffering from benign stenosis of the pylorus. As, however, one of the patients had been refused operation at two hospitals and told to go home to die, and as the other patient had been under the best medical care for pyloric cancer and was considered beyond surgical aid, they should be classed as suffering from malignant disease, so far as the purpose of the present paper is concerned. Three facts should be emphasized: (1) Cancer at all stages is a surgical affection and the surgeon alone should decide whether the case is beyond aid or not. (2) Surgeons should be more optimistic in treating the disease. Exploratory section should be resorted to more frequently. (3) Patients should be made to understand that while the disease is ordinarily incurable, yet they will be better treated by honest physicians that promise little than by charlatans who promise much.

2. **Cancer of the Stomach.**—Fitz takes a rather pessimistic view of the surgical treatment of cancer of the stomach. He analyzes the records of 37 patients on whom operation was performed. Twenty-eight of these patients died within two months after operation, and only one was in good condition one year after operation. The author concludes: "It would appear from this experience that merely exploratory operations in advanced malignant disease involving the stomach have a considerable mortality, afford no relief and are followed by an early death. That explorations in such advanced cases followed by operations intended to relieve symptoms have a high mortality, and that in the survivors, relief is inconstant, though sometimes prolonged at least a year. It may be admitted that the surgical treatment of advanced cases of malignant disease of the stomach is humane because it sometimes gives more or less prolonged relief, and often shortens the period of suffering even if it gives no considerable relief. On the other hand, the treatment of such cases by other than sur-

gical methods often gives more or less prolonged relief and usually makes dying easy. It may be more humane to treat every case surgically, whatever its condition at the time, or to administer a lethal dose to an incurable and suffering patient. Should the choice lie between the two methods, the latter has certain advantages in its favor."

3. Gastroenterostomy.—This is Gould's fourth paper on proposed improvements in surgical technics. The ideal operation should satisfy the following requirements: (1) The pylorus should never be closed, merely to ensure the patency of the artificial opening. (2) The gastroenterostomy opening should be so constructed that it will remain open of itself. (3) An enteroenterostomy should be performed between the proximal and the distal coils of the jejunum. (4) That as much as possible of the food should be prevented from entering the stomach, without entirely cutting off the jejunal patch from the protection of the bile against the eroding effect of the gastric juice. In the proposed operation the second requirement is attained by making the opening in the stomach at right angles to the greater curvature. This gives a diamond shaped opening when the operation is completed. The fourth requirement is obtained by constructing an artificial valve in the proximal loop of the jejunum on the stomach side of the enteroenterostomy.

MEDICAL RECORD.

January 21, 1905.

1. A Contribution to the Ætiology of Malaria, and to the Analysis of Some Relations of Meteorology to Chemical Pathology, By HOMER WAKEFIELD.
2. The Use of Sulphate of Copper Alone, and in Combination with Lime, for the Destruction of Mosquito Larvæ, as a Deodorant, and as a Disinfectant, By A. H. DOTY.
2. The Subconscious Self, By J. ALLEN GILBERT.
4. Some Painful Affections of the Feet, Diagnosis and Treatment, By CHARLES OGILVY.
5. An Inflamed Appendix in an Inguinal Hernia, Simulating Strangulation, By JOSEPH E. GOLDING.

1. Malaria.—Wakefield contends that "malaria" is a syndrome more typical in symptomatology than in incidental blood changes or specific mode of infection. It is "essentially a disease of general stasis of catabolism, involving primarily blood destruction, and is, in different cases, caused by the suboxidation of humidity, vitiated atmospheres, etc., by toxicity, of many mosquito bites, by intravascular bacterial toxins, and undoubtedly, also, by direct inhalation of atmosphere heavily impregnated with decaying organic matter, which is absorbed by the blood circulating through the pulmonary alveoli." The mosquito and the plasmodium enter very little into the author's theory of the ætiology of the disease.

2. Sulphate of Copper and Lime in Sanitation.—Doty records the results of an investigation conducted for the purpose of determining the following points: (1) The use of copper alone, or in combination with lime, for the destruction of mosquito larvæ; (2) as a deodorant;

(3) as a disinfectant. (1) Sulphate of copper combined with lime is more effective as a destroyer of mosquito larvæ or as a deodorant than when used alone. Against mosquitoes the combination is effective, not on account of its toxicity, but because it rapidly removes from the water the organic matter on which the larvæ feed. This method of destroying mosquitoes is therefore of limited applicability. (2) As a deodorant the mixture is the most valuable agent we have at present. It is cheap, harmless, and easily made. It acts rapidly on both solids and liquids and its effects are permanent. (3) As a germicide the value of the combination has as yet not been sufficiently worked out. Many experiments are being conducted in various laboratories in order to settle the question, and the information will be soon available.

4. Painful Affections of the Foot.—Ogilvy discusses at some length the following affections: (1) Rheumatism of the feet may occur. The term is mostly used by the lazy or ignorant for denoting conditions that are not rheumatism. (2) Eversion. So called weak ankle. If not attended to in time is very apt to result in flat foot. (3) Flat foot. This is of three degrees: (a) Before the arch has broken down. The condition is as a rule dependent on some malformation which weakens the foot, such as eversion or pronation. The treatment of this first stage of flat foot is the treatment of the deformity. For simple eversion or pronation with a well arched foot a Thomas heel should be worn. (b) If the arch has given away we have the second degree of flat foot. For this condition a plate, which gives lateral as well as central support should be worn, such as the Whitman plate. (c) Third degree. In this type of flat foot there is marked eversion with rigidity. The foot should be overcorrected by suitable operative intervention and then put up in plaster for three weeks. After this a plate and an inside leg brace should be worn for several months. (4) Morton toe. This condition is overcome usually by supporting the anterior transverse arch of the foot. (5) Painful heel is due to a bursitis. Treatment may be by either excising the bursa or by hollowing out the heel on the side of the bursa. The condition usually occurs with a weakened longitudinal arch or with flat foot. If this be the case a foot plate should be used, a longer one than for ordinary flat foot.

AMERICAN MEDICINE

January 21, 1905.

1. Psychiatry in Its Relation to Other Sciences, By CHARLES L. DANA.
2. Subnormal Accommodation and Premature Presbyopia, By GEORGE M. GOULD.
3. Erotomania: Considerations on Its Manifestations and Pathogenesis, with the History of an Instructive Case, By J. LEONARD CORNING.
4. Occupations with Relation to Tuberculosis, By JOHN B. HUBER.
5. Is Cæsarean Section Ever Justifiable in the Management of Placenta Prævia? By RICHARD DOUGLAS.
6. Radiotherapeutic Nihilism, By GORDON G. BURDICK.
7. President Garfield at Elberon, By ANDREW H. SMITH.

1. **Psychiatry.**—Dana's remarks do not lend themselves to recapitulation. They are presented under eight heads: (1) Psychiatry and economics; (2) psychiatry and psychology; (3) psychiatry and psychotherapy; (4) psychiatry and neurology and internal medicine; (5) psychiatry, pathology, and physiological chemistry; (6) psychiatry and criminology; (7) psychiatry and forensic or legal medicine, and (8) psychiatry and anthropology.

3. **Erotomania.**—Corning reports in detail the case of a man, aged 29 years, apparently normal to puberty, but who at this period developed a longing "for a divine woman, sinless and pure." After some years he met her in a public park. His advances were not acceptable. He so persecuted the unfortunate woman that her friends had to call the matter to the attention of his family. His disposition by this time had become so difficult that he was sent away under supervision. Erotomania is not to be confounded with nymphomania or satyriasis. In the former the love is in the head, in the latter in the flesh. The author summarizes his conclusions thus: (1) Erotomania, like other manifestations of paranoia, is due to degeneration. (2) It may occur in either men or women, but is more common in the former. (3) Broadly, it is an affection of the imagination, a morbid extravagance of the ideal. (4) In its individual manifestations, it presents the characters of a love, pathological, and essentially psychic and devoid, moreover, of carnal appetite. (5) There is nearly always, though not invariably, a tendency to personification; the subject foists his ideality upon a living person, or upon an inanimate object (statue, picture). In the latter case, his apostrophes and gestures disclose the personifying propensity. (6) The delirious idea of the erotomaniac is impulsive, obsessional, irresistibly compelling. Though his intelligence may show him the consequence of yielding to his obsession, he is powerless to resist it. He should, therefore, not be held to a legal responsibility for his acts, but should be restrained. (7) Erotomania may occasionally coexist with nymphomania or some other form of sexual aberration, or with mysticism. (8) The obsession of the erotomaniac is usually for an individual of the opposite sex. (9) While erotomania may disclose itself in youth, it is really a disease of adult life, coming on after puberty, and ending not seldom in dementia.

4. **Tuberculosis.**—Huber's paper is based chiefly on statistics furnished him by Miss Brandt, of the Charity Organization Society. The author gives a table in which the tuberculosis mortality is noted for fifty-three different occupations. We quote only a few figures which represent the deaths from tuberculosis per hundred thousand living in the same occupation. Marble and stone cutters head the list with 540.5 deaths, and bankers, brokers, and officials of companies foot it with 92.1 deaths. Physicians and surgeons are fairly immune (168.8), though not to the extent of lawyers (139.9) and clergymen (123.5).

5. **Placenta Prævia.**—Douglas reports one case in which he performed Cæsarean section for placenta prævia. The woman lived. To date, twenty-four cases have been treated by this method (Deaver). Summarized: "The argument stands about in this light. The maternal mortality of placenta prævia centralis, treated obstetrically, varies from 18 per cent. to 30 per cent.; and as Radtke has shown, many who recover sustain pelvic lesions, resulting in invalidism. Against this, when the same condition is treated by Cæsarean section, the mortality is 18.75 per cent. (Deaver). The infantile mortality in placenta prævia centralis, by vaginal delivery, is 75 per cent. to 85 per cent. In properly selected cases, it is only 56 per cent. after Cæsarean section. These are the actual figures, justified by the results up to date. It is my firm conviction that the maternal mortality can be reduced below 10 per cent. We are not warranted in anticipating a reduction in the fetal mortality below 50 per cent." The author sent out the following telegram to a number of well known men: "In placenta prævia centralis; first pregnancy; child viable; compact woman; rigid cervix; free hæmorrhage; surroundings favorable; would you endorse Cæsarean section? Kindly answer." The following answers were received: "Conditions justify such action; best chances for mother and child."—Henry D. Fry. "If child living do immediate Cæsarean section, otherwise forcible delivery for mother's sake."—W. R. Pryor. "If you do Cæsarean section, put large drain of strong iodoform gauze from uterus down through cervix."—W. R. Pryor. "Yes, would do Cæsarean section in interests of both mother and child, if very difficult to use colpeurynter."—Howard A. Kelly. "I unhesitatingly advise Cæsarean section."—George H. Noble. "Cæsarean section if cervix cannot be dilated without great danger; otherwise not."—J. Whitridge Williams. "Believe Cæsarean section safest under conditions named, if patient not exsanguinated."—Charles P. Noble. "Cæsarean section offers best chance of recovery."—Charles A. L. Reed. "By all means, yes; have had a successful and easy case only lately."—Edward J. III. "Yes, if surroundings are favorable, and if you will do the work."—L. H. Dunning. "Certainly, if cervix very rigid."—Clarence J. Webster. "Not as a rule, unless cervix very rigid, hæmorrhage more than average, and version seems difficult."—B. C. Hirst. "I do not favor Cæsarean section under the circumstances stated."—E. S. Lewis.

MEDICAL NEWS.

January 21, 1905.

1. Precautions Used by the New York City Department of Health to Prevent the Spread of Contagious Disease in the Schools of the City.
By THOMAS DARLINGTON.
2. The Cystoscope as an Aid in Genitourinary Surgery.
By FOLLEN CABOT.
3. The Relation of Cholin to Epilepsy (*To be continued*),
By Dr. JULIUS DONATH.
4. Some Ocular Reflexes—(Psychoses),
By S. W. S. TOMS.

5. Report of a Case of Postdiphtheritic Paralysis,

By WILLIAM J. BUTLER.

1. **Medical Inspection of Schools.**—Darlington goes into a detailed description of the method employed in New York for the inspection of the school children by the Health Department officers. The magnitude of the task may be imagined from a few concrete figures. In 1904 the number of examinations made was 8,261,733; the number of children excluded from school, 12,289, and the number treated by the department, 515,505.

2. **The Cystoscope.**—Cabot before using the cystoscope thinks it best to prepare the patient. For a few days sounds should be passed and bladder irrigations resorted to. Usually it is best to inject, before cystoscopy, half an ounce of a one per cent. solution of cocaine into the bladder. The cystoscope is useful for detecting incysted stones, foreign bodies, or new growths within the bladder. Careful examinations in conjunction with urethral catheterization will often throw much light on the condition of the kidneys.

4. **Ocular Reflexes.**—Toms reports four cases which illustrate how abnormal conditions of the eyes are at times capable of giving rise to symptoms whose ocular origin would ordinarily remain unsuspected. The moral would seem to be that the eyes ought to be examined regularly unless the cause of illness is quite evident.

5. **Postdiphtheritic Paralysis.**—Butler's case exhibited a postdiphtheritic paralysis of unusual extent, involving the external recti of the eyes, the soft palate, the pharynx, the abductors of the larynx, the diaphragm, and peripheral nerves. Acute cardiac dilatation, with pulmonary hypostasis, and œdema; also liver stasis. The heart in diphtheria is discussed at some length.

ANNALS OF SURGERY.

November, 1904.

1. Bacillus Pyocyaneus Septicæmia Associated with Blastomycetic Growth in Primary Wound,

By EASTMAN and KEENE.

2. The Bridging of Nerve Defects,

By POWERS.

3. Total Avulsion of the Scalp,

By MELLISH.

4. Traumatic Abscesses of the Cerebrum,

By ROBINSON.

5. Fracture of the Base of the Skull,

By WALTON.

6. Ligation of Both Common Carotid Arteries,

By THOMAS.

7. Perforating Wounds of the Chest, Perforating the Diaphragm and Involving the Abdominal Viscera,

By WILLIAMS.

8. Operative Treatment of Perforative Gastric Ulcer,

By ATHERTON.

9. A New Operation for Intestinal Stenoses,

By MCGRAW.

10. Pneumococcus Peritonitis,

By MATHEWS.

11. The Treatment of the Stump in Appendicectomy,

By SEELIG.

12. Appendix Vermiformis Concealed in the Postcæcal Retroperitoneal Space,

By HANCOCK.

13. Remarks on Appendicitis,

By SYMS.

14. Double Traumatic Iliac Dislocation of the Hip,

By LEWIS.

15. Fracture of the Tibial Tubercle,

By WARE.

16. Abdominal Crisis Caused by Meckel's Diverticulum,

By SMITH.

17. The Use of the Segmented Ring in Gastric and Intestinal Anastomoses,

By HARRINGTON and GOULD.

1. **Bacillus Pyocyaneus Septicæmia.**—Eastman and Keene conclude: 1. There was in their case a general septicæmia. The diagnosis rested upon the bacteriological findings. There was profound intoxication with high pulse rate and usually subnormal temperature. 2. The most marked feature was nervous excitation. 3. The finding of blastomycetes in the local ulcer explained the failure of the wound to heal. The combination of the blue pus bacillus infection with blastomycetic infection was unusual. 4. The case presented a clean incised wound which healed by first intention. The wound became infected with blastomycetes primarily and with bacillus pyocyaneus secondarily. The complication is a rare one, owing to the limited distribution of the pathogenic yeasts.

2. **The Bridging of Nerve Defects.**—Powers concludes that, although correction of the evils resulting from a gap in the continuity of a nerve is a matter of great importance in a given case, it is impossible to say definitely what form of bridging should be employed. More cases, recorded later in their history, are needed. Neuroplasty and implantation are always available resources and should be preferred at present. Resection of bone may be advisable in selected cases. Transplantation of foreign grafts should be avoided. The prognosis should always be guarded, and repeated operations may be necessary.

6. Ligation of Both Common Carotid Arteries.

—Thomas considers the following points of interest in his case: 1. The presence of a malignant growth which was so situated that radical removal was impossible, but which caused such distress that relief was urgently called for. 2. The impossibility of administering a general anæsthetic and the successful and satisfactory ligation under local anæsthesia. 3. The temporary improvement which followed in spite of the advanced stage of the disease when the operation was undertaken. 4. The high division of the common carotid which was demonstrated at the time of the second operation. This point was not observed on the right side, as the common trunk only was sought.

17. The Use of the Segmented Ring in Gastric and Intestinal Anastomosis.

—Harrington and Gould conclude as follows: 1. The process of repair is as rapid after use of the segmented ring as after a plain suture. 2. The time required for the operation is less than is required for a straight intestinal suture. 3. Such objections as weight, ulceration, difficulty of passage, etc., inherent in other mechanical contrivances, are minimized by the ring. 4. The analogy between the experimental and the human observations is so close as to show the propriety of the deductions made from the animal experiments. 5. The employment of the ring in human beings is safe and satisfactory for all sutures.

December, 1904.

1. On the Morphology of Carcinoma and the Parasitic Theory of Its Ætiology, By ORTH.
2. The Present Position of the Surgery of the Hypertrophied Prostate, By WHITE.
3. Intussusception of Meckel's Diverticulum, By CHEYNE.
4. The Operative Treatment of Cancer of the Breast, By WARREN.
5. Modern Bullet Wounds, By FOXWORTHY.
6. Some Experiments with a New Method of Closing Wounds of the Larger Arteries, By BREWER.
7. Birth Fracture of the Skull, By NICOLL.
8. Divulsion in Œsophageal Strictures by Means of a New Instrument, By ALESSANDRI.
9. Parotiditis Following Injury or Disease of the Abdominal and Pelvic Viscera, By DYBALL.
10. Duodenal Ulcer, By MAYO.
11. Tetany and Foreign Bodies in the Stomach, By WARBASSE.
12. Intraabdominal Torsion of the Entire Great Omentum, By SCUDDER.
13. Hernia of the Bladder Complicating Inguinal Hernia, By SHEPHERD.
14. Dermoid Cyst of the Pelvic Connective Tissue, By GERMAIN.
15. The Iliac Extraperitoneal Operation for Stone in the Lower Ureter in the Male, By FOWLER.
16. Undescended Testicle, By ODIORNE and SIMMONS.
17. I. Hypernephroma of Kidney; II. Fibroadenoma of Inner Wall of Ileum, By WATSON.

1. On the Morphology of Carcinoma and the Parasitic Theory of Its Ætiology.—Orth has reached the following conclusions: 1. No one up to the present time has produced proof that carcinoma is of parasitic origin. 2. There is no necessity to assume a parasitic ætiology in carcinoma.

7. Birth Fracture of the Skull.—Nicoll has operated upon 23 cases and has collected the literature of the subject, drawing the following conclusions: 1. The statement that depressed green stick fracture of the skull in infants rectifies itself if left alone lacks substantiation. It is not true of traumatic green stick fracture any more than it would be true of a similar fracture in any other part of the body. In the parturition cases it may be true in those in which there is only slight indentation. In the severer cases, especially if allowed to continue for a month, such a result if it occurred at all would be slow and partial. 2. In green stick fractures which have not, when recent and soft, been remedied by Munro Kerr's method, operation is justifiable, if only for the correction of deformity. The operation is not serious; all of the author's 23 patients recovered. 3. Inversion is preferable to elevation in the freedom from risk and the perfection of the result obtained.

9. Parotiditis Following Injury or Disease of the Abdominal and Pelvic Viscera.—Dyball summarizes his paper as follows: 1. It is most probable that cœliac parotiditis is due to the action on the parotid glands of toxic substances absorbed into the blood and derived from (a) the secretions of certain organs modified by injury or disease,

(b) toxins of microbic origin absorbed from the alimentary canal, peritoneal cavity, or bladder; (c) products of deranged digestion. 2. The occurrence of parotiditis in such disease will, therefore, depend on the presence and absorption in sufficient quantity of some of these toxic agents. 3. Suppuration is not necessary to this condition, but is due to the fact that the gland when inflamed by these agencies forms a locus minoris resistentiæ and becomes secondarily infected by pyogenic organisms, which reach it by the blood stream or by Stenson's duct. The author's theory is not capable of proof at the present time, but is in accordance with our present knowledge of pathology.

14. Dermoid Cysts of the Pelvic Connective Tissue.—Germain concludes as follows: 1. Dermoid cysts of the pelvic connective tissue are of rare occurrence. 2. They occur most frequently during the child bearing period. 3. They are located most frequently above the levatores muscles, posterior to the rectum. 4. They can be cured only by radical surgical interference. 5. Their origin is to be referred to the fetal period of life.

15. The Iliac Extraperitoneal Operation for Stone in the Lower Ureter in the Male.—Fowler demonstrates that this portion of the ureter is as freely accessible by the extraperitoneal route as the upper portion. The ureter can be explored for its entire extent, stones in the lower part being dislodged upward and extracted, or removed by incision of the ureter at the point of arrest and the wound sutured. If there is a stricture in the intramural portion of the ureter the bladder may be incised and other necessary procedures carried out without a separate suprapubic incision. This operation is simple and involves little risk. The intravesical portion of the ureter is best reached by suprapubic cystotomy. Calculi in the intravesical or intramural portions of the ureter are best reached by the suprapubic intravesical route, calculi impacted in the juxtavesical and paraeschal portions should be removed by the iliac extraperitoneal route.

AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

December, 1904.

1. The Limitations of Operative Interference in Cancer of the Cervix Uteri, By BALLOCH.
2. Ectromelus, By LEWIS.
3. Streptococci in Air of Hospital Operating Rooms and Wards During an Epidemic of Amygdalitis, By ROSENOW.
4. Movable Kidney, By SPRIGG.
5. Conservation of the Natural Resistance of Patients in Surgical Work, By MORRIS.
6. An Historical Résumé of Tuberculous Meningitis from Hippocrates to the Middle of the Nineteenth Century, By CUMSTON.
7. Infantile Intestinal Diverticula, By HYDE.
8. Chondrodystrophia Fetalis, By COOKE.
9. A Case of Indirect Traumatic Rupture of the Uterus in the Seventh Month of Pregnancy. Amputation of the Uterus. Recovery, By DE LEE.
10. Conservatism in Pelvic Surgery, By ROBB.

11. Gunshot Wound of the Abdomen Involving the Hip Joint. Report of a Case with Remarks,

By LAIDLEY.

1. **The Limitations of Operative Interference in Cancer of the Cervix Uteri.**—Balloch draws the following conclusions from his studies:—1. The present status of operative intervention in cancer of the cervix uteri is practically useless in cases as they usually come under the notice of the surgeon. 2. In the operable cases the only procedure offering any reasonable prospect of a permanent cure is the so called radical operation by the abdominal route. 3. Vaginal hysterectomy is useless as a radical operation, but has a place as a palliative measure. 4. The upper part of the vagina is deserving of more attention, from the standpoint of recurrence than it has thus far received. 5. The most promising outlook lies in early diagnosis, combined with thorough and complete operative measures. 6. The starvation of the disease by cutting off its blood supply is a palliative measure worthy of trial, and a valuable addition to our operative technics.

3. **Streptococci in the Air of Hospital Operating Rooms and Wards During an Epidemic of Amygdalitis.**—Rosenow summarizes his paper as follows: 1. There is such a thing as "hospital air," which under certain circumstances becomes rich in pathogenic bacteria. The surgical maxim that "wound infection means contact infection" is not necessarily true, and attention should be paid to the condition of the air when much surgical work is to be done. 2. The streptococcus becomes more virulent or more numerous during an epidemic of angina from such a cause. 3. Since the streptococcus is more virulent during an attack of amygdalitis, operators, assistants, and nurses suffering with this disease should be isolated. 4. The operator, assistant, and all who handle surgical materials before and during an operation should wear a proper mouth covering. All sterile surgical material should be exposed to the air as little as possible. 5. Operating rooms should be frequently fumigated with an efficient disinfectant.

4. **Movable Kidney.**—Sprigg draws the following deductions upon this subject: 1. The relief obtained from bandaging in any case of movable kidney will depend on the presence and the degree of associated enteroptosis. 2. Fixation of the kidney in as nearly normal a position as possible is the correct method of surgical treatment. 3. In all cases in which relief of the symptoms cannot be obtained from bandages or corsets nephropexy should be performed.

7. **Infantile Intestinal Diverticula.**—Hyde concludes: 1. The diverticulum ilei is more frequently found as a blind pouch attached or unattached to the interior abdominal wall or mesentery. Rarely it establishes open communication between the ileum and the external surface at the umbilicus. 2. It occurs more frequently in males. 3. The accoucheur should always examine the cord before and after separation and so tie it as not to include any portion of intestine which might be protruding. 4. When the fistulous exit indicates the presence of a diverticulum the safest treatment is a radical operation at the earliest possible moment.

LANCET.

January 7, 1905.

1. **Recurrent Effusion Into the Knee Joint After Injury,**
Based on a Series of 750 Cases,
By SIR W. H. BENNETT.
2. **A Simple Method of Separating and Collecting the Urine, Which Is Secreted by Each of the Two Kidneys,**
By W. B. CLARKE.
3. **On the Pathology and Treatment of the Hernia of Children and Their Relation to Conditions in the Adult,**
By R. H. RUSSELL.
4. **The Influence of Rainy Winds on Phthisis,**
By W. GORDON.
5. **The Cultivation of Trypanosoma Out of the Leishman-Donovan Body Upon the Method of Captain L. Rogers,**
By G. C. CHATTERJEE.
6. **Child Study and the Treatment of Paralysis in Children,**
By A. A. MUMFORD.
7. **Diet in Chronic Diseases,**
By J. HADDON.

1. **Recurrent Knee Joint Effusion.**—Bennett's paper is based upon 750 cases of the above affection, in which the effusion was recurrent either spontaneously or after another injury, usually very slight. In all the cases an interval had elapsed during which the joint was apparently entirely independent of any constitutional conditions. Of these, in 428 the symptoms of internal derangement were very precise. The proportion of male to female cases was as sixteen to one. Eighty cases were treated by operation—removal of pedunculated bodies, and of internal and external semilunar cartilages. From his experience the author concludes that when the usual methods of treatment have failed to effect a cure, exploratory operation is indicated. Further, that extensive displacement of one or even both semilunar cartilages may take place without the recurrence of any of the symptoms which are commonly regarded as characteristic of the lesion. The cases in which the displacement is greatest give rise to the fewest symptoms. Constitutional conditions seemed to play a part in 241 cases. Osteoarthritis was present in 107 cases. Radiant heat baths, massage, and electric vibration were the only modes of treatment which seemed to have more than a palliative effect. In 23 recent cases they appeared to effect an actual cure. Rheumatism and gout were present in 30 cases, and as a rule the usual constitutional measures gave relief. In 42 syphilitic cases no permanent benefit was obtained until a course of antisyphilitic treatment was adopted. In 28 cases there was a history of gonorrhoea, 17 of the patients having obvious gleet. Operations were performed to relieve tension, aspiration effecting the purpose as perfectly as incision. An interesting class of cases were the ones where there was a history of malaria, mostly contracted in South Africa. Eighteen such cases were seen. There were thirteen instances of quiet effusion in young people, a condition to which the author has previously called attention.

2. **Separation of Urine.**—Clarke calls attention to the great value and efficiency of the Luys separator, for separating and collecting the urine which is secreted from each of the two kidneys.

It is simple to introduce, does not require an anæsthetic and for the time being converts the bladder into two halves by means of a vertical sæp-tum, raised into place after the instrument has been introduced. Each half of the base of the bladder receives the urine from the corresponding ureter and delivers it by a separate channel. Thus the urine can be watched flowing from each kidney. The author cites a number of cases which illustrate what an aid to diagnosis the instrument has been.

4. Wind and Phthisis.—Gordon has previously shown that in Devonshire the mortality from phthisis is much greater in those districts which are exposed to the strong prevalent rainy winds than in those which are sheltered from them, and that winds are injurious to phthisical patients. In this paper he endeavors to show: 1. That in many countries exposure to strong rainy winds is accompanied by increased phthisis mortality. 2. That in the most successful health resorts for phthisis strong rainy winds are not prevalent. 3. That the influence of these rainy winds on the prevalence of phthisis is more powerful than that of any other influence, except marked difference of race and, in some countries, of occupation.

5. Trypanosomes.—Chatterjee, following the method of Rogers, has succeeded in cultivating trypanosoma from the Leishman-Donovan bodies. The blood containing the bodies was obtained by spleen puncture, and five c.c. of blood were mixed in a test tube with one c.c. of sterile five per cent. citrate of sodium solution. On the first day three or four Leishman-Donovan bodies could be seen in every field of a stained specimen. On the second day 200 to 500 bodies could be seen in a field: they were larger, the micronucleus was larger, and the cell contents were more granular. On the third day elongated bodies with flagella could be seen, and fully developed trypanosoma-like bodies. In hanging drop specimens motile elongated flagellate bodies could be seen, but the movement was much slower than that of an ordinary trypanosome. The parasite seems to differ from the ordinary trypanosoma in the following respects: (1) the position of the micronucleus at the anterior end of the body of the parasites; (2) the long, thick, anterior flagellum; (3) the absence of (or, if present, rudimentary) undulating membrane; and (4) the rudimentary posterior flagellum. As far as these points go, they seem rather to be allied to the class of trypanopsis described by Keysseltz.

BRITISH MEDICAL JOURNAL.

January 7, 1905.

1. The Pains of Tabes, By SIR W. R. GOWERS.
2. Soft Fibroma of the Larynx and Neck, Removed by External Operation, Without Opening the Cavity of the Larynx, By SIR F. SEMON.
3. Some Thoughts on Pleurisy, By G. A. GIBSON.
4. Schistosoma Cattoi, a New Blood Fluke of Man, By J. CATTO.
5. An Investigation Into the Follicle Cells of the Mam-malian Ovary, By V. C. DE BOINVILLE.
6. Ambidexterity, By N. B. HARMAN.

7. A Case of Cutaneous Anthrax Successfully Treated by Scelavo's Serum,

By C. B. LOCKWOOD and F. W. ANDREWES.

8. Value of Nitroglycerin in the Practice of Surgery,

By F. ELVY.

1. Tabes.—Gowers states that pain is a frequent symptom of tabes—far more common than ataxy and beginning earlier in the course of the disease. The symptoms of tabes are probably due to a chemical toxine, which results from syphilis. A ferment is produced which slightly influences the albuminous bodies in the process of their production, yet enough to convert them into nerve poison instead of a food. This toxine influences chiefly the elements of the lower sensory spinal neuron. The pains of tabes are an early and distressing symptom: they are often thought to be rheumatic. They may be classified as follows: A. Brief momentary pains, succeeding each other after a short interval in the same place. (1) Superficial. These seem to be on or just under the surface, and are usually felt at one spot. They are most common on the limbs, especially the lower legs and feet. They are extremely brief but recurring: from their character arose the name "lightning pains." They have the remarkable effect of leaving the skin *very* tender, and thus may occur where sensibility to pain has been lost. 2. Deep seated. These pains cannot, as a rule, be definitely located, but sometimes are referred to the joints. They have the same characters as the superficial pains, but are not so momentary, usually lasting several seconds. They are chiefly felt in the limbs, and they are not followed by hyperæsthesia. B. Prolonged pains, lasting for days or hours in the same place. They are most common in the trunk, and are usually deep seated, an exception being the girdle pain or sensation. They sometimes closely simulate sciatic neuritis. A common variety is a sense of distressing tension on the tendons or muscles. Very intense pains have often a burning character. There is very seldom at any exciting cause. Widely diffused distressing sensations also occur, such as numbness, tingling, swelling, etc. In one form of the disease the pains so dominate the scene as to justify a separate classification of such cases. The author has seen eleven such cases, all in adult men, and with a specific history in nine cases. The pains were the symptom for which relief was sought: They were severe and neuralgic in character. The danger of ataxy in such cases is small.

The extremities of the peripheral nerves are thought to be the source of the pains. Only the superficial pains can be relieved by local measures. Chloroform sprinkled on lint and covered with oiled silk, is often useful. Cocaine administered electrically is sometimes beneficial. Deep injections of cocaine are of little service in pains in the softer substance of a limb. As regards internal medication the coal tar products stand above all others. Phenacetin, antipyrine, and antifebrine are the ones most used and of the highest merit. Antifebrine is certainly the most effective. Sometimes the suffering is so intense as to require morphine. Chloride of aluminum, in doses of 5 to 10 grains thrice daily seems to lessen the tendency to recurrence and the severity of the pains. Salicylates sometimes have

the same effect. The use of iodides and mercury belong to the treatment of the disease rather than of the pains.

3. Pleurisy.—Gibson, in this article, gives the results of ten years' hospital experience. *Diagnosis.* Clinical examination by inspection, palpation, percussion, and auscultation, and the x rays forms one mode of diagnosis. The other mode consists mainly in cytology and bacteriology. *Cytology.* In order to examine the cellular elements of the exudate, the author uses an exploring syringe, centrifugates the fluid withdrawn, and prepares stained specimens, Jenner's stain giving the best results. The endothelial cells of the pleural membrane are found in varying numbers: also red corpuscles and leucocytes, either polynuclear neutrophiles or lymphocytes, the latter appearing to be the more stable. Pleural lymphocytosis is thought by some to be tantamount to pleural tuberculosis. As regards the bacteriology of pleural exudates, the commonest organisms are the pneumococcus, the streptococcus, the staphylococcus, and the tubercle bacillus. Examinations of the sputum, blood, and urine often yield useful collateral results. Of 118 cases of pleurisy seen, 65 were dry, 38 were serous, and 6 purulent. Tuberculous infection was present in 35 (29 per cent.): the pneumococcus was found in 27 (22 per cent.). In thirty-four cases it was impossible to assign any cause. A large lymphocytosis at an early stage in the exudation, and the absence of leucocytosis in the blood, are suspicious circumstances pointing to a tuberculous origin.

4. A New Blood Fluke.—Catto describes a new blood fluke found in the case of a Chinaman dying of cholera, to which he gives the name of *Schistosoma Cattoi*. Trematode ova were found scattered throughout the organs, and in the blood vessels adult trematodes, male and female. The case was confused by the presence in the intestine of nematodes (filaria). This new schistosoma resembles somewhat the well known schistosoma hæmatobium, but from which it differs in the following respects: Its habitat is mainly arterial, that of the African worm being reputed to be venous only. The ova' apparently exclusively affect the alimentary system, escaping by this route from the human host. The ova of *S. hæmatobium* affect mainly the urinary system. The abdominal viscera were more widely affected, and the geographical distribution differs, for no case of bilharziosis has yet been met with in China. The following worms and their ova were also found in the bowel: tricocephalus dispar, ankyllostoma duodenale, and ascaris lumbricoides.

7. Anthrax.—Lockwood and Andrewes report a case of anthrax of the cheek occurring in a horse hair worker, aged thirty-one years. The lesion had all the appearance of a malignant pustule, and anthrax bacilli were found in the clear fluid from the neighborhood of the slough. The duration of the case when first seen was four days. Excision would have meant considerable disfigurement: Sclavo's anthrax serum was therefore administered, forty c.c. of the serum being given subcutaneously. For two days the patient showed little improvement: the temperature varied from normal to

101.5° F., the slough increased a little in size, and the œdema and glandular swelling became more marked. No further dose of the serum was given: on the third day there was distinct improvement, and a culture from the edge of the slough showed no anthrax bacilli. Convalescence was rapid, but the slough did not come away until the twenty-first day of the disease, leaving a small granulating surface.

8. Nitroglycerin.—Elvy calls attention to the value of nitroglycerin in surgery. Not only in incipient senile gangrene, but in all cases of impaired circulation in which contracted arterial walls are present, it should be of great value.

GLASGOW MEDICAL JOURNAL.

December, 1904.

1. Eye Strain and Its Consequences, By RAMSAY.
2. Mycoses with Special Reference to Mycosis of the Eye-ball, By BUCHANAN.
3. Case of Traumatic Exophthalmus Pulsans, Ligature of Common Carotid. Cure, By KENNEDY.

1. Eye Strain and Its Consequences.—Ramsay states that his intention is to indicate the scope of this subject, and to arouse interest in it, rather than to attempt to give an exhaustive account of the evils which may arise from uncorrected errors of refraction. Eye strain is very often the unsuspected cause of headache and many other nervous disorders, hence it is always most important that any ocular defects should be corrected as soon as possible. In order that serious interpretation of symptoms may be avoided it is equally essential that other coexisting causes be not neglected and that their ætiological value be not underestimated.

MONTREAL MEDICAL JOURNAL.

January, 1905.

1. Health Resorts in Arizona, By VAUGHAN.
2. Quinine Amaurosis, with Report of a Case, By MATHEWSON.
3. Diagnosis and Treatment of Metrorrhagia, By MORROD.
4. The Placing of Perineal Sutures in Position Before the Laceration Takes Place, By LAPHORN SMITH.
5. Acute Intestinal Obstruction Occurring After Labor Caused by Hæmorrhagic Cyst, By SHAW.
6. Case of Extensive Gunshot Injury and Unusual Method of Closing a Large Granulating Surface, By KENDALL.
7. The Privileges of Medicine, By MCCRAE.

4. The Placing of Perineal Sutures in Position Before the Laceration Takes Place.—Laphorn Smith's advocacy of this plan is based upon an experience of four cases. His plan consists in introducing two or three silk worm gut sutures from side to side through the perinæum, just before the head reaches the perinæum, the patient being anesthetized. The ends of the sutures on either side are caught with a hæmostatic forceps, the two forceps hanging below the vulva and not interfering in the least with the progress of the labor. After the delivery of the placenta the perinæum is inspected and if laceration has taken place the sutures are tied, if not they are simply withdrawn, leaving only the insignificant puncture holes.

Letters to the Editor.

DELUSIONS DEPENDENT ON ABDOMINAL DISORDER.

126 EAST TWENTY-NINTH STREET,
NEW YORK, December 26, 1904.

To the Editor,

Sir: Your editorial under the above title in the issue for December 24th of your esteemed *Journal* interests me very much. Kindly permit me to call attention to some observations which may throw light on one mysterious abdominal disorder, namely, mucous colic.

Some distinguish between enteritis membranacea—a genuine enteritic catarrh—without colicky pains and colica mucosa, the latter characterized by the well known complex of symptoms, foremost colicky pains. Nothnagel calls this latter form a disease *sui generis*. As far as my own observations, confirmed by observations made by Dr. R. C. Kemp, show, mucous colic is not a disease *sui generis*, but one of the manifestations of gastropptosis, that is, abdominal ptosis.

The question if gastropptosis is the cause of mucous colic in all cases has to be decided by further observation, but it is easy to arrive at a division *ex jurantibus*. Thus far only some writers have paid attention to the coexistence of gastropptosis in cases of mucous colic, and I know of none, except my friend Dr. Kemp and some European colleagues, who, in treating of mucous colic, have considered the presence of gastropptosis. Gastropptosis is very frequent and mucous colic is rare, but this does not exclude the fact that mucous colic may be one of the manifestations of gastropptosis.

The relation of some ailments to gastropptosis has only been recognized since abdominal strapping in case of gastric atony has been practised in such an extensive way during the last few years. It has been found that there exists an important relation between dysmenorrhœa and gastropptosis. Cases of dysmenorrhœa in which uterine flexions or ovarian troubles existed and where gastropptosis was present have been promptly relieved by means of the abdominal plaster belt; relief of gastropptosis was relief from dysmenorrhœa. The same is the result in cases of mucous colic. German colleagues who during the last two years have made extensive use of the abdominal plaster belt have stated that this method of treatment did better service in many instances of uterine flexions than all the pessaries. This is easily explained. Gastropptosis is very often the cause of disorders of circulation, as well as of nervous disorders, and these disorders may in some instances cause mucous colic, dysmenorrhœa in others.

In general, the recognition of gastropptosis in its relation to a number of ailments, such as heart and lung diseases, anomalies of gastric secretions and motor functions is of far reaching importance.

A German writer, Dr. R. Weissmann, of Lindendelfs, writes:

"There exists a large number of chronic cases going from Pontius to Pilatus, and not a small

percentage of their ailments is connected with gastropptosis. Physicians in abdominal disorders, neuroses, neuralgias, should look for gastric atony, because they will in many instances relieve their patients from persistent and painful sufferings by means of the simple Rose belt."

On this occasion I wish to say that Dr. William H. Thomson was the first who appreciated the value of the strapping method when I spoke of it before a medical society five years ago, and that Dr. Robert Coleman Kemp has done the greatest part to make it popular among our American colleagues. I owe great thanks to these two and, last but not least, to Dr. E. C. Dent, who permitted me to give the method extensive trial in the Manhattan State Hospital on Ward's Island. In Germany it was Dr. Walther Nie. Clemm who introduced what Dr. Kemp has named "the Rose belt."

A. ROSE.

ENURESIS IN CHILDREN.

616 MADISON AVENUE,
NEW YORK, January 14, 1905.

To the Editor,

Sir: Under this heading Dr. J. Ullmann, of Buffalo, gives an interesting contribution to the *Journal* for December 31, 1904, but leaves out of detailed statement the chief cause of enuresis. Preputial adhesions are so predominantly the cause, particularly in girls, that no treatment should be instituted until that factor is definitely known to be out of the way. Girls need circumcision rather more frequently than boys do, anyway, for the reason that in girls preputial adhesions are more common than they are in boys, and the disturbances seem to be more marked on account of the more impressive nervous system of girls. Circumcision for girls is easily done. A general anæsthetic should be given—preferably nitrous oxide gas. Adhesions between the prepuce and the glans clitoridis are separated with the point of a thumb forceps. The prepuce is lifted with the forceps and trimmed off with a pair of curved scissors. An antiseptic powder is dusted over the field and a compress applied for a few hours. No sutures or ligatures are required, as the oozing is of small consequence. This work should be done by women physicians, but any physician of large practice who has not had a great many girl patients circumcised has missed the opportunity for having some very grateful patients and parents on his list.

ROBERT T. MORRIS.

EYE STRAIN.

85 BROAD STREET,
CHARLESTON, S. C., January 12, 1905.

To the Editor,

Sir: In your issue of December 24th there appears a reply to Dr. H. H. Seabrook's paper on What Should the General Practitioner Know of Ophthalmology, by Dr. F. D. W. Bates, of Ontario, Canada. Many articles have appeared from time to time on the effects of eye strain, notably

by Gould, of Philadelphia, and others, but it is strange how many men of experience and authority have attributed almost every known disease to eye strain, and yet but few have investigated the cause of the eye strain. It is well known that many errors of refraction are benefited by the removal of pressure symptoms in the nose. It frequently occurs that patients will state that their glasses have become too strong for them after the removal of nasal obstructions; therefore, if it is true that any diseases are produced by eye strain, which of course is not at all unnatural, is it not all the more proper that the cause of the eye strain, in the shape of muscular weakness, nasal obstruction, prolonged near vision, etc., should be removed, rather than to be content with glass correction. It is axiomatic in medicine that *causa sublata tollitur effectus*, but to attribute everything to eye strain and then fail to remove the true cause of the eye strain appears at least irrational.

W. PEYRE PORCHER.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of Wednesday, January 11, 1905.

The First Vice-President, Dr. FRANKLIN B. STAHL, in the Chair.

The Practice of Medicine in India.—Dr. ANNA M. FULLERTON (by invitation) read this paper. She said that the practice of medicine in India was attended with great difficulties in consequence of social and religious customs. These, with the dense ignorance and grinding poverty of the mass of the people, were responsible for the widespread epidemics which prevailed and which had baffled all the efforts of the English government for their suppression. There was no scientific system of native medicine. Herb doctors, known as "hakims," combined with their medical practice the use of charms and incantations, with offerings to the gods. Omens and astrology were believed in and much resorted to. Surgery was consigned to the barber. The condition of women was especially deplorable. High caste women could never see a male physician, but must be treated through the medium of ignorant midwives. Child marriage was an unending source of evil. Multitudes of girls of ten to twelve or even less were thus given over to outrage. Girls of even twelve years were known to become mothers in that land, and few attained the age of eighteen without bearing children. An increasing population under these physical conditions could not be a healthy or a vigorous one. On the part of the mother, shocking mutilations were often met with, for which repair of any kind was impossible. The hospitals established by the English government, and especially mission hospitals and dispensaries, were creating a sentiment in favor of Western medicine.

The Antitoxine Treatment of Diphtheria, with a Plea for Rational Dosage in Treatment and in Immunizing.—Dr. B. FRANKLIN ROYER, of the Municipal Hospital, in this paper, by a series of tables from the statistics of the boards of health in

Chicago, New York city, Brooklyn, and Philadelphia, proved an actual decrease in the loss of life in each city respectively of 5,400, 8,204, 951, and 1,853, a total for these four cities, without allowing for increased population, of 16,408 lives. By means of a preliminary table from the twelfth census a reduction of varying numbers in 100,000 population was shown in thirty large American cities.

By a table including 67,748 patients treated in the Metropolitan Asylums Board Hospital a decrease in death rate of 15.24 per cent. was shown. By a table from the South Department in Boston, reporting 16,544 cases, a decrease of 29.26 per cent. was shown. In the Municipal Hospital, reporting 10,219 cases, a decrease of 10 per cent. was proved.

The paper ended with a plea for a dose of antitoxine in proportion to the amount and situation of the exudate. Large doses were recommended in nasal, nasopharyngeal, and laryngeal diphtheria. A plea was made for a more general use of antitoxine as an immunizing agent. A strong plea was made for its use earlier in the disease, without waiting for culture returns.

The dose in use at the Municipal Hospital was: For tonsillar exudate (single), 2,500 units; purely tonsillar (double), 5,000 units; tonsillar exudate with pillars and uvula or pharynx involved, 7,500 to 10,000 units; nasal and any other part involved or for laryngeal diphtheria, 7,500 to 10,000 units. Repeat the dose in each type of disease in from twelve to twenty-four hours, depending upon the signs of improvement, and every twenty-four hours thereafter; when a large amount of exudate persisted, a dose of 5,000 to 7,500 units was given until a good amount of the exudate had disappeared.

Dr. H. M. FUSSELL said he had always felt, as expressed by Dr. Royer, that the cause of the high mortality of diphtheria in the Municipal Hospital was their receiving very bad cases. He also agreed with the writer that the conservatism of the practicing physician was responsible in part. A comparison of the treatment of diphtheria twenty years ago and now showed the value of antitoxine, for it was now possible to cure every case of diphtheria in which antitoxine was given in sufficient doses in the early part of the disease.

Dr. A. A. ESHNER referred to the intravenous employment of antitoxine in malignant cases of diphtheria and to its employment by the mouth.

Dr. ROYER said that they had used the intravenous administration of antitoxine at the Municipal Hospital for about sixteen months in cases that seemed hopeless, and had been gratified to see a few patients get well. He thought the method was well worth trying in malignant cases seen late. He had not mentioned the method, because he thought the practicing physician would see the cases early and give antitoxine.

An Unusually Severe Case of Acute Chorea Treated Successfully With Apomorphine.—Dr. MONTROSE GRAHAM TULL, in this paper, reported a case of acute chorea coming on gradually in a girl fifteen years of age, with menstruation not fully established, presenting symptoms of acute mania, guttural and unintelligible articulation, thickened tongue, covered with a confluent, morbilliform rash, and with incessant choreic movements. After all the accepted forms of treatment had been tried for

two weeks, with absolutely no effect, the services of Dr. Charles S. Potts were obtained. He endorsed the diagnosis and treatment, pronouncing it the severest case that he had ever seen. Everything else having failed, Dr. Tull concluded to try apomorphine in tentative doses. A fortieth of a grain was consequently administered hypodermically with a remarkable result. The choreic movements ceased in about three minutes and the child slept peacefully and quietly. A twentieth of a grain of apomorphine every three hours, by the mouth, was continued for three or four days in addition to arsenic, which she had taken from the beginning, with a perfectly uninterrupted recovery. Within two weeks the patient went to the seashore for the summer and soon became perfectly well.

The case seemed of value, as the diagnosis and earlier treatment were both reviewed and endorsed by a specialist of standing, and from the fact that practically all known means had been exhausted before apomorphine was used. The good results following so promptly upon the administration of apomorphine rendered it of special importance.

New Inventions.

A NEW GONORRHOEAL IRRIGATION APRON AND A STERILE BODY CLOTH FOR OFFICE USE DURING URETHRAL INSTRUMENTATION.

By FREDERIC GRIFFITH, M. D.,

NEW YORK.

Probably the most commonly employed treatment for gonorrhœa at the present day is irrigation in one form or another, and in this connection I desire to describe an apron which will protect a patient's clothing from wetting or staining during the carrying out of the procedure. A good idea of the shape and size required for ordinary office use may be obtained from Fig. 1, the

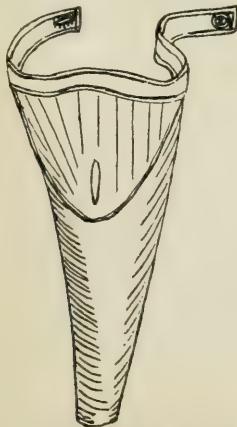


FIG. 1.—Author's irrigation apron for patients, made of rubber or mackintosh cloth.

apron being in reality a belted sleeve of mackintosh or rubber cloth containing an aperture for the penis. When applied, the protector is to be fastened about the patient's waist, and the penis drawn through the opening, the sleeve draining into a pail. The apron is to be turned inside out for cleansing by scrubbing with hot water and soap and bichloride solution.

A body cloth to take the place of the two or three towels required to be spread over a patient's clothing and person during office urethral examinations, passage of sounds or bougies as well as sundry operations about the penis, is pictured in Fig. 2. It consists of ordinary towelling cut in

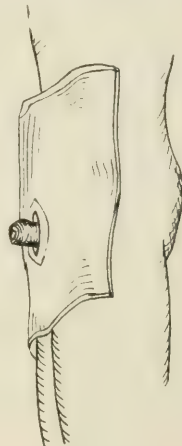


FIG. 2.—Sterile body cloth with opening for the penis, for use during the passage of sounds and bougies.

three quarter yard lengths, in the centre of each being a three inch hemmed slit.

49 EAST SIXTY-FOURTH STREET.

Book Notices.

Poverty. By ROBERT HUNTER. New York, 1904: The Macmillan Company. London: Macmillan & Co., Ltd., 1904. Pp. xi-382. (\$1.50.)

The author states that his purpose is to define poverty, to estimate its extent in this country at the present time, to describe some of its evils, to indicate certain remedial actions that society may undertake safely, and to point out that the evils of poverty are not barren, but procreative. The book is divided into chapters on poverty, the pauper, the vagrant, the sick, the child, the immigrant, and conclusions.

The author believes that "there are probably in fairly prosperous years no less than 10,000,000 persons in poverty; that is to say, underfed, underclothed, and poorly housed. Of these, about 4,000,000 persons are public paupers. Over 2,000,000 workmen are unemployed from four to six

months in the year. About 500,000 male immigrants arrive yearly and seek work in the very districts where unemployment is greatest. Nearly half the families in the country are propertyless. Over 1,700,000 little children are forced to become wage earners when they still should be in school. About 5,000,000 women find it necessary to work and about 2,000,000 are employed in factories and mills. Probably no less than 1,000,000 workers are injured or killed each year while doing their work, and about 10,000,000 of the persons now living will, if the present ratio is kept up, die of the preventable disease, tuberculosis."

Certain reforms are proposed to remedy these deplorable conditions: "They would make all tenements and factories sanitary; they would regulate the hours of work, especially for women and children; they would regulate and thoroughly supervise dangerous trades; they would institute all necessary measures to stamp out unnecessary disease and to prevent unnecessary death; they would prohibit entirely child labor; they would institute all necessary educational and recreational institutions to replace the social and educational losses of the home and the domestic workshop; they would perfect, as far as possible, legislation and institutions to make industry pay the legitimate cost of producing and maintaining efficient laborers; they would institute on the lines of foreign experience measures to compensate labor for enforced seasons of idleness due to sickness, old age, lack of work, or other causes beyond the control of the workman; they would restrict the power of employer and of shipowner to stimulate for purely selfish ends an excessive immigration, and in this way to beat down wages and to increase unemployment."

The book is a plain, forcible statement of facts within the experience of an earnest worker in the field of relief, and deserves careful and thoughtful consideration.

Bacteriology and the Public Health. By GEORGE NEWMAN, M. D., F. R. S. E., D. P. H., Formerly Demonstrator of Bacteriology in King's College, London; Medical Officer of Health of the Metropolitan Borough of Finsbury, etc. Third Edition, Illustrated. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. xx-497.

The author states that this new edition is an attempt to set forth a simple general statement of our present knowledge of bacteria, especially as they are related to the public health. He has sought to meet the requirement of the general student of hygiene and the medical officer of health, who need an elementary book that gives an adequate record of laboratory facts, and also views the subject broadly and particularly as it concerns the practical, every day problems of health and preventive medicine.

The first chapter, on the biology of bacteria, gives a careful description of the morphology and physiology of these organisms. The seven subsequent chapters describe bacteria in water, air, soil, food and waste and the technical and economic applications of bacteriology. Two chapters deal with bacteria and disease. There are interesting chapters on

the ætiology of tropical diseases, the question of immunity and antitoxines, and disinfection. The work is practical and likely to appeal to a large class of readers.

Précis d'auscultation et de percussion du poulmon et du cœur; signes physiques. Par J. VIRES, Professeur agrégé, et P. PAGES, Chef de clinique médicale à la faculté de médecine de Montpellier. Montpellier: Coulet et Fils; Paris: Masson et Cie., 1905. Pp. xvi-136. (Fr. 2.50.)

This little volume is a résumé of the author's lectures in his clinic in the Montpellier general hospital. He describes the phenomena of auscultation and percussion that are usually found, and explains them simply, avoiding speculative theories and holding fast to well established facts.

Miscellany.

Poisoning With Lysol.—Lange, in *Fortschritte der Medizin*, for September 20, 1904, states that he had the opportunity of seeing three cases of lysol poisoning in the course of one month, one of which resulted fatally. The general phenomena varied according to the severity of the intoxication. In the bad cases vomiting occurred soon after the lysol was ingested, this being quickly followed by unconsciousness and profound coma, so that the patients appeared to be dying. The heart seemed to be the organ which suffered most. Even in the lighter degrees of poisoning there were cardiovascular disturbances to a moderate extent, together with vomiting, headache, dizziness, and burning in the neck. In the mild cases the kidneys are intact, though there may be moderate and transient albuminuria with the characteristic color which accompanies carbolic acid poisoning. In the severe cases there is a toxic nephritis, or as Fries has termed it, a toxic glomeruli nephritis associated with severe uræmia. Additional phenomena in lysol poisoning are cyanosis, dyspnoea, and spasms. Motor phenomena of irritation were absent in the cases narrated by Lange. Autopsy reveals corrosion of the mucous membrane of the mouth, pharynx, and œsophagus and extensive injury to the mucous membrane of the stomach.

The proper treatment consists in free irrigation of the stomach. Even in cases which terminate fatally one can never be sure that the injury has been so extensive that irrigation will be contraindicated. If several hours have elapsed since the lysol was taken one must try to remove that which has reached the intestine with cathartics and high enemata. Especial care must be taken that none of the lysol is aspirated during vomiting, as irrigation for this would lead to the most serious complications. Hot tea, lemonade, or other soothing drinks must be administered in abundance to anticipate any irritation of the kidneys. Lysol can produce poisonous effects, not only when taken by the mouth, but also when used externally. Necrosis and gangrene of the skin have been thus produced. A case has been

reported in which death occurred after a one per cent. uterine douche. It should be sold by the apothecary under the same restrictions which are required for the sale of carbolic acid.

Observations Concerning Sudden Death from Heart Disease During Sleep.—Heitter, in *Fortschritte der Medizin*, for September 20, 1904, remarks that the prognosis in conditions of extensive changes in the heart muscle is indeterminable. In some cases in which there are the severest paroxysms of cardiac asthma and insufficiency of the heart muscle the patients unexpectedly get better and live for years, in others the patients seem to be in the best of condition in a general way, but some morning are found dead in bed. Anatomical changes in the heart muscle cannot always be brought forward as an explanation in such cases, for they are often absent or are not very conspicuous. One is forced to fall back upon nerve influences as a cause, which has been constantly invoked since the time of Goltz's experiments, as a probable means of stopping the heart's action. That these acute irritating influences must act injuriously upon a heart which is functionally incompetent more injuriously than upon a sound heart which has reserve force, is easily understood. In the presence of such irritating conditions death might easily result from sudden turning of the body, disturbing dreams, or other apparently slight causes, especially since they would occur at a time when the functional power of the body is usually at its lowest ebb.

An Antidote to Impertinent Curiosity.—Physicians often find it difficult to parry the idle questions of the curious. They might find it efficacious at times to resort to something like the following, which is said to have appeared in a newspaper a few years ago:

"Pardon me, sir," began the inquisitive passenger, bending in a confidential way over the back of the seat before him, "but what—"

"Adam was the first man," replied the dyspeptic looking man in front, in a cold gray monotone; "Moses was the meekest man, there never was any meekest woman; Columbus discovered America, John Hancock signed the Declaration of Independence. In the winter of 1847 and 1848 potatoes formed almost the sole food of the Irish peasantry. We are all indeed hurrying on toward eternity. White sheep eat more than black ones, because there are more of them. A door is not a door when it's ajar. Schley's name is pronounced 'Sly,' and golf is 'goff.' It is highly improper to wear a silk hat with a sack coat. There never was any such person as the Ahkoond of Swat. The great weakness of the American people is signing petitions without reading them. Yes, it is a good morning, and I have used everybody's soap; I—"

"Excuse me, but—er—er—what are you trying to—ah—get at?" interrupted the inquisitive one, much astonished at the reply his attempt had precipitated.

"The foregoing information," was the grim answer, in the same accentless voice, "is all I know about anything of any name or nature—biblical,

historical, statistical, biographical, geographical, conundrums or otherwise—past, present, or future, now and forever. I don't know anything else of any kind, character, style, shape, or color, good, bad, or indifferent. I not only do not know anything else, but I don't want to.

"My name is William Sufferin Smith; I am forty-three years old and a widower. I have the following relations, or, rather, they have me, namely: one mother in law, who was born to command; three brothers in law, who were born to be hanged, but have thus far escaped; two maiden sisters in law, of the vintage of 1842. Since the death of my wife these several relatives have lived on me like a pack of cannibals. My mother in law is sure my wife would have been alive now, if it had not been for my conduct. My brothers in law have differed with and also from me in politics and all other questions; they have worn my clothes, spent my money, and treated me with contumely and derision. One of my sisters in law is stage-struck, and the other has been subject to swooning spells for years. The whole outfit has ground into me their superior wisdom, their views of life, and their preferences in everything; they have henpecked, flouted, and abused me world without end. Yesterday I laid my coat and hat on the bank of the river, swam across, and disappeared in the woods, leaving my kith and kin to mourn me as dead. I am never going back unless I am overtaken and hypnotized. I don't know anything of interest to tell anybody, and I don't want to hear anything that anybody else has to tell. I want nothing in the world but peace. If you don't let me alone I'll throw my gripsack out of the window and jump after it. I have spoken." Thereupon the speaker withdrew into his shell, leaving the inquisitive passenger in a state closely bordering upon collapse.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 20, 1905:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
Alabama—Mobile	Dec. 19-Jan. 9	3	from ves-
Arkansas—Fort Smith	Dec. 10-17	3	els in pers.
Illinois—Chicago	Jan. 8-14	16	1
Illinois—Danville	Jan. 8-14	2	
Illinois—Peoria	Dec. 1-31	7	
Kansas—Topeka	Jan. 8-16	1	
Louisiana—New Orleans	Jan. 8-14	7	
Massachusetts—Everett	Jan. 8-14	3	1
Massachusetts—Hyde Park	Jan. 8-14	1	from Ss. Cymric.
Michigan—Detroit	Jan. 8-14	4	
Michigan—Grand Traverse Co. Dec.	1-31	1	1
Michigan—Jackson County	Dec. 1-31	1	
Minnesota—Clay County	Jan. 3-9	1	
Minnesota—Morrisson County	Jan. 3-9	1	
Minnesota—Otter Tail County	Jan. 3-9	8	
Minnesota—Rice County	Jan. 3-9	2	
Minnesota—St. Louis County	Jan. 3-9	3	
Minnesota—Todd County	Jan. 3-9	3	
Minnesota—Wadena County	Jan. 3-9	5	
Missouri—St. Louis	Jan. 8-14	17	
New York—New York	Jan. 8-14	2	
Ohio—Toledo	Jan. 10-17	2	
Pennsylvania—Homestead	Jan. 9-15	1	
South Carolina—Georgetown	Jan. 1-14	10	
Tennessee—Memphis	Jan. 8-14	2	
Tennessee—Nashville	Jan. 8-14	4	
Wisconsin—Milwaukee	Jan. 8-14	8	

South America—Foreign.

Brazil—Para	Dec. 1-14	54
Brazil—Rio de Janeiro	Dec. 12-18	102
France—Paris	Dec. 18-24	1
Great Britain—Hull	Dec. 25-31	14
Great Britain—London	Dec. 25-31	1
Great Britain—Manchester	Dec. 25-31	5
Great Britain—Newcastle-on-Tyne	Dec. 25-31	2
Great Britain—Nottingham	Dec. 25-31	3
India—Bombay	Dec. 14-20	25
India—Calcutta	Dec. 10-16	1
India—Karachi	Dec. 12-18	4
Italy—Palermo	Dec. 23-29	2
Italy—Palermo	Dec. 18-24	5
Panama—Colon	Jan. 1-8	1
Spain—Barcelona	Dec. 21-31	11

Brazil—Para	Dec. 1-14	18
Mexico—Coatzacoalcas	Dec. 25-31	2
Mexico—Juchitan	Jan. 1-7	1
Venezuela—Maracaibo	Dec. 4-11	1

India—Bombay	Dec. 14-20	1
India—Calcutta	Dec. 10-17	108
Russia—Dshewat	Dec. 8-14	264
Russia—Lenkoran	Dec. 8-14	177

Europe.

Arabia—Crater	Dec. 17-24	43
Arabia—Hedjuff (plague hospi- tals)	Dec. 17-24	5
Arabia—Shaikh Othman	Dec. 17-24	7
Brazil—Rio de Janeiro	Dec. 12-18	35
Chile—Iquique	Dec. 1-17	2
Chile—Santiago	Dec. 2	1
Egypt—Port Said	Dec. 10-17	1
Egypt—Suez	Dec. 10-17	1
Egypt—Tukh district	Dec. 10-17	1
India—Bombay	Dec. 14-20	102
India—Calcutta	Dec. 10-17	15
India—Karachi	Dec. 12-18	56
Japan—Kobe	Dec. 1	52
Mauritius	Oct. 14-Nov. 3	66

Public Health and Marine Hospital Service:

Official List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 18, 1905:

GREENE, J. B., Passed Assistant Surgeon. Seven days' extension of leave of absence from January 7th, granted by Bureau telegram of January 4th, revoked.

TOWNSEND, W., Acting Assistant Surgeon. Department letter of November 22, 1904, amended to grant Acting Assistant Surgeon Townsend leave of absence for twelve days instead of thirty days from December 15, 1904.

Board Convened.

Board convened to meet at Washington, D. C., January 19, 1905, for the physical examination of an applicant for the position of Second Assistant Engineer, Revenue Cutter Service. Detail for the board—Assistant Surgeon General G. T. VAUGHAN, chairman. Assistant Surgeon A. J. McLAUGHLIN, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 21, 1905:

ALFRED, A. R., Surgeon. Detached from the *Solace* and ordered to the Naval Station, Cavite, P. I.

BUTLER, C. S., Passed Assistant Surgeon. Detached from the *Constellation* and ordered to the Naval Hospital, San Juan, P. R.

GARTON, W. M., Passed Assistant Surgeon. Detached from the Naval Hospital, Yokohama, Japan, and ordered home.

McLARTY, C., Pharmacist. Detached from the *Solace* and ordered to the Naval Hospital, Yokohama, Japan.

PLEADWELL, F. L., Surgeon. Detached from the Naval Dispensary, Washington, D. C., and ordered to duty at the Naval Hospital, Yokohama, Japan.

PLUMMER, R. W., Passed Assistant Surgeon. Detached from the Naval Hospital, San Juan, P. R., and granted leave of absence until February 15, 1905.

RODMAN, S. S., Passed Assistant Surgeon. Ordered to the *Pensacola*.

SELLERS, F. E., Passed Assistant Surgeon. Detached from the *Gloucester* and ordered to the *Franklin*.

STUART, A., Assistant Surgeon. Detached from the Naval Hospital, San Juan, P. R., and ordered to Washington,

D. C., for examination for promotion, and thence home to await orders.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 21, 1905:

EBERT, R. G., Major and Surgeon. Left from detached duty at Fort D. A. Russell, Wyoming, on fifteen days' leave of absence from January 11, 1905.

SMART, CHARLES, Brigadier General and Surgeon General. Retired as Colonel and Assistant Surgeon General, and advanced to Brigadier General on the retired list.

SWEAZY, VERGE E., First Lieutenant and Assistant Surgeon. Reported at the United States Army General Hospital, Washington Barracks, D. C., for treatment, from leave of absence.

Births, Marriages, and Deaths*Married.*

GROSS—MORGAN.—In Louisville, Kentucky, on Friday, January 13th, Dr. A. M. Gross and Miss Emma Morgan.

MURPHY—KEENAN.—In Brooklyn, N. Y., on Wednesday, January 11th, Dr. Joseph Paul Murphy and Miss Ella Keenan.

YOUNT—CRILEY.—In Prescott, Arizona, on Wednesday, December 14th, Dr. C. E. Yount and Miss Clara Criley.

Died.

BECKWITH.—In Atlantic City, New Jersey, on Friday, January 20th, Dr. Seth R. Beckwith, in the seventy-third year of his age.

CARR.—In Durham, North Carolina, on Friday, January 13th, Dr. A. G. Carr, in the fifty-ninth year of his age.

DEUELL.—In Saratoga, N. Y., on Friday, January 20th, Dr. E. Valencourt Deuell.

EDGERTON.—In Middletown, Connecticut, on Thursday, January 19th, Dr. Francis D. Edgerton, in the sixty-eighth year of his age.

GORDON.—In Jersey City, New Jersey, on Tuesday, January 17th, Dr. Leonard J. Gordon, in the sixty-first year of his age.

HARDING.—In Blairsville, Pennsylvania, on Tuesday, January 10th, Dr. James Leslie Harding, in the forty-sixth year of his age.

HARRISON.—In Grand Rapids, Michigan, on Thursday, January 12th, Dr. George W. Harrison.

HERVEY.—In Indianapolis, Indiana, on Friday, January 6th, Dr. James W. Hervey, in the eighty-second year of his age.

KANE.—In Kansas City, Missouri, on Monday, January 9th, Dr. J. H. Kane, in the forty-ninth year of his age.

MATHEWS.—In Manchester, Virginia, on Thursday, January 12th, Dr. Thomas P. Mathews, in the seventieth year of his age.

McJUNKINS.—In Toccoa, Georgia, on Tuesday, January 10th, Dr. John McJunkins.

NORRED.—In Minneapolis, Minnesota, on Wednesday, January 11th, Dr. William A. Norred, in the thirty-fifth year of his age.

O'LEARY.—In Cleveland, Ohio, on Wednesday, January 18th, Dr. Arthur O'Leary.

PELTZ.—In Philadelphia, on Friday, January 13th, Dr. Josiah Peltz, in the sixty-fourth year of his age.

POLIN.—In Springfield, Kentucky, on Saturday, January 14th, Dr. D. O. Polin, in the seventy-seventh year of his age.

SAUNDERS.—In Charleston, South Carolina, on Tuesday, January 10th, Dr. J. G. Saunders, in the fiftieth year of his age.

WOODBURY.—In Washington, D. C., on Sunday, January 15th, Dr. Henry E. Woodbury, in the eightieth year of his age.

YOUNG.—In New York, on Thursday, January 19th, Dr. John W. Young, in the twenty-sixth year of his age.

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Original Communications.

SOME OBSERVATIONS ON THE DIAGNOSIS OF RENAL CALCULUS, WITH SPECIAL REFERENCE TO DIAGNOSIS BY MEANS OF THE X RAYS.*

By ALEXANDER B. JOHNSON, M. D.,

NEW YORK.

According to their occurrence we may divide renal calculi into two groups: Primary, when the stone is formed in a previously healthy kidney; and, secondary, when the stone formation occurs as a result of disease already existent in the organs.

From the diagnostic point of view the primary calculi are of greater interest.

In the second class the disease of the organ itself usually forms the foreground of the picture, in which the signs and symptoms due to the presence of stone are more or less completely lost to view, except in those cases in which the stone causes temporary or permanent obstruction to the passage of fluids from the ureter to the bladder.

In their chemical composition kidney stones may be classed in several groups. Commonly, uric acid and oxalate of lime stones are grouped together.

The stones, consisting chiefly of alkalies and the salts of the alkaline earths, form a second group.

The cystin, xanthin, and indigo stones form a third.

This grouping is more or less artificial, inasmuch as stones consisting of a single ingredient are quite rare and we usually find that several ingredients are mixed in varying proportions. The mixture may be, and usually is, an intimate one; or, on the other hand, the different ingredients may be arranged more or less regularly in concentric layers, each layer consisting of a single ingredient or of several ingredients. This

mixture is found in the majority of primary as well as of secondary, calculi.

The bearing of these facts upon the x ray diagnosis of renal calculus will be mentioned in another place.

The designation of stones as stones of calcium oxalate or stones of uric acid, for example, usually indicates merely that this or that ingredient predominates. Stones of nearly chemically pure oxalate of lime, uric acid, cystin, or other ingredient are occasionally found, it is true, but their occurrence is the exception rather than the rule.

Henry Morris gives the following figures, derived from 73 published cases, in regard to the relative frequency of occurrence of different types of kidney stones:

Calcium oxalate.....	44	per cent.
Uric acid.....	22	per cent.
Phosphatic.....	16.8	per cent.
Mixed.....	14	per cent.
Calcium carbonate, and Cystin.....	} Rare.	

James Israel, amongst 49 cases of primary renal calculi in his own practice, found

21 stones of phosphates and carbonates.
10 uric acid and uric acid salts.
16 oxalates.
Uric acid and urates constituted 20.4 per cent.
1 xanthin.
1 sulphur

A careful perusal, however, of the case histories published in Professor Israel's work shows that a chemical analysis was made of the stones removed in most of his cases, and that the stones containing uric acid and urates alone without oxalate of lime or the phosphates and carbonates of the alkaline earths in considerable quantities, were quite the exception: for example, of stones removed from 74 cases, including both primary and secondary calculi, 26 consisted partly of oxalate of lime; 31 contained a considerable proportion of phosphates; in 9 the character of the stone is not specifically stated, but the history of the cases would indicate that these were phosphatic stones, or, at least, contained a considerable proportion of phosphates. One stone consisted

* Read before the Society of the Alumni of the New York Hospital.

chiefly of sulphur and one of xanthin. The pure uric acid and urate stones numbered 6—that is to say, 8 per cent. of the entire number.

In order to conduct certain experiments in regard to the detection of renal calculi by means of the x rays I collected a considerable number of calculi from different sources, from surgeons of my acquaintance and from museums.

I chose only such calculi as were believed to consist solely or chiefly of uric acid. Upon having these calculi subjected to chemical analysis, out of 20 stones acquired from various sources, but one was found to consist of uric acid or its salts in what might be fairly called a pure state. The others contained a variable quantity of oxalate of lime or of phosphates.

The bearing of these observations upon the x ray diagnosis of kidney stone will be mentioned later. Theoretically, it is generally assumed that for the formation of stone an organic nucleus is necessary, but it is evident that such a nucleus may consist of a single degenerated blood cell or the minutest fragment of mucus.

An unduly concentrated urine is supposed to favor the production of calculus, and urine containing an excess of a variety of ingredients may be assumed to be a condition favorable for the precipitation of such ingredients.

The disease appears to be slightly more common in men than in women, and climatic conditions and qualities of drinking water appear in certain not entirely evident ways to favor the condition.

Mode of life, apparently, has some influence; a sedentary life, a nitrogenous diet, and the use of alcohol seem in some cases to determine the formation of calculus. On the other hand, among the people who subsist chiefly upon carbohydrates and who live and work vigorously out of doors, renal calculus is common enough.

In by far the largest proportion of cases, the formation of renal calculus takes place in the renal pelvis or one of the calices.

The occurrence of kidney stone in the parenchyma of the organ belongs to the surgical rarities; a few such cases only have been reported.

In size and shape the greatest diversity exists. The stones may be minute, constituting the condition known as gravel, or, in certain instances, a stone or stones weighing several ounces have been removed from the kidney.

The stones may be rounded or irregular in shape, or may form a complete cast of the dilated pelvis, calices, and beginning of the ureter.

The x rays have demonstrated that a larger proportion of stones than was formerly supposed pass out of the pelvis of the kidney and find their

way downward to lodge in the intrapelvic portion of the ureter; thus Leonard found that among 30 cases in which the diagnosis of stone was made by means of the x rays, the stones occupied the ureter in 19 cases.

CHANGES PRODUCED IN THE KIDNEY BY THE PRESENCE OF STONES.

The changes produced in the kidney by the presence of stones in the pelvis or in the ureter depend upon a variety of conditions.

An important distinction is to be drawn between the cases in which the kidney remains in an aseptic condition and those in which infection occurs.

So long as no infection takes place the changes consist in an interstitial nephritis and a fatty or hyperplastic change in the fibrous and fatty capsules of the organ.

If the ureter becomes obstructed the kidney may suffer in two ways. In case the obstructive process is gradual, the pelvis of the kidney may become dilated and the kidney itself may be changed into a thin walled sac, with disappearance, partial or complete, of the proper secretory and excretory substance, the condition, namely, of hydronephrosis.

Sudden and complete occlusion of the ureter which persists leads, not to dilatation, but to atrophy of the kidney. The kidney becomes converted into a dense mass of fibrous tissue containing much fat, from which the kidney substance disappears.

In case infection occurs, the various phenomena of pyelitis, pyelonephritis, infected hydronephrosis, abscess of the kidney, or pyonephrosis are produced.

An extension of the infectious process beyond the kidney itself results in perinephritis and in abscess in the neighborhood of the kidney.

In certain rare cases pressure necrosis caused by the stone may lead to perforation of the renal pelvis or parenchyma, with the production of areas of granulation tissue in the perinephric structures; and, in the absence of infection, this condition may exist without the formation of pus.

The symptoms and physical signs of calculus formation may be considered under several heads:

- 1st. Subjective symptoms.
- 2nd. Changes in the urine.
- 3rd. The physical signs to be recognized by palpation.
- 4th. The evidence to be derived from the cystoscope, ureteral catheter, and ureteral sound.
- 5th. The evidence to be derived from x ray examinations.

1st. The subjective symptoms of kidney stones as well as of stone in the ureter—consist of pain and of disturbances of urination. The pains may

be broadly said to consist of sudden severe attacks of pain of longer or shorter duration, and of more or less constant, though usually intermittent, pain of a less severe character. The severe attacks of pain are often spoken of as attacks of kidney colic.

The typical kidney colic is characterized by a sudden onset and is of excruciating character; it is felt in the kidney region affected, along the course of the ureter, sometimes in the bladder, the testes, and external genitals. The pain may also radiate upward into the shoulder or down the thigh along the distribution of the anterior crural nerve. The pain is sometimes accompanied by vomiting, great prostration, sweating, by a constant desire to urinate, and in some cases by general convulsions. The attack may last for a few minutes, for hours, or for several days. The pain generally subsides suddenly, leaving the individual quite free from discomfort.

This typical history of an attack of renal colic is clinically the exception rather than the rule. Any one of the characteristic symptoms may be absent. The pain may be referred in such a manner as to lead to suspicion of disease of a different character. The symptoms may point to acute gastrointestinal disturbance. The pain may closely resemble an attack of biliary colic. If the pain is localized in the epigastrium, is a general abdominal pain, or is felt chiefly on the right side of the abdomen, low down, it may be mistaken for disease of the appendix.

There are numerous instances in which kidney stone has been mistaken for scoliosis and for tuberculous disease of the bodies of the vertebrae.

It is also to be remembered that a number of conditions, other than stone, affecting the kidney may give rise to precisely the same train of symptoms.

The invasion of the kidney structure with tuberculosis, with its accompanying congestion and tension of the kidney capsule, may produce identical symptoms and be accompanied by characteristic hæmaturia.

A new growth into which a hæmorrhage takes place may exactly simulate a renal colic.

It is asserted by several authorities on the subject, although denied by others, that the pain may be located upon the opposite side of the body. My own observation supports the affirmative view.

Hæmorrhagic pyelitis may give rise to symptoms precisely the same.

Kinks in the ureter, in cases of movable kidney, may give rise to similar attacks.

In general, any condition which produces a sudden increase in the intracapsular tension of

the kidney or which obstructs the ureter may accurately simulate an attack of renal colic, an intraabdominal tumor, or an aneurysm, by pressure for example.

There remain to be considered the very considerable group of cases in which the stone remains, so to speak, quiescent, giving rise to no symptoms at all, or at most to a slight amount of discomfort from time to time, or to symptoms hardly to be differentiated from those of ordinary functional gastrointestinal disturbance.

In another class of cases the typical symptoms of renal colic are entirely wanting, and the patient may suffer from constant or intermittent pain, sometimes referred to the region of the kidney often to the bladder, and not infrequently to distant parts of the body, as, for instance, the sole of the foot.

A large number of these cases are treated for bladder disturbance, none of the symptoms being referred to the kidney.

Calculous Anuria.—A patient who suffers from kidney stone may suddenly be seized with suppression of urine. If the other kidney is absent, destroyed, or seriously diseased, or if both ureters are obstructed at the same time, the condition will usually end in death in a few days, unless relieved by operative removal of the stone obstructing the ureter, or unless, as sometimes happens, the obstruction is partly or entirely overcome by natural means.

If the other kidney is sound it usually continues its function. Sometimes a reflex anuria, usually of a temporary character, may occur in this sound kidney also. In fact, it is probable that such reflex anuria in a sound kidney rarely if ever endures to a fatal issue.

The symptoms of the onset of urinary suppression from calculus differ to some extent from the ordinary symptoms of uræmia.

At the beginning there is usually pain, referred to the kidney region or to the lumbar region and down the course of the ureter. The pain may last throughout the attack or more often will subside after hours or days.

Many of the symptoms may be referred to the bladder as in an ordinary attack of renal colic.

When the obstruction is absolute, no urine may be passed after the beginning of the attack. If incomplete or intermittent, oliguria may alternate with polyuria. These are the cases in which hydronephrosis develops. The suppression is rarely so absolute as in ordinary cases of uræmia, and, usually, small amounts of urine of low specific gravity will be voided, even though the case is to end fatally.

In case the useful kidney is hydronephrotic a

certain tolerance appears to be established; and even if the obstruction is not overcome death may be delayed for many days.

When uræmic symptoms develop, they resemble those accompanying other forms of suppression, except that vomiting is more common and diarrhoea less so.

CHANGES IN THE URINE.

The evidences furnished by the urine are valuable, although there are no data to be obtained from the urine, which enable us to make a certain diagnosis of kidney stone.

The urine may be entirely free from abnormal ingredients.

In certain cases the examination of the urine suggests merely a hyperæmia of the kidney.

The urine frequently contains blood in small amount, constantly or only at intervals.

The blood in many cases is only discoverable under the microscope. There will sometimes be a quantity of albumin present in the urine, slightly in excess of the amount of blood or of the number of pus cells, if such are present.

Sharp, and even dangerous, hæmorrhage may occur, but such cases are the exception.

The type of bleeding which furnishes us with the strongest evidence of the presence of calculus is small in amount and frequently microscopic.

The number of blood cells present in the urine is often increased by muscular exertion and entirely disappears when the individual is kept quiet.

When the hæmorrhage is coincident with an attack of renal colic the bleeding usually continues for hours or days after the colic has subsided.

Blood casts of the renal tubules do not occur, nor are blood casts of the ureter at all common.

When the hæmorrhage is severe we must depend upon other physical signs and symptoms to exclude the presence of a malignant growth, an invasion of the kidney with tuberculosis, or the presence of a hæmorrhagic pyelitis.

A moderate increase in the number of leucocytes contained in the urine, or even a mild catarrhal pyelitis, may exist without infection.

In the absence of lesions of the lower genito-urinary tract, the presence of a small quantity of blood, a trace of albumin, a moderate number of leucocytes in the urine is, when combined with attacks of renal pain in the absence of tubercle bacilli and failure to appreciate a notable enlargement of the kidney on palpation, and especially if there is a previous history of a passage of calculi, strong presumptive evidence of the presence of stone.

When infection of the kidney has taken place and the urine is loaded with the products of inflammation, it is scarcely possible by urinary analysis to say whether the primary cause of the trouble is stone or some originally infectious process: indeed, a stone or stones are often found in the pelvis of pyonephrotic kidneys, apparently as a secondary condition to the suppurative nephritis, and also in tuberculous kidneys in which secondary purulent infection has occurred, stone is not very rare.

These secondary cases of renal calculus present themselves to us more commonly as cases of pyonephrosis, perinephritic abscess, or other serious destructive lesion of the kidney, in which the stone plays a subordinate rôle from a pathological as well as from a diagnostic point of view.

In those cases of primary calculus where infection occurs, a series of signs and symptoms are exhibited, complex in character and due in part to the presence of stone; either set of signs and symptoms may predominate in any variety of prominence.

THE PHYSICAL SIGNS AND SYMPTOMS TO BE OBSERVED BY PALPATION.

Manifestly, the only positive signs of the presence of kidney stone discoverable by palpation are, the actual appreciation of the stone under the examining fingers or a sensation of grating obtained by moving one stone upon another.

Such signs are rarely observed, and only in cases presenting stones of unusual size or in the persons of individuals unusually flabby and with thin abdominal walls. Such cases must of necessity belong to the surgical rarities, and although occasionally observed and reported by surgeons, these signs can scarcely constitute a common means of diagnosis.

A physical sign to which many surgeons have attached much importance is the occurrence of pain elicited by a light quick blow upon the last rib of the affected side. In the absence of pronounced changes in the urine and of other signs of serious deorganization of the kidney, this sign is often given a high diagnostic value, when taken in connection with subjective symptoms such as commonly accompany the presence of a stone in the kidney.

Since the presence of a stone in the renal pelvis is not incompatible with a kidney normal in size, shape, and position, the existence of a tumor of any description corresponding to the situation of the kidney, or the absence of such a tumor, is not necessarily significant of the presence, or, on the other hand, of the absence, of stone.

Stone impacted in the lower end of the ureter may occasionally be felt *per rectum* or *per vaginam*.

The cystoscope and ureteral catheter sometimes afford useful aid. A stone projecting through the opening of the ureter into the bladder can be seen through the cystoscope.

The ureteral catheter, when passed into the ureter, may meet with obstruction, and such obstruction may be due to stone.

A positive diagnosis, even, is possible and has been made by inserting a wax coated bougie into the ureter. The bougie coming in contact with the stone was moved back and forth and scratch marks were found upon the surface of the wax, thus showing the presence of some hard rough substance (Kelly).

The general conclusion must, then, be drawn, that in by far the largest proportion of cases no positive diagnosis of renal calculus can be made by the ordinary methods of examination.

There remains to be considered the value of the x ray examination in these cases. The opinions of different observers in this field vary to some extent.

On the one hand, Dr. Charles L. Leonard, of Philadelphia, regards the x ray diagnosis of kidney stone as a method of almost mathematical accuracy. His opinion is supported by observations made upon nearly three hundred cases. In sixty or more of these cases a positive result has been obtained by x ray examination. The others have been negative, and he states that in not more than three or four instances have his conclusions been proved erroneous.

On the other hand, Henry Morris, of London, in his recent work on the *Surgery of the Kidney*, places but little reliance on the evidences furnished by the x rays. He believes that, though an occasional diagnosis of a kidney stone may thus be made, the negative evidence is almost valueless.

Professor James Israel, of Berlin, entertains similar views.

Albers Schöneberg believes that uric acid, xanthin, and cystin stones are in general not capable of demonstration by means of the x rays. To recognize them in this way is as hard as is the case with biliary calculi—that is to say, they are only demonstrable under favorable conditions. He finds, on the other hand, that stones composed of phosphate and of oxalate of lime cast extraordinarily clear shadows on the photographic plate.

Bevan (*Annals of Surgery*, March, 1901) says that, while formerly only the positive results of an x ray examination for kidney stone were valuable, now the negative results have become of value. He says: "If the kidney itself is plainly

recognizable as a shadow upon the plate, a stone will show if it be present, and if the shadow of the kidney is clear and no shadow of a stone appears, a stone cannot be present."

Hutchinson (*Medical Press*, August 14, 1901; *British Medical Journal*, October 19, 1901) draws the following conclusions:

1st. The x rays render an exact diagnosis possible, except in the case of a very stout individual or a very small stone. The position, size, and number of the stones can be determined by this means, etc.

Among American surgeons in general no very great reliance is placed on the x ray diagnosis of kidney stones. It is, of course, agreed that positive results are often obtained, but since a large proportion of the individuals who suffer from symptoms leading to the suspicion of renal calculus have some other cause as a basis for their troubles, the negative diagnosis is of greater importance than is the positive detection of a stone. It is generally admitted that oxalate of lime and phosphatic stones may be detected, and under favorable conditions excluded, by the use of the x rays. It is asserted, on the other hand, that uric acid stones cast such faint shadows upon the photographic plate that a negative result is not conclusive.

My own experience is limited to about 125 cases examined. I have not succeeded in detecting a pure uric acid calculus. Among the earlier cases examined was one in which, owing to want of experience, a shadow upon the plate was believed to be a stone, but was found to be due to a defect in the gelatin. The patient was operated on and no stone was found. In thirty cases a positive diagnosis was made by means of one or more skiagraphs, and the presence of stone was confirmed by the operation.

Of the stones discovered, in 26 cases the stone or stones were in the pelvis of the kidney or extreme upper end of the ureter. In 4 cases the stones were in the pelvic portion of the ureter.

One stone of oxalate of lime weighing less than a grain and a half was found on three different occasions in three different situations in the ureter, each successive time at a lower level. The stone finally passed and was weighed by me. As stated, it weighed $1\frac{1}{2}$ grains. The patient suffered no further discomfort. He was a man with a thick abdomen, but of short stature. His weight was 175 pounds.

The stones discovered have varied from a fraction of a grain to nearly an ounce in weight. They have all either contained oxalate of lime in appreciable quantity or have consisted largely of phosphates. Several stones appeared to consist of

uric acid merely, but chemical analysis showed at least 10 per cent. of oxalate of lime in every instance.

In several cases no picture has been obtained good enough for a diagnosis. The failures have been due to:

- 1st. Great thickness of the body of the patient.
- 2nd. Imperfect working of the electrical apparatus.
- 3rd. Improper handling of the photographic plate in the dark room.
- 4th. Imperfect photographic plates.

Among the cases in which a negative diagnosis has been made, in one I failed to detect the presence of several small calculi in the end of the ureter. In this case the x ray plate did not extend far enough downward to include that portion of the ureter in which the stones were afterward felt *per vaginam*.

While I do not intend to enter into an elaborate description of the apparatus and the technique employed, I believe that a general view of the methods, the difficulties, and the apparent limitations of the procedure at the present time, may not be devoid of interest to the society.

To insure success in the radiography of kidney stones, the following conditions must be fulfilled:

The electrical current used to excite the tube must be of high voltage and of considerable amperage. The best coils and large static machines answer this requirement perfectly.

The x ray tube used must permit the passage of such a current continuously for several minutes without much change in internal resistance; and, to produce the best effects, this should be true, although the resistance or vacuum of the tube is relatively low at the start. This condition is, in my experience, hard to fulfill.

A tube of relatively low resistance produces rays showing upon the photographic plate slighter differences of density in the structures through which the rays are passed; but, as the result of the passage through such a tube of a powerful current, the tube usually becomes heated with a further fall of resistance and the production of rays of inadequate penetrative power. A tube of high resistance tends to preserve its vacuum resistance better, but the x rays given off from a tube, the resistance of which is very high, possess the penetrative power to a high degree; they penetrate all the structures of the body more nearly in an equal manner, and thus produce radiographs, showing but little contrast between tissues of different densities. Such pictures are what are described in photography as "flat" negatives. The positive and negative value of such a picture of the

body of an individual supposed to be suffering from renal calculus is not great.

In order to establish the absence of stone it is necessary, as has already been pointed out by a number of observers, to produce a negative which shall show such marked contrasts between structures varying but little in density that even the smallest calculus will cast a definite shadow. This may usually be done in young persons and in slender adults. It is, on the other hand, exceedingly difficult when the individuals are large and stout.

I have been unable to make up my mind as to the exact cause of this difficulty. Probably pictures of fat people are hard to obtain for several reasons. In the first place, the actual thickness of tissue to be penetrated is much greater, consequently the exposure must be longer; moreover, the length of the exposure must be still further increased, because it is dangerous to expose the skin for a long period to the action of the rays unless a considerable interval exists between the tube and the skin, twelve inches at least. There seems to be some reason to believe that long exposures excite in the tissues themselves secondary foci of x rays, which affect the photographic plate and produce a blurred and indistinct picture.

The thickness of the fat upon the buttocks and upon the back raises the skeleton and the kidney some distance away from the underlying photographic plate. A further blurring and want of detail in the image is thereby produced. This is notably the case in women possessing large thick buttocks.

The movements of the abdominal walls of fat persons also seem to produce a clouded appearance on the photographic plate.

I have succeeded occasionally in producing satisfactory negatives of very stout people. The conditions were as follows: The tube used was the water cooled tube, devised by Dr. E. Grunmach, and sold by the Kny Scherer Company. It has always happened to be an entirely new tube, of relatively low resistance, showing a brilliant apple green fluorescence and illuminating the fluoroscope brilliantly, and producing vivid fluoroscopic images of the flesh and bones of the wrist and forearm. Such a tube will produce a vivid picture of the hand on the screen at a distance of many feet, and the tube has always possessed the peculiarity that its resistance fell but little even after some minutes of running at its full capacity.

I have never taken a successful picture of a kidney stone with a tube which had been used many times, or with one which had become coated with

the purplish black film which forms in old tubes. My best pictures have been taken with the Wehnelt electrolytic interrupter, with rather a heavy platinum electrode having a considerable amount of platinum exposed in the acid, thereby permitting the use of a current of considerable amperage and relatively slow interruptions.

The exposures for large stout people have varied from ten to fifteen minutes with the anticathode about thirty inches from the photographic plate. For thin individuals these exposures have been shortened one half.

I do not know whether my failure to obtain good pictures with any but new tubes is due to a defect in the apparatus used or not, but I am inclined to think that such is the case, since the experience of others does not entirely agree with my own.

This may depend upon the fact that, with the machine I use, a discharge occasionally occurs through the tube in both directions. Hitherto I have been unable to prevent this when driving the tubes to their fullest capacity, and they are soon destroyed.

It has sometimes happened that, with all the conditions apparently favorable and with the greatest pains in technique, the pictures have been utter failures.

Sometimes I have been able to account for such failures by imperfections in the photographic plate or in the technique of development, and sometimes I have not been able to explain the failure. A serious handicap has been also, in these cases, the necessity of taking the pictures singly and at rather long intervals, on account of the danger of burns and of the unwillingness on the part of the patients to permit a number of exposures to be made. The very great expense also of new tubes for each case has prevented the best obtainable results.

The conclusions I have been able to draw from my experience are as follows:

The positive diagnosis of kidney stone by the x rays is reliable and of great practical value.

The negative diagnosis of kidney stone by the x rays is reliable and valuable up to a certain limit.

If pictures of a proper quality are obtained, calculi of oxalate of lime and phosphates can be excluded. Pure uric acid calculi cannot.

Pictures of a proper quality can be obtained with ease in children and slender adults of both sexes.

Such pictures can usually be obtained by repeated trials in well nourished adults.

When patients are unusually stout, when the abdomen is very thick and the buttocks are large, the conditions are extremely difficult, and only occasionally will a satisfactory result be obtainable with the present form of apparatus.

12 EAST FIFTY-EIGHTH STREET.

BINASAL HEMIANOPSIA; A CASE OF NEURITIC OPTIC ATROPHY WITH BINASAL HEMIANOPIC FIELDS.*

By WILLIAM T. SHOEMAKER, M. D.

PHILADELPHIA.

Hemianopsia means half blindness, but unfortunately this very useful and expressive term does not indicate of itself the anatomical cause of the blindness. Partly for this reason, confusion is at times experienced in properly classifying certain forms of disease having as a prominent symptom half blindness, as applied to the visual fields. This is notably true of those rather rare cases in which the nasal field of one or both eyes fails. Nineteen such cases have been reported, mostly under the diagnosis of binasal or nasal hemianopsia. Such a diagnosis is purely symptomatic and should be discarded, as has been suggested by Rakowicz (1) and others before him.

One thing necessary before this can be done is a greater unanimity in the understanding and acceptance of the term hemianopsia. Another necessity is a willingness on the part of those reporting cases, to report so far as possible actual conditions, instead of some rare symptom.

The classical definition of hemianopsia calls for a half defect in the field of vision of each eye, symmetrically placed, and caused by a common intracranial lesion. The basis of this definition is the semidecussation of the optic nerve fibres in the chiasm, and by it are excluded affections of the visual fibres distal to the chiasm, or affections of the optic nerve in any part, and intraocular affections. There has been no difficulty in excluding hemianopsia as a diagnostic term when it is of intraocular origin, as for example, occurring in the course of glaucoma, but with affections of the optic nerve, it has been different; they have not been excluded as being productive of true hemianopsia, and in particular of binasal hemianopsia.

The possibility of binasal hemianopsia within the definition has been frequently denied, and still more frequently doubted. That it can result from a chiasm lesion must be acknowledged to be an anatomical impossibility, in view of the investigations of Henschen, Dimmer, Hosch, v. Monakow, and Schmidt-Rimpler. These investigators have studied descending degeneration of the visual fibres with coincident results. The relative situation of the crossed, uncrossed, and macular fibres throughout their course to the primary optic ganglia, but especially in the nerve and chiasm, has been very definitely settled.

* Read before the Ophthalmic Section of the Philadelphia College of Physicians.



Fig. 1. Diagram of the optic chiasm, from Willbrand and Sönger (after Henschen).
 ++ = Crossed fibres
 .. = Uncrossed fibres
 ... = Uncrossed fibres of papilla macular bundle

FIG. 1.—Diagram of the chiasm.

The fibres in question, or those supplying the temporal half of the retina; the uncrossed fibres, of the fasciculus lateralis, course as follows: In the nerve, next the bulbus, this bundle divides into two equal portions, between which, outwards and downwards, lies the macular bundle. These two bundles approach each other, and unite about the point where the central retinal artery enters the nerve, to form a crescent shaped bundle situated peripherally below and out. The crossed fibres form a compact and uninterrupted bundle throughout the nerve, with a dorsomedian position.

Upon entering the chiasm, the uncrossed fibres divide into a number of radially arranged layers, like superimposed leaves. A certain number of fibres approach the periphery of the chiasm; the principal mass, however, lies more toward the middle, and those fibres are mixed with crossed and crossing fibres.

In the chiasm, the crossed fibres pass from a dorsomedian position which they have in the nerve, to a ventromedian position which they keep in the tract. The uncrossed fibres pass in an opposite direction; ventrolateral fibres in the nerve become dorsocentral in the tract. The crossed fibres arrange themselves into a number of horizontal processes which push between the uncrossed bundles, which are in horizontal layers. Many of the crossed fibres reach the periphery of the chiasm. From this arrangement and mixture of crossed, crossing, and uncrossed fibres in the chiasm, it will be seen that at no point in the chiasm do the uncrossed fibres form an isolated bundle, and that nasal hemianopsia due to a chiasm lesion must be impossible. Willbrand and Sönger (2) are the latest authorities for this statement.

It likewise follows that the graphic production of nasal hemianopsia, by the placing of a lesion in the lateral angle of the chiasm, as found in so many textbooks, is an error.

As to the course of the crossed and uncrossed fibres in the tract, opinions differ somewhat. A few observers believe these fibres to be mixed,

but Henschen and the majority of investigators have found the uncrossed bundle intact as such throughout.

A lesion which would destroy this bundle, and this alone, would produce nasal hemianopsia, and is of course possible. The only probable lesion of this kind, however, would be an atrophy of this bundle, which might be called for want of a better name a selective atrophy. A pressure lesion which, exerting itself from without, would limit its destruction with such nicety to the uncrossed fibres is difficult to conceive of, and a similarly limited inflammation, interstitial in character, would be most improbable on account of the almost total absence of pial processes and septa entering the tract. This anatomical arrangement will be referred to below. Gowers in a letter to Eales concerning the latter's case of binasal hemianopsia, wrote that he thought nasal hemianopsia had never been due to disease behind the chiasm, and that he could not conceive that it could be so produced.

We have still left in which to place the offending lesion, the optic nerve and, out of respect to the case of Herschel referred to later, the visual centre, or subcortical regions. Degeneration of the visual fibres has not been carried with certainty beyond the external geniculate body, therefore the possibilities of a lesion situated between this point and the cortical visual centre are purely speculative.

The writer is in accord with those who believe that so called nasal hemianopsia is in most instances a symptom of optic nerve disease. A brief examination of the cases reported will show reason for this when the optic nerve conditions are considered. The cases are arranged chronologically as reported.

I. *v. Graefe* (3), in 1856, mentioned a case of binasal hemianopsia, the only one he had seen, which he considered of central origin. Aside from the symptom of hemianopsia, the data in the case were insufficient to warrant any explanation or special diagnosis.

II. *Mandelstamm* (4) (1866) described a case observed in Pagenstecher's Institute. This case showed neuroretinitis, which resulted in total blindness.

III. *A Second Case by Mandelstamm* (5) (1866) showed neuroretinitis and perivascularitis. There was no sharply defined dividing line.

IV. *Mooren* (6) (1867) reported two cases. The first case was one of traumatism, the patient falling from a considerable height. Ophthalmoscopically, all the signs of optic atrophy were pronounced.

V. *Mooren's Second Case* was in a 16 year old girl who suddenly suffered from headache and vertigo. There was complete loss of function of the

outer half of each retina. Complete recovery took place in two days.

VI. *Schmidt and Wegner's Case* (7) (1869) was one of brain tumor, presenting ophthalmoscopically the picture of typical albuminuric retinitis. The tumor was the size of a pear, situated in the middle of the left ventricle, and lying loosely upon the large ganglia. The optic thalamus was flattened and atrophied. The growth extended into the third ventricle, involving the *sæptum lucidum*, fornix, and external layer of the corpus callosum. The aqueduct of Sylvius and the fourth ventricle were dilated. The dura was thickened. With such extensive brain disturbance and destruction, the mere fact that the patient was not blind, instead of half blind, would almost place the immediate cause of the hemianopsia in the optic nerve, and not more centrally.

VII. *Daae's Case* (8) (1870) was one terminating in epilepsy, mental deterioration, and death. The nasal field was lost in each eye. Ophthalmoscopically nothing was recorded but alteration in the chorioidal pigment. Five other members of the family were said to have exhibited exactly the same phenomena. This case so far as known must be considered as one of true binasal hemianopsia, due of course, or in all probability, to a double lesion back of the chiasm.

VIII. *Knapp's Well Known Case* (9) (1873) is classical; O. D. showed marked, O. S. slight neuroretinitis. This case is unique, and although it occurred thirty-two years ago, it is interesting to note the correctness of the recorded explanation. A temporary obstruction in the circle of Willis produced an impediment to the blood current, swelling of the arteries, pressure upon the lateral angles of the chiasm, exudation into the arachnoid cavity, and through the intervaginal spaces of the optic nerves, causing neuroretinitis and atrophy. The case is thus perfectly explained, but the beautiful post mortem demonstration of sclerosed vessels pressing upon the sides of the chiasm made almost irresistible the conclusion that this pressure caused of itself the binasal hemianopsia, which we now know is impossible.

IX. *Herschel's Case* (10) (1883) is one which can neither be proved nor disproved. The patient, a woman aged 39 years, fell without warning, was unconscious for a brief period, and speechless for half an hour. Returned to work upon the following day. No sugar, albumin, syphilis, or discoverable constitutional disease. Binasal hemianopsia, which Herschel believed to stand in direct relation to the apopleptic attack. The cause he ascribed to double hæmorrhage in symmetrical portions of the brain (occipital lobes). If this is true, the case was one of genuine binasal hemianopsia. The discs showed atrophic discoloration especially in the temporal halves; there were peripheral color disturbances; the Wernicke pupil was absent. If such a case is possible, it would seem that a unilateral destruction of the uncrossed fibre centre should not be so uncommon in cases of brain hæmorrhage. A double symmetrical hæmorrhage is much more difficult of production than a single hæmorrhage.

X. *Hensen* (11) (1890) records a case of nasal hemianopsia in the right eye, the left eye being entirely blind. The autopsy revealed gummatous exudation surrounding the chiasm. If monocular nasal hemianopsia is to be spoken of, the field of the other eye should not show serious defects. That the chiasm was surrounded by gummatous exudate, and that the fellow eye was blind, are sufficient in themselves to exclude this case as one showing true nasal hemianopsia.

XI. *Lang and Beevor's Case* (12) (1894) is one of tabetic atrophy. Noyes (13) among others speaks of limitation or invasion of the visual field, occurring in glaucoma, optic atrophy, embolism of a retinal vessel, retinitis pigmentosa, etc., but makes a sharp distinction between such limitations and those which he considers under hemianopsia. This case, however, as pointed out below, is probably one with true binasal hemianopsia.

XII. *Eales's Case* (14) (1895). Both discs were "filled in," grayish yellow in color, with blurred margins. Diagnosis, chronic interstitial neuritis. This was the case of which Gowers wrote: "This case suggests a bilateral inflammation of the trunks of the optic nerves in front of the chiasm."

XIII. *Ole Bull's Case* (15) (1895) was a remarkable one. Microscopically the tracts and optic nerves were degenerated, the latter more than the former. In the optic nerves, no fibres were found peripherally. There was of course pure optic atrophy, and the temporal fields were considerably cut.

XIV. *Rakowicz* (15) (1895) in a paper in which he doubted the possibility of nasal hemianopsia, and deprecated the use of the term for cases in which the disease was clearly optic nerve affection, reported a case with typical failure of each nasal field. He avoided the diagnosis of binasal hemianopsia, however, preferring that of optic atrophy. After six weeks the patient was blind.

XV. *Fridenberg's Case* (16) (1896) was a traumatic one. Fridenberg is inclined to think that the lesion causing the hemianopsia was an indirect one, and that the chiasm was gradually compressed upon each side, by callus formation or other newly formed tissue at these points. Basal fracture of the skull is most probable in this case from the nature of the injury, but in view of the anatomical arrangement of the fibres in the optic nerves and chiasm, the callus or newly formed tissue must have pressed upon each nerve separately, rather than upon the lateral chiasm. This case showed optic atrophy, but no neuritis.

XVI. *Eschridge's Case* (17) (1896) was one of brain tumor. Ophthalmoscopically all the findings were of intense acute papillitis. With the two symptoms of binasal hemianopsia and hemianopic pupillary inaction, the diagnosis of tumor at the chiasm was made with considerable confidence. The autopsy revealed a tumor in the left lobe of the cerebellum, and thickening of the pial sheath surrounding the chiasm.

XVII. *Veasey's Case* (18) (1897) shows intraocular inflammation; hæmorrhages, cholesterine, reduced arteries, and cloudy media. He considered his case more like that of Eales than any

other which he reviews, and accepted for it Gow-ers's probable explanation.

XVIII. *Burnett's Case* (19) (1900) was one of nasal hemianopia showing first in one eye, and a few months later becoming double. The exciting cause was a blow on the forehead due to a fall. Each eye was in turn the seat of optic neuritis and papillitis ending in atrophy.

Burnett, after discussing the various theories advanced for the explanation of nasal hemianopia, said of his case: "Whatever else may have preceded, we are forced to consider an optic neuritis as the essential pathological lesion."

Finally XIX. The writer's case, reported in full, is as follows: W. H. S., aged 65 years, male, white, widower, occupation upholsterer, came to the Eye Dispensary of the Presbyterian Hospital in June, 1904. Vision had always been good until eight or nine years previously, when he noticed first that O. S. was failing. The disturbance was described as a central blur, and he felt that O. D. was doing all the work. Did not progress, so far as known until three months before, when he noticed a black film before O. D. There had been a gradual diminution of vision during the previous three months; he could no longer see to work. He was also troubled with ringing in his ears, which Dr. B. H. Potts found to be clearly due to middle ear disturbance.

V. O. D. $\frac{1}{80}$ (eccentric fixation) not improved.

V. O. S. $\frac{1}{30}$ central not improved.

Fixing with O. S., O. D. was divergent. In getting around, the head was turned searchingly in the manner characteristic of loss of the nasal fields. His pupils were equal, the irides rather sluggishly active to light, and the hemianopic pupillary reflex was imperfectly present. Ophthalmoscopically, 0.2, the discs were "filled in" and atrophic. They were "fluffy" in appearance, with margins somewhat blurred. The vessels were small, with irregular contour and changeable calibre. There were a few yellowish spots in the fundus around the disc. All the changes were more pronounced in the right eye.

The left field, that of the better eye, was nasal hemianopic. In its temporal aspect, it was cut concentrically about 20° . Nasally, the field was overshoot about 5° ; the line of demarcation was well defined; the macular region was preserved. The field for red showed a corresponding contraction.

The right field, also nasal hemianopic, showed a large central scotoma. Fixation could be maintained only with a pointer. Temporally, it was much contracted, the greatest contraction being below and out. It was overshoot a few degrees at the centre. In other words, the entire nasal field and most of the temporal field were lost for this eye. Color was not recognized. The hemianopia in each eye was practically absolute.

This patient's general health was subjectively pretty good. He had had some muscular rheumatism, there was no history of syphilis, and no history of lead poisoning. He formerly smoked six to nine cigars daily, and used alcohol moderately, but for the past five months he had not used either tobacco or alcohol. Recent examination of the urine was negative.

He had been carefully examined by Dr. Harvey Shoemaker, and by Dr. William G. Spiller. Dr. Shoemaker reported, August 22, 1904, as follows:

The veins of chest were dilated. Heart: apex beat was neither palpable nor visible. At mitral area was a soft, short systolic murmur, not transmitted; the second sound was impure. At other areas both sounds were impure, but there was no distinct murmur. Heart action quiet, there was some arrhythmia, and second sound was slightly accentuated at pulmonary area. Percussion did not show the heart to be enlarged.

There was marked visible arterial pulsation at wrists, in forearms, and arms, above clavicles, and in neck. All palpable arteries were rather small, but very stiff, with no hard chalky areas in them. Left radial much smaller than right, but the pulses were synchronous. Over upper part of sternum, when the heart action was accelerated,

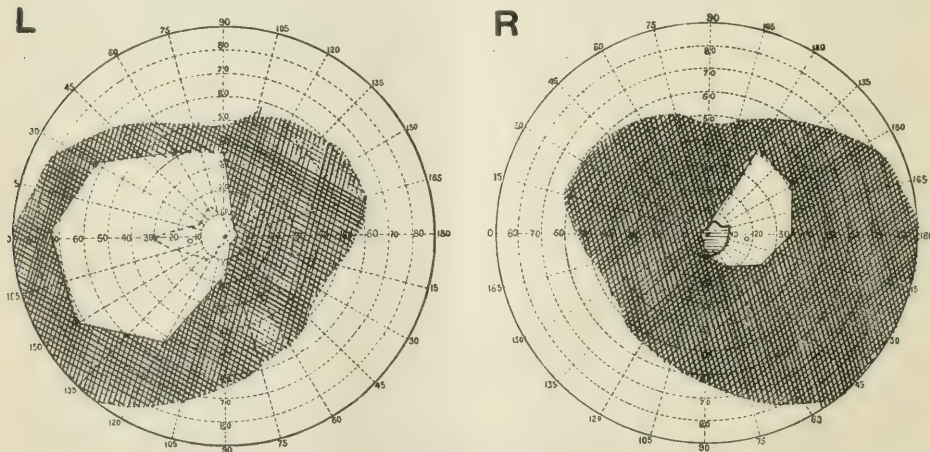


FIG. 2.—Binasal hemianopic fields in case of neuritic optic atrophy. (Author's case.)

a distinct bruit was heard. Diagnosis: *General Diffuse Cardiac and Arterial Sclerosis*.

Dr. Spiller wrote, August 6, 1904: "I am unable to find any distinct signs of involvement of brain or cord, aside from the disturbance in the visual field."

Medically, this case is one of pronounced diffuse arterial sclerosis; ophthalmologically, it is one of optic atrophy, following or attended in course by a low grade optic neuritis. It forms a very good example of so called binasal hemianopsia, but such a diagnosis would give little information as to the man's true condition.

As to the field defects, the writer believes them to be due to optic-nerve disease. The well marked arterial sclerosis is thought to be a factor in the primary causation, and should opportunity arise, possibly a condition of affairs around the circle of Willis would be found similar to that described by Dr. Knapp.

Of these 19 cases exhibiting nasal hemianopic fields, demonstrable inflammatory disease of the optic nerves was found in 12 cases, or in 63 per cent.

These cases are those of Mandelstamm (2 cases), Schmidt and Wegner, Knapp, Henschen, Eales, Ole Bull, Rakowicz, Eskridge, Veasey, Burnett, and Shoemaker. If with these, Mooren's first case and Fridenberg's case can be included, the percentage of cases of probable optic nerve origin is 73.6. Regarding these two cases, they were traumatic and likely due to fracture.

Fridenberg places callus and other newly formed tissue at each side of the chiasm, but this alone will not explain the binasal hemianopsia in his case. It is probable, therefore, that the direct cause of the hemianopsia is here also in the optic nerves.

The five remaining cases appear to be so far as known cases exhibiting true binasal hemianopsia. Lang and Beevor's case is unfortunately not very fully reported, but from the data at hand, there seems to be no reason why it is not a case with true binasal hemianopsia. The writer believes that only postneuritic atrophy, and atrophy secondary to optic nerve injury or involvement should exclude a true hemianopsia.

The three cases of Graefe, Daae, and Herschel would seem to be of central origin, and likewise show true binasal hemianopsia.

Mooren's second case, which is imperfectly recorded, was transient, and was perhaps psychic.

The destruction of the uncrossed fibres in the optic nerve without serious or immediate destruction of other fibres, can probably be best accounted for by the profusion and arrangement of the *sæpta* or pial processes which enter the nerve, especially in its intracranial portion. Reference to Wilbrand and Sænger's third volume, part I,

page 73, will show how very well developed and numerous many of these pial processes are. Inflammation travelling along these *sæpta*, limited to, commencing in, or more intense in those surrounding the uncrossed fibres, is not at all too unthinkable to have occurred 12 times. It is a well known fact that interstitial inflammation is frequently symmetrical, and therefore it is not so remarkable that it should attack in this manner the optic nerves.

The *sæptum* formation has been shown by Wilbrand and Sænger to be definite, and not haphazard; it is most marked in the intracranial section of the nerve, a piece a little less than 10 mm. in length; and it is almost absent in the tract. The line of demarcation in nasal hemianopic fields is seldom one of perfect bilateral division, whereas in complete homonymous and bitemporal hemianopsia, it should be straight, with of course the well known variations as to the preservation of the macular region. The reason for this is the fact that lesions of the chiasm, or posterior thereto, which produce typical bitemporal or homonymous hemianopsia, destroy all of the fibres, while we can scarcely conceive of pressure lesions, attacking the uncrossed fibres alone anywhere in their course, which will not allow some of them to escape, or involve some of the crossed fibres. Of course, every case of homonymous hemianopsia is nasal hemianopsia for one eye, but the lesion here is totally destructive of both sets of fibres behind the chiasm.

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2031 CHESTNUT STREET.

INSECTS; THE ROLE THEY PLAY IN THE TRANSMISSION OF DISEASE.*

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That insects have had something to do with the spread of disease has long ago been suspected; the actual demonstration of such was, however, not made until recent years, and the importance of the rôle which they play in the spread of pathogenic microorganisms has yet to be appreciated. For many years Italians have believed that mosquitoes had something to do with malaria, but it was not until 1898 that the relation between the two was absolutely determined. For decades we have chronicled the enormous death rate due to malaria and yellow fever. The lowering and, in many places, the complete abolition of that death rate, during the past five years has been one of the most astonishing accomplishments of scientific medicine.

Let us consider separately and in order the different phases of our subject:

I. The diseases transmitted by insects.

II. The insects responsible for such transmission.

III. How such transmission may occur.

IV. Agents eliminating the insect factor in the transmission of disease.

I. *Diseases Transmitted by Insects.*—There are a number of diseases such as malaria, yellow fever, Texas cattle fever, and possibly also sleeping fever, "spotted fever," relapsing fever, and elephantiasis that are conveyed only through the medium of insects. Others are at times transmitted in this way.

a. *Malaria.*—Although the infective agent of malaria was discovered by Laveran in 1880, and

this disease had long been classed with the communicable diseases, and although it was long ago suspected that the mosquito had something to do with malaria, yet it was not until 1898 that the manner of transmitting the disease was solved. Through the painstaking researches of Ross, Manson, Grassi, and others, we now know that the hæmatozoon malarie requires two hosts for its development; man as the intermediate host for the development of the larval form, and the mosquito, of the genus anopheles, as the definitive host for the development of the adult form. The mosquito forms the only means, so far as we know at present, of transmitting the disease from one individual to another.

b. *Yellow Fever.*—Scarcely less wonderful are the discoveries in connection with yellow fever. Dr. C. J. Finlay, of Havana, in 1881 first advanced the idea that mosquitoes were concerned in the transmission of this disease. In 1900, a committee, consisting of Dr. Reed, Dr. Carroll, Dr. Agramonte, and Dr. Lazear, which had been appointed to investigate the relation existing between the mosquito and yellow fever, reported that the mosquito of the genus *Stegomyia*, served as a host for the parasite of yellow fever and that it was very probable that the disease was propagated only through the bite of this insect. A committee consisting of Parker, Beyer, and Pothier have recently stated that they found a protozoon parasite in the stegomyia, and to have worked out a part of its life history. For this organism they propose the name *Myxococcidium stegomyia* (Marine Hospital Service, Yellow Fever Institute, Bulletin No. 13, March, 1903). It has, as yet, been by no means proved that the bodies found by the last named committee are the real ætiological agents of yellow fever.

c. *Elephantiasis*, due to filaria sanguinis hominis. —The mosquito serves as intermediate host, and transmits the embryo parasite to man through its bite. The parasites probably develop into the adult form in the skin or just beneath it, which probably enter the lymphatics and give birth to broods of embryos that are disseminated in the lymph stream and then enter blood vessels. They occur in the peripheral blood in greatest number when the patient is asleep. When the patient is active they retire to the deeper structures, presumably the lymphatics. By occluding the lymphatics they produce a lymphatic œdema which causes an enlargement, principally of the lower extremities, resulting in the condition known as elephantiasis.

d. *Trypanosomiasis.*—This condition is due to the presence of an animal parasite, trypanosoma, which has an elongated body and a large flagellate caudal extremity. The organisms are found principally

* Read at the sixteenth annual meeting of the Dubuque County (Ia.) Medical Society.

in the blood of the animals affected. There are a number of these parasites, which produce different diseases in different animals (in some cases apparently without effect) and are transmitted from animal to animal, in a few cases at least, by different insects. One of the most important of these diseases in the human being is:

e. Sleeping fever, a very fatal disease which is almost entirely limited to the colored population of Africa. During the past year it has been determined with a great deal of certainty that the specific cause of the disease is a trypanosoma (Castellai, *Brit. Med. Journal*, June 20, 1903), and that it is transmitted by some insect, probably the tsetse fly which also conveys the trypanosoma producing the disease nagana which proves so fatal to many of the domestic horses in Africa. Our common rat is frequently found affected by trypanosoma transmitted by the rat flea. It does not prove fatal, but affords a good opportunity for the laboratory study of this parasite.

f. Relapsing Fever.—Ticktin has examined bed bugs which had filled themselves with blood of men and monkeys suffering from relapsing fever, and found that the blood of these insects contained the specific spirilla for a period varying from eighteen to seventy-seven hours after they had gorged themselves. Some soon become immotile, others remained motile for a long time. Blood, from eight bed bugs which had fed upon an infected monkey, was injected into another monkey which in sixty-four hours developed the disease. The recent researches of Karlinski have caused him to believe that bed bugs play an important part in the transmission of relapsing fever. (Karlinski, *Centralblatt für Bacteriologie*, Bd. XXX, Orig., 1902.)

g. Texas Fever of Cattle.—Theobald Smith has shown that this disease is caused by a very small hematozoon (*Pyrosoma bigeminum*) and is carried from animal to animal through the bite of a tick (*Boophilus bovis*). The adult tick, after gorging itself with the blood of an infected animal, falls to the ground, and in a few days lays her eggs and dies. After several weeks the eggs hatch out, the embryo ticks escape and at the first opportunity attach themselves to cattle, and through their bite infect healthy animals.

h. Typhoid Fever.—During the past few years our attention has frequently been called to the fact that flies play rather an important part in conveying the germs of typhoid fever. Such seems to have been a great factor in the production of the large number of cases of typhoid in the American camps during the Spanish-American war. Flies were very numerous and had free access both to the discharges of typhoid patients and the food of the soldiers.

Smith reported a small epidemic of typhoid at the New Haven county jail, which he attributed to the influence of flies. Twenty-one of the inmates were taken sick. There were several cases of typhoid in the houses near the jail and there was open communication between the jail kitchen and the adjoining yards.

Dr. Alice Hamilton, who made a very careful study of the recent typhoid epidemic in Chicago, believes that flies were concerned in the production of many of the cases (*Jour. of the American Med. Association*, February 28, 1903). Ficker has isolated typhoid bacilli from the bodies of flies caught in a house where eight cases of typhoid occurred (*Arch. f. Hyg., München u. Leipzig*, Bd. XLVI, S. 274). Experimentally, Ficker has shown that typhoid bacilli will live in the bodies of flies for some time, and that flies fed with typhoid bacilli are able to convey the microorganisms to objects with which they come in contact, for as long as twenty-three days after feeding. This emphasizes the great importance of thoroughly disinfecting all discharges from typhoid patients, and of excluding all flies and other insects from dwelling places, especially from the rooms of typhoid fever patients and from the dining rooms of others.

i. Tuberculosis.—The frequency of occurrence of this disease, its almost universal distribution, the manner in which infected material is distributed because of the careless disposition of many consumptives, the great number and disgusting habits of flies, all suggest that the rôle which insects play in the transmission of this disease may not be at all unimportant. Spillmann, Haushalter, and Hoffman have found living and virulent tubercle bacilli in the bodies of flies caught in the rooms of consumptives and also in their faecal specks scraped from the wall or articles of furniture. The greatest care should be taken with tuberculous sputum. It should be collected in spittoons, which contain a disinfecting solution and are always kept well covered.

j. Plague.—It seems very certain that this disease is frequently transmitted by fleas, either,

Fleas that commonly infest the human being, conveying the disease from one individual to another, or,

The rat flea, which leaves the dead rat, an animal very susceptible to plague, as soon as the body becomes cold. These fleas will sometimes bite the human being and so may transmit the disease. Transmission by flies probably also occurs. Nuttall has shown (1897) that flies die of the disease, and Yersin has found the bacilli of this disease in flies infesting his laboratory.

k. Cholera (Asiatic).—There have been a number of epidemics of this disease, the spread of which

cannot be satisfactorily explained except through the agency of flies. Biggs explained the development of a small epidemic of this disease in New York in 1892 on these grounds (*Amer. Jour. of the Med. Sci.*, January, 1893). Macrae performed an interesting experiment by exposing sterilized milk in two apartments of a jail, one of which contained cholera patients and the other did not, but both contained many flies. The milk in the apartment which contained the cholera patients soon became infected with cholera microorganisms, the other did not.

l. Yaws.—The real cause and manner of transmission of this disease is not known. There is, however, good evidence to show that simple sores have been infected with the virus of the disease by certain flies called "yaws flies" which are common in the "yaws" district.

m. Leprosy.—This disease is in some cases probably transmitted by mosquitoes and flies. It is interesting to note that the plague of mosquitoes and an epidemic of leprosy appeared at the same time in the Hawaiian Islands in 1840, at which time mosquitoes were imported, probably from China. Alvarez claims to have discovered bacilli of leprosy in mosquitoes gorged with the blood of lepers. Others have failed to verify his findings.

n. Anthrax.—It is very probable that anthrax is frequently carried from animal to animal and occasionally from animal to man through the bites of flies.

o. Worms.—Tape worms, especially *Tania cucumerina*, a tape worm occasionally found in man but most commonly in the dog, undergoes a part of its development (larval) in the bodies of fleas and dog lice. The swallowing of such insects has caused tape worm infection. Grassi has demonstrated that ordinary flies may ingest the ova of various worms parasitic to man such as the ordinary round worm, pin worm, and tape worm, and later deposit them with their feces. This is, of course, a possible source of infection.

p. Impetigo Contagiosa.—Although it has not yet been well demonstrated clinically that impetigo may be transmitted from the affected to the unaffected by insects, yet there is abundant experimental evidence that this is possible, especially through the medium of lice. Dewevre has been able to transfer the disease in this way in about fifty per cent. of children experimented upon.

q. Purulent Conjunctivitis, such as *Egyptian ophthalmia* and "*Florida sore eyes*."—Flies are attracted by the discharges and in some cases are known to have carried the infection from the affected to the unaffected. There are certain flies (*Hippelates* flies) which are especially prone to

dart into the eyes, nose, etc. These are probably most responsible for carrying the infection.

r. Ordinary Infection.—Paltauf reported a case of fly bite producing erysipelas, meningitis, and death in two days. Joseph gives three cases of septicæmia due to fly bites.

Wounds may be infected by insects, first, directly, by getting in contact with wound; second, indirectly, by carrying infected material to instruments or dressings or to the skin which later through an abrasion may produce an infection.

There are many other diseases or disease conditions that are no doubt occasionally, or frequently, transmitted by insects. Reference to some of these will be made when considering the next subject.

II. *Insects Principally Concerned in the Transmission of Disease.*—*a. Mosquitoes.*—The female of this insect usually lays her eggs on the surface of water and young ones develop only where there is an abundance of moisture. The larvæ remain near the surface and breathe through a respiratory tube near the anal extremity. If this contact with the atmosphere is denied they will soon drown. There are different varieties of mosquitoes concerned in the transmission of different diseases, as follows:

Malaria—*Anopheles*, several varieties, *Anopheles maculipennis*, *Anopheles punctipennis*, etc.

Yellow fever—*Stegomyia fasciata*.

Filariasis—a *Culex* (*Culex pipiens* and *Culex ciliaris*), and possibly also an *anopheles*.

Our common mosquito is also a *Culex* (*Culex pungens*). The recent researches on dengue, by Graham, practically show that this disease is caused by a hæmatozoon which is conveyed by a mosquito. In all of these cases infection is carried by the bite of the mosquito. It is probable that this insect also has something to do with the spread of other disease conditions.

b. Flies.—A number of different flies are concerned in the transmission of different diseases. Probably of greatest importance is our common house fly (*Musca domestica*), which enjoys feasting upon the discharges of animals as much as upon the food of human beings and is very prone to carry infectious material from the one to the other, either mechanically, the infectious material clinging to parts of its body, or by ingestion, and later depositing it with its feces. Or, if the organisms kill the flies, the decomposition of the latter will permit the liberation of the infective material. It is very probable that *Bacillus typhosus* and the tubercle bacillus are frequently spread by flies in one of these three ways. Dr. Alice Hamilton, who made a rather detailed study of the recent mild epidemic of typhoid in Chicago, states that in one instance the dis-

charges from a typhoid patient were put into a privy vault and that a number of flies, caught within the vault, on the fence in the yard, and in the sick room and kitchen of the patient, were examined, and from two of them typhoid bacilli were isolated (*Jour. of the Am. Med. Assn.*, February 28, 1903). Spillman and Haushalter have found virulent tubercle bacilli in the bodies of flies. Madox and Simmond after feeding flies with the spirilla of Asiatic cholera have been able to obtain cultures of this organism from them. Yersin found the bacilli of bubonic plague in flies infesting his laboratory, and Nuttall has shown that flies will die of this disease.

The ordinary fly can travel at the rate of 5.35 metres per second, which would mean ten miles if kept up for one hour. Its powers of producing evil are great and it is not at all improbable that many of our cases of typhoid, both sporadic and epidemic, are due to the agency of flies.

Other flies concerned in the transmission of disease are: The tsetse fly conveying trypanosoma, producing nagana in horses, and sleeping fever in man.

The "yaws fly" connected with the disease, known as "yaws."

The Hippelates fly disseminates a purulent conjunctivitis—"Florida sore eye."

c. *Fleas*.—There are different varieties of these suctorial, wingless insects, which choose different animals as hosts. The one which most commonly affects man is the *Pulex irritans*; the dog and cat flea (*Pulex serraticipes*) may also affect the human being, etc. Fleas are probably the agents frequently conveying trypanosoma infection from rats to rats and plague infection from rats to rats or man and from man to man or rats.

d. *Ticks*.—These insects seem to be capable of conveying a number of diseases:

Texas cattle fever (already described) caused by a small protozoon (*Pyrosoma bigeminum*) which is conveyed by ticks (*Boophilus bovis*).

The carapto disease affecting human beings in Africa seems certainly to be produced by the bite of a tick (*Argas maubata*, Manson, *Brit. Med. Jour.*, September 11, 1903). The infective agent is probably the *Filaria perstans*.

Another "tick fever" of man occurs in Asia, due to the tick *Argas persicus*.

A third probable "tick fever" in man is the so called "spotted fever," a quite fatal although not very common disease which is practically limited to the Bitter Root Valley of the Rocky Mountains. Wilson and Chowning, who discovered the causative agent of the disease, have given to it the name *Pyroplasma hominis*. There is considerable evidence to show that the disease is transmitted to man

by a tick, *Dermacentor reticulatus*. (*Journal of Infectious Diseases*, Vol. 1, No. 1, January 2, 1904, p. 31, and U. S. Public Health Service Bulletin, No. 14, July, 1903). There are still other diseases of horses, sheep, and cattle probably transmitted by ticks.

e. *Bed Bugs* (*Cimex lectularius*).—Nuttall, in 1898, performed a number of experiments permitting bed bugs to bite animals that had died or were dying of anthrax, mouse septicæmia, etc., and then permitted these bugs to bite healthy animals. Results were all negative. During the last few years it has been determined that bed bugs play a very important part in the transmission of relapsing fever (Karlinski, *Centralblatt f. Bact.* Bd. XXXI, Orig., 1902).

f. *Lice*.—Experimentally, Dewevre has conveyed impetigo contagiosa from the affected to the unaffected in a number of cases.

Other insects, such as ants, cockroaches, spiders, etc., also no doubt play some part in spreading infectious diseases.

III. *Insects are capable of spreading disease in a number of different ways:*

a. Pathogenic microorganisms may collect upon the limbs or bodies of insects, and by them be carried to fresh wounds, where they produce direct infection, or to articles of food, thus indirectly infecting the individual consuming such food. The contamination of food is of frequent occurrence, as already stated, and no doubt plays an important part in the transmission of typhoid fever.

b. Insects may ingest disease producing microorganisms with their food and later deposit them with their fæces. Spillman and Haushalter have found living and virulent tubercle bacilli in the fæces of flies that had been fed upon tuberculous sputum.

c. Insects may ingest the germs of disease with their food, be killed by them, and the dead animals may cause infection by,

Falling or dying on articles of food, contaminating the latter.

By decomposition of the body of the dead insect, the liberation of the microorganisms, and their dissemination through the dust. This is especially true of bubonic plague which causes the death of infected flies.

d. Insects may ingest pathogenic germs by biting diseased animals and then transmit them to healthy animals by similar bites. Many examples of this method of infection can be given such as the transmission of anthrax by flies, bubonic plague by fleas, and trypanosomiasis, which in some cases is transmitted by flies, in others by fleas. Certain diseases, such as malaria and yellow fever, are transmitted

only in this way. In such cases, the organisms always have a double life history and undergo one part of it in the body of the insect.

c. Insects may ingest pathogenic microorganisms and transmit them to their offspring, who in turn may inoculate healthy animals. As an example of this method of transmission we have the Texas fever of cattle.

IV. *Agents Eliminating the Insect Factor (a few of the more important insects) in the Spread of Disease:*

a. Destruction of bed bugs, etc.

1. Screen windows to prevent the entrance of bed bugs at night.

2. All crevices obliterated, by papering or painting walls, and using furniture as simple as possible.

3. Infected places may be washed with some disinfecting solution, such as mercuric chloride.

4. Use of pyrethrum, a good palliative.

5. General fumigation, as concerns the destruction of insects. Formaldehyde often fails to kill them. This is a point of considerable importance. Formaldehyde, although superior to sulphur dioxide in the destruction of bacteria, is inferior to the latter when insects are considered. Better than either for the destruction of animal life—large animals as well as insects—is the use of hydrocyanic acid. It has a slight tendency to destroy the color of fabrics and will slightly tarnish polished brass and nickel. The precautions of general fumigation, such as the closing of all crevices, etc., should be observed. For fumigation, Howard advises the addition of one ounce of potassium cyanide (98 per cent.) to a solution containing one ounce of commercial sulphuric acid diluted, with two ounces of water to every 1,000 cubic feet of room space. After twenty-four hours, the room should be thoroughly aired (preferably about twenty-four hours) before it is again occupied.

Although affording a very efficient means for the destruction of animal life, such as bed bugs, cockroaches, clothes moths, ants, flies, etc., as well as rats and mice, the use of hydrocyanic acid is both expensive and dangerous and it should be used only when the greatest precautions are taken.

b. *Flies*.—Although we may greatly lessen the number of flies by rendering the breeding places (usually manure) inaccessible to flies, or when accessible, by the occasional addition of chlorinated lime to destroy the larvæ as recommended by Howard, yet the extermination of these pests will not be accomplished for some time at least. We may do something, however, to free ourselves from the dangers that lurk about these creatures. In the first place we may deny their access to special sources of infection

by such means as the thorough disinfection of the bowel and bladder discharges of typhoid fever patients. In the second place we can prevent them from gaining entrance into our dwelling places and from contaminating our food, by the use of screens and fly nets. And, lastly, their number may be decreased by the use of sticking paper, poison, etc., or by entirely eradicating them from a room by fumigation.

c. *Destruction of Mosquitoes*.—It is rather hard to destroy large numbers of the adult forms except by fumigation, but since the larval forms are more accessible, it is to them that the axe is placed. This may be done by:

1. Removal of their breeding places by draining swamps and other small bodies of standing water, and by preventing the accumulation of water in cans, pails, barrels, etc.

2. Lakes, watering troughs, etc., may be stocked with different varieties of fish, which will swallow the larvæ before they develop into adult forms.

3. The surface of water which cannot be drained may be covered by a film of coal oil, petroleum, or kerosene, about one ounce to every fifteen square feet. This kills the adult female when she attempts to deposit her eggs, it prevents the development of eggs, and kills the larval forms, since it is impossible for them to breathe. This oil does not injure the fish below.

If it is impossible to destroy all the mosquitoes, we may further protect ourselves by:

4. Screening doors and windows, and thus preventing the entrance of mosquitoes into houses, especially those containing patients with malaria, yellow fever, or filariasis.

5. Pyrethrum (Persian powder) may be blown about the room or burned. This has no effect on the human being, but stupefies the insects so that they may be collected and destroyed.

6. To keep mosquitoes from the body a number of substances, such as the essential oil of lavender, pennyroyal, peppermint, eucalyptus, camphor, etc., have been advised, but they are all volatile and exert their good influence for but a short time. Howard mentions the use of the following formula: Castor oil, one ounce; alcohol, one ounce, and oil of lavender, one drachm. The use of an ointment of petrolatum which has been impregnated with peppermint and eucalyptus is also useful and convenient. As an application for mosquito bites, Howard mentions the use of alcohol, ammonia, or glycerin, singly or combined.

This brief review of the subject under consideration gives us at least a glimpse of the important rôle played by insects in the transmission of disease. That chapter in preventive medicine which

will refer to the zeal and energy with which the clinical observations and laboratory experiments in such diseases as malaria and yellow fever were conducted; which will relate the sacrifice of a Lazear's life, a consequence of devotion to science; and which will tell us of the enormous saving in human life and suffering that has resulted from researches along these lines, during the last five years, will be one of the brightest that an historian will have occasion to record.

GONORRHŒA IN ITS FEMALE PELVIC RELATIONS.*

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Dating from Noeggarath's book, *Die latente Gonorrhæ in weiblichen Geschlecht*, in 1872, gonorrhœa has become one of the urgent questions of the day. It may be said to belong to the trilogy of diseases that press urgently for solution. I would name these three diseases in the order in which they appear to me most important; gonorrhœa, tuberculosis, and syphilis. I place gonorrhœa before tuberculosis, not because it is less destructive to life than the latter, but because it is potentially more dangerous to society in its power to impair fertility and permanently infringe upon usefulness. An opinion well held is worth two facts to an average mind; almost equally groundless is a fact born before its time. It required time to change the attitude of surgeons toward the importance of gonorrhœal infection of women. It becomes the history of a new idea rather than the history of a fact. Gonorrhœa as a sexual disease was a duly regarded fact older than our civilization, but that a woman once infected always remained the nidus of a dangerous pus producing germ was too revolutionary to be regarded seriously. I remember well the effect that Dr. Noeggarath's revolutionary theory produced in my own mind, but I had the advantage of an intimacy with Dr. Noeggarath, and had learned to place the utmost reliance upon his sincerity of purpose and the firm logical qualities of his mind. To me the stage of incredulity was short, and I was among the first in this country to give my allegiance to his views.

As becomes a man who holds to bold and original ideas Dr. Noeggarath was very tenacious of his opinions. The writer remembers an invitation to luncheon by Dr. Noeggarath after the reading of his paper before the American Gynecological Society, where it was received with

strenuous opposition. He could talk of nothing else than the subject of his paper, and naturally felt sore over the hostile tone which the subject evoked. I could offer no opposition to his theory, although I must admit that I was skeptical, but I did venture an objection to his choice of a word. I believed, then, and I have not changed my opinion since, that unnecessary opposition was provoked by the term "latent" rather than by his theory, supported as it was at that time by a rather scant array of facts; this opposition was one of opinion only as at that time bacteriology could not afford the demonstration of positive proof. Latent was evidently not the word that Dr. Noeggarath wanted. Webster gives two definitions; the colloquial and the scientific with meanings widely different. In the latter as a botanical term we have latent buds, those that have passed the period of expansion without development. Latent heat in physics, that quantity of heat which disappears or becomes concealed in a body while undergoing some changes other than a rise of temperature as evaporation or expansion. In medicine we have another use, and here the author made his mistake, as a disease may be latent, or have a period of latency, before its development, as in the exanthemata in which after exposure the health is not affected until the prodromes appear. Crabb in English Synonymes gives the revealing word. What is secret is known to some one. The Latin word latens means hidden, lying secret, or concealed. The German word is in its Latin form. I have gone into these definitions to show how misleading Dr. Noeggarath's choice of a word was. Nothing latent in relation to gonorrhœa was described in his German work or in his paper in the gynecological transactions. Surely nothing is latent about a disease that is daily, for prolonged periods of years, insidiously undermining health or destroying life. It gains no meaning of latency, because it has the faculty of pathological longevity. Neither can the term be applied to a disease that produces no other evidence of its existence than an incurable sterility.

It is not worth the trouble to seek a better term. The words latent gonorrhœa have passed into medical literature, and no matter what the word may be, the views of Dr. Noeggarath have been confirmed over and over again as time has passed. He has done more than any one to place the disease among the most dangerous of those that afflict humanity.

While we are all familiar with the clinical picture so graphically drawn by Dr. Noeggarath with the inspiration of the enthusiast, yet it is

* Part of a "symposium" on gonorrhœa held by the Syracuse Academy of Medicine.

well worth the time to refer at least to one of his cases, as the paper is contained in a volume long out of print and inaccessible to the most of you. I will cite but one case.

Mr. M., formerly a commercial traveler for a large manufacturing firm in Europe acquired a gonorrhœa. The treatment recommended by a renowned specialist was at once carefully followed and the affection was cured in two months. Two years later this gentleman married a healthy, robust young lady from B., a village in the province of Westphalia, Germany. Three months later the woman began to complain of backache and general malaise; it became difficult for her to supervise her household affairs; the usual promenade instead of being a pleasure became fatiguing. Menstruation, which appeared hitherto without giving any preparatory notice, was now connected with backache, more profuse than usual, and followed by a white discharge. By and by the desire to urinate became more frequent, and was occasionally accompanied with a burning at the meatus. The white discharge gradually extended from one period to the other. About eight weeks later a pain was felt in the left side of the abdomen, which suddenly increased upon any unusually severe exertion, to such an extent that the patient had to take to her bed. At the same time the dysuria was considerably increased, the discharge became profuse and of a greenish yellow color like pus. The physician attending her recognized an attack of perimetritis. A year after this she consulted me for sterility. I found her suffering from general weakness, backache, pain in the left side, increased before the now scanty menstruation and a mucopurulent discharge. On examination the uterus was found in right lateroversion and ante-flexed; the left vaginal roof or parts above, hardened and contracted; the uterus soft, succulent, very tender on being pushed into its normal position, with great tenderness of posterior cul-de-sac. The neck was of a high color, the os surrounded by a thin rim of eroded tissue, discharging a tenacious yellow mucus. Both outlets of Cowper's glands were eroded to some distance and painful to the touch. Dr. Noeggerath briefly commented upon this. He said: "This combination and development of symptoms, physical as well as rational, you will never find in women who are married to husbands who have not exposed themselves to the danger of venereal affections. I say, advisedly never! And if any one has a right to speak thus positively, I claim this privilege." He further stated that this patient had never been infected in the accepted meaning of the word, but she gradually developed a condition which we usually observe as the result of an acute attack of gonorrhœa. This may have been true in 1872, but it is not held as true now, as we recognize these cases as positive and active, not latent infections.

I have now under observation a case so nearly identical with this one, but connected with such positive proof of the absolute chastity of the

young lady previous to marriage that the case is unique and worthy of a brief study.

Mrs. G. L., of Utica, brought her daughter to me many years ago. She was a well formed girl about thirteen years old. The abdomen was distended by a mass extending above the umbilicus. An inspection showed a bulging of an imperforate hymen. Under careful antiseptic preparation the menstrual accumulation was drawn off through a trocar. The hymen was then divided by a crucial incision and the mucous membrane covering both surfaces of the obstructing hymen stitched together to insure against cicatricial contraction. This opening proved ample to drain away the menstrual secretion. In this condition she was allowed to remain until a little past the twentieth year when she became engaged to marry. We had always understood that an additional operation would be necessary to prepare her for marital duties. The hymenal remnants were dissected away, the edges of the mucous membrane brought together by sutures, and in a week or so the patient returned home with the lumen of the vulva restored to its normal proportion. The hymen, which was removed entire, was a resistant cicatrix with a central opening, large enough to meet its physiological function, but through which the tip of the little finger could not be forced. Bimanual palpation proved the pelvis to be free from any mass, indurations, or adhesions, with the uterus in a typically normal position. Inspection showed the vaginal portion to be free from any erosions and the cervical canal without any catarrhal discharge.

Here we had a young and healthy girl, free from any specific infection and demonstratively so from absolute necessity. In about a month she was married. It is not prudent to delve any deeper into family history. In two months after marriage, just preceding a menstrual period, she was attacked by a sudden chill, followed by a mild febrile reaction and the rapid development of a mass in the right iliac fossa, attended by excruciating pain. The tenderness over the mass was excessive, gradually shading off over the abdomen. On palpation the uterus was found to be fixed, the fundus crowded over to the left. Any attempt to push the uterus into its normal axis was too painful to be persisted in. In about a month the acute symptoms had subsided. The mass to the right had quite disappeared and the uterus was nearly restored to its normal mobility. She then came under my personal care and by appropriate treatment the rapid cure was confirmed and she returned home under engagement to return and resume treatment in a month. During this interval she saw her husband a couple of times. Agreeably to her promise she returned and I was surprised to find that the pelvic tenderness had slightly returned and there was evidently a lessened uterine mobility.

The husband confessed to having contracted a gonorrhœa about seven years previous to his marriage. At long intervals after that he had observed a slight urethral catarrh, generally without tenderness, but sometimes with a little itch-

ing and redness at the meatus. This urethral catarrh would recur at wide and irregular intervals. He stated that he had even gone a year without noticing any discharge, but quite often he had observed it three or four times a year. Just before the pelvic outbreak in the wife he had noticed a discharge of about a week's duration.

It does not appear possible that this attack from which the wife suffered could be traced to any cause other than that of an acute gonorrhœal infection. It was acute, so far as it related to the wife; it was chronic concerning the husband. In his case it is gonorrhœa, not in a potential form, or latent, but active, with passive and exacerbated intervals. It is doubtful if he ever recovers from it, and it is more than doubtful if the wife ever becomes immune to the perennial fountain of germs furnished by the husband.

Clinically speaking, we have been safe within the limit of our pathological purview; biologically we have not. Concerning this, investigations have been carried out upon the conjunctiva of the newly born. For these we are principally indebted to Bumm. The urethral mucous membrane is not situated favorably for the investigation of the immediate effect of the gonococci upon the tissue. His observations show that the microorganism possesses but a limited range of tissue penetration. The gonococci penetrate only the most superficial sheaths of the subepithelial layer. Their power to penetrate lymph vessels and capillary blood vessels is denied, and against this denial we have only the solitary case of Bockhart. Taking the invasion of the conjunctiva in ophthalmic blennorrhœa neonatorum as a type, we can trace the "reaction of the tissues in the acute stage corresponds to the violence of the onset and the rapidity with which the microorganism is developed; and in the later stages, when the tissues have become protected by the development of epithelium due to the reaction of the tissues, and the gonococcus disappears, the remaining phenomena of the disease are just those which may be produced by any chronic irritation" (Sinclair).

This may explain the life history of the gonococcus, but it does not explain the clinical phenomena offered by the genitals of men and women when once exposed to the attack of the organism. If one were asked to define the most characteristic trait of a gonorrhœal infection we would be obliged to say that it was its tendency to persist and recur. If what the biologists say of the pure culture of the gonococcus germ when placed upon favorable soil is true, we must search further to find the true explanation of the clinical findings after an acute infection. Bumm offers the most reasonable explanation of the

gonorrhœal mystery. This is the theory of mixed infections. These are consecutive and not accidental. These infections are attended by constancy of association, and point to the certainty that when one germ has found lodgment, another form of germ invasion will find the way prepared for it and will follow as a matter of pathological certainty.

The gonococcus, by its invasion of the genital tract of women, causes such changes in its mucous sublayer that other fungi which are usually present as non-pathogenic become morbidly active, and then assume an activity distinct in life history from the gonococci. As an illustration, take the vulvovaginal glands. These are very frequently the seat of gonorrhœa in women. The stage is an active purulent one, followed by a mucous discharge of indefinite chronicity. When, however, such a gland is invaded by a pyogenous microorganism, an intensely purulent action at once takes place. When it is removed and examined, it is found that the pus inside the gland is caused by pyogenous staphylococci which have destroyed the gonorrhœal germs, have penetrated into the gland, and continued their invasion into the connective tissue surrounding it. Watson Chyne, in the *British Medical Journal*, gives about the same conclusion in suppurative adenitis in the inguinal gland as the result of a mixed infection.

In the genital tract, inflammatory processes, after gonorrhœal germs have invaded the cervical and uterine cavities, extend to the pelvic connective tissue and the peritonæum. The germs of gonorrhœa do not directly invade the lymph tracts and the connective tissue about the uterus and cause inflammation and exudation. "The territory of the gonococcus is fortunately limited to the superficial layers of the mucous membrane. Gonorrhœal para and parametritis cannot be explained by the action of the gonococci; there must, therefore, be another agent, which under the influence of the infection of the mucous membrane, passes into the parametric tissues and there causes disturbance. It is not very common for that exudation to break down into pus; if it does so the occurrence is due to a mixed infection" (Sinclair). Senn in his *Surgical Bacteriology* also quotes the foregoing extract approvingly. Bumm reaches the conclusion that "purulent parametritis with gonorrhœa of the cervix is due to a mixed infection with pyogenous bacteria; it is the analogue of the acute gonorrhœal bubo in the male, which likewise owes its origin to pyogenous germs."

Sinclair says, that the further the specific in-

fection moves upward from the cervix, the fewer are the admixtures with the associated pus producing germs. In infected uterine secretions few other bacteria are found, and they are scarcely ever found in the tube, as it appears that the associated germs are either left behind, or are exterminated. In the tubes, therefore, the activity of the specific germ is expended with the least possible adulteration with other pus producing agents. Here they cause inflammation of the mucous membrane, but do not invade the enveloping connective tissue. The gonorrhœal pus escapes into the peritonæum, where the process terminates in circumscribed adhesive inflammation which encloses the pus. A purulent pelvic cellulitis sac bursting into the abdominal cavity causes general peritonitis, "because it contains pyogenous streptococci which rapidly multiply in serous cavities. Specific pus cannot do this; its microbes do not find in the peritonæum conditions favorable to their increase. The pus, therefore, acts as an aseptic body, becomes incapsulated, and is finally absorbed" (Sinclair, Bumm).

If the gonorrhœal germ has such a limited power of tissue penetration; if its natural habitat is the mucous membrane; and if when it migrates into, or upon other tissues, its pathogenic activity is limited or destroyed, it has left part of the gonorrhœal mystery unsolved. In suppurative arthritis, in remote abscesses, and even in the blood current the gonorrhœal diplococcus has been found. How did it get there? May it not have been carried along in the wake of its associated germs like a shark with its attendant pilot fish? Here is a wide field yet unexplored now occupied by contending factions of bacteriologists. The surgeon, working at the bedside instead of in the laboratory, must in the absence of any authoritative guide select for himself such facts that the bacteriologist places before him as will most rationally make clear the clinical difficulties he may encounter.

I have always regarded the perimetritic abscess as of gonorrhœal origin. We cannot dispute Bumm's facts which are adhered to by such men as Senn and Sinclair. Here is a form of abscess that develops with alarming rapidity, becomes quickly circumscribed, and, in the old days before abdominal or vaginal section, I have seen scores of them self terminated by absorption. These are the pelvic conditions that may properly be called relapsing. Even after uterine tenderness and mobility are restored, from causes so slight as to escape notice, we may find a return of the adhesions, the old uterine lateral dis-

placement, and the lateral pelvic mass. It is different in the parametritic, the cellulitic abscess, or the abscess of the fossa. These are the ones that persist until they find an outlet to the surface, but when once evacuated and healed they never return. I have had the pus from this type of abscess examined and found free from gonorrhœal germs, except in two instances, in which organisms of a doubtful character were found. Abscesses of this type may supervene upon gonorrhœa. The lesion of the mucous membrane may offer a convenient channel for the mixed pyogenic organisms to invade the connective tissue structure of the pelvis. The disposition of this type of abscess to remain cured after evacuation, in contrast to the tendency of the perimetritic to recur, may be due to the fact that the tube offers such a lasting nidus for the specific germs that they may leak again and again into the pelvic cavity and cause the renewal of the inflammation.

The uterine displacements due to these pelvic conditions are quite uniform. They are lateral and directed away from the affected side. Strong anteversions, with the cervix high in the sacrum, and caused by posterior adhesion, are also quite frequent.

Cystitis is another form of mixed infection invited by an attack of gonorrhœa. Sinclair states that the specific cocci do not attack the bladder epithelium as they do that of the urethra and vagina and cause suppuration, but that other and associated germs produce this result.

In conclusion I believe I am within the limit of well established facts when I say that the germ of gonorrhœa is the most active morbid agent known. It possesses the malevolent traits of not only by itself causing destructive processes, but it has the power to develop into malignant activity germs, otherwise non-pathogenic, far more active in their power to inflict damage than the specific germ itself. If we measure this activity by the lasting disabilities both functional and physical that are caused, we see in this almost universally distributed disease a serious menace to the fertility and prosperity of the nation. One of the saddest conditions of all is the fact that it usually claims an innocent victim—a woman—who in her own person develops the diseased conditions that threaten the prosperity and well being of the community.

Accident to a Newark Physician.—Dr. Augustus V. Wendel, of Newark, was thrown from his sleigh on January 28th and sustained a fractured leg.

THE PRACTICAL VALUE OF LITTEN'S "DIAPHRAGM PHENOMENON" IN DIAGNOSIS.*

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In respect of terms used in designating this phenomenon, Litten's sign, Litten's phenomenon, Litten's diaphragm phenomenon, Litten's "shadow," and the "diaphragm shadow" have been employed. There is no special objection to any of these words except "shadow," which appears to be a distinct misnomer of the physiological process involved. As a good term, both brief and specific, I would venture to suggest *phrenic wave*, but the older expressions have probably come to stay.

The sign may be described as the visible descending and ascending wave associated with the respiratory movements of the diaphragm in the lower zone of the thorax. The excursion in normal adults is usually between 2 and 5 inches. The exact physiology has not been fully worked out. It seems reasonable that, for the rising wave at least, some function must be assigned to vacuum traction by the pulmonary margins, as well as to the diaphragm itself. It is not my present purpose, however, to study minutely the physiology of the sign.

As regards the history and literature of the sign, it appears to have been noticed some time ago as an occasional curiosity by Gerhardt (1), but M. Litten (2), in 1892, first called attention to its clinical value. Subsequent papers by him (3), notices in the textbooks of Cabot (4) and Sahli (5), a paper by A. Abrams (6), and a recent exhaustive study by Puglisi (7), have entirely confirmed and somewhat amplified Litten's views and have given the sign a permanent place. It is now beginning to be mentioned by lecturers in the colleges, and the oncoming generation of medical graduates who pass under my notice as students appear usually to have heard of it, though with a rather vague notion of what useful information it may be expected to convey.

To elicit the sign, Litten instructs (*l. c.*) that the patient should be on his back, knees toward a good daylight, head flat, lower limbs extended, and should be directed to take a deep breath. He mentions also that by lying on the belly the patient can sometimes breathe deeply enough to

show the wave in the lower posterior zone of the thorax. Later observers found a good artificial light (lamp, candle, electric bulb) as effective or nearly as effective as daylight, and that in favorable cases the wave may be noticed when the patient is standing or sitting as well as when lying down. Abrams (*l. c.*) states (for reasons difficult to understand) that coloring the thoracic wall yellow with alcoholic solution of gamboge or other convenient stain, accentuates the shadow; also that pinching up and tightening the skin over the area where the wave is expected to appear will do the same. The former expedient I have not tried; the latter is perhaps useful in so far as it startles the patient and makes his diaphragm contract more actively. To these suggestions I may add as the result of personal experience that the shadow is sometimes (not always) much plainer if the patient's head and knees be *not flat*, but raised as in palpating the abdomen, for the simple reason that the thoracic tissues, being thus relaxed to the greatest possible extent, yield more completely to the traction of the diaphragm. In fat or muscular subjects the gain from this suggestion is specially great. Cross lights only are objectionable; a straight light may fall in any direction if strong enough.

The percentage of occurrence of the sign in presumably healthy subjects more than four years old is variously given. Litten thinks it always present; Puglisi, in several hundred presumably normal cases, found it in 86 per cent. A damaging factor in such statistics is the fact that old pleuritic adhesions are unexpectedly present in numbers of patients presumed to be normal; this would probably raise the percentage of occurrence in health to 90 + per cent.

As to limitations in health, the patient must of course be intelligent, at least to the extent of knowing how to take a deep diaphragmatic breath. Thoracic breathing is often unaccompanied by contraction of the diaphragm, but if the inspiratory effort is great enough, the diaphragm will finally descend. When the patient is quite unable to move his diaphragm voluntarily, one may lay the fingers firmly along the lower edge of the liver on either side, make firm pressure upwards, and thus quite often *surprise* the diaphragm into a contraction.

Unless the sign is evident in tidal breathing, it will of course be absent in infants. As regards later ages, I have been able to get the sign as early as the third or fourth year in docile children, and in small babies it is quite often noticeable when the child is crying. From five years up it is easy to find, and continues to be readily

* Read before the Society of Internal Medicine, New York.

perceptible until the cartilages in advancing years begin to lose their elasticity. When calcification of the cartilages has distinctly begun, the wave is broken at the crossing of each rib and shows only in the soft tissues.

Narrow costal interspaces are unfavorable to a good wave, and if these are combined with calcified cartilages the wave will be recognized only with great difficulty.

It seems hardly needful to add that no one ought to confuse with a true wave the stationary traction on the ribs made by the insertions of the diaphragm, though Sahli gives much space to the distinction.

Pathologically, or at least abnormally, the sign is, like fremitus, (1) *increased*, (2) *diminished*, or (3) *absent*, always noting of course that these distinctions are relative.

(1) *Exaggeration* may be soon disposed of. It may be bilateral or unilateral. The former is noted in persons of large lung capacity (*pulmo excessivus* of German writers) and in some small chested persons who have a habit of specially marked diaphragmatic breathing. Unilateral exaggeration is, as a rule, a sign of diminished function of the opposite lung.

(2) *Diminution*.—This is to be expected constantly on both sides in asthma and emphysema; on one or both sides in pleurodynia and intercostal neuralgia, in early tuberculosis, in fibroid disease of the lung when not accompanied by extensive adhesive pleurisy; in hypertrophy of the heart or pericardial effusion, and in tumors of the mediastinum. Irregular pleural adhesions will also break the wave in various ways. In asthma and emphysema we may note that the wave is not only low along the thoracic outlet, but near the middle line in front will even run down over the costal margins a little way upon the epigastrium.

The most important condition denoted by unilateral diminution of the wave is early tuberculosis. This disease usually starts unilaterally, or is at least more marked in one apex, the other lung enlarging somewhat in compensation. I have seen but one early case of apical phthisis in the last four years (tubercle bacillus in the sputum) in which the wave on the affected side was not markedly less than on the other.

Bronchitis is also said (Puglisi) to lessen the excursion, though this statement I am not able to confirm.

(3) *Absence*.—The wave will usually be absent on the diseased side in advanced consolidation of the lung from whatever cause, in pleurisy with any kind of fluid effusion, in pneumothorax,

and in such rare conditions as spasm or paralysis of the diaphragm. Extensive adhesions abolish the wave, partial or disseminated adhesions modify without inhibiting it. Acute fibrinous pleurisy also inhibits the wave as a rule, but probably only because of the pain produced by taking a deep breath.

It would take needless time to mention the obvious abdominal causes which mechanically inhibit the wave; dropsy, tumors (specially ovarian tumors), and pregnancy after the seventh month, may be specially mentioned. Subdiaphragmatic abscess has been stated by Litten to leave the wave unaffected, thus giving a differential point in comparison with empyema.

My practical conclusions are as follows:

(1) To students in physiology, the phrenic wave is useful as a demonstration of the respiratory movements of the diaphragm.

(2) When unbroken and over 3 inches in extent on both sides, it is a good indication of healthy lungs, and should be incorporated as such into life insurance examinations.

(3) As an easy and practical substitute in many cases for the expensive and laborious x ray examination of the movements of the diaphragm, when such an examination is desired (Cabot).

(4) When diminished markedly on both sides, low down in the thorax, and more marked behind than in front, it is an excellent sign of asthma and emphysema.

(5) When absent or nearly absent on one side only, it is a useful confirmatory sign of a variety of conditions which may be suspected from other signs, particularly pleurisy and early tuberculosis.

(6) When absent on both sides no conclusion of any kind is really justifiable, unless the patient has been previously known to have had good waves.

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40 EAST FIFTY-EIGHTH STREET.

Railway Hospital for Petersburg, Va.—It is reported that a hospital is to be built for employees of the Seaboard Air Line Railway through the beneficence of Mrs. Thomas F. Ryan, and efforts are being made to secure a desirable site.

REPORT OF A CASE OF CEREBROSPINAL MENINGITIS, LUMBAR PUNCTURE, PURULENT CEREBROSPINAL FLUID, PERFECT RE- COVERY.*

By SIGMUND A. AGATSTON, M. D.,

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CASE.—The patient, F. A., was a boy 16 years of age. With the exception of having suffered from some of the diseases of childhood, he always enjoyed good health. Five weeks previous to his coming under my observation he was taken with chill, fever, headache, projectile vomiting, extreme drowsiness, and mild delirium. The drowsy condition persisted for twenty-four hours. After that, although he was up and around, the patient did not regain his normal state, but remained languid both mentally and physically. His appetite was poor; he complained of headache and a feeling of lassitude, and was described as having lost all ambition. He received treatment for malaria from the physician who attended him at the time. On May 28th he had been active up to a late hour. On May 29th, at 10 a. m., he complained of not feeling well, lay down, and fell into a state of stupor. He could be aroused only with difficulty, and answered questions incoherently. His pupils were normal and reacted slowly to light. Scattered over the trunk and both upper and lower extremities, there was a purpuric eruption. Pulse was 100, extremely feeble, and scarcely felt at the wrist; respiration normal; temperature, 104°. At 11 a. m., he had a severe chill, which lasted fifteen minutes. During this chill he had an attack of vomiting, which was of projectile character. He vomited all food and medication during the first twenty-four hours. At 5.30 p. m., pulse was 86 and temperature 103.6°; and at 8.30 p. m., pulse was 82, temperature 103°. The patient remained in a state of stupor all day, and toward night became very restless, incessantly tossing about, and moaning. On May 30th, at 2 a. m., pulse was 76, temperature 101.6°; and at 5 a. m., pulse 77, temperature 99.8°. The pulse was very irregular, intermittent, and feeble. Restlessness, and alternating delirium and stupor persisted all night. At 8 a. m., pulse was 88, temperature 99.6°; and at 11 a. m. pulse was 120, and temperature 100°. The patient developed orthotonos and showed the Kernig sign. Neither the Babinski symptom, nor that of McEwen was present. Toward evening of the second day, the pulse rose to 130, and the temperature to 101.4°. During the second night, the pulse became extremely feeble, scarcely felt, and ranging between 140 and 160. On May 31st, the third day of the disease, the condition remained about the same, the pulse improving somewhat after copious stimulation, and the temperature remaining at 101.4°, showing no remission. The blood count was taken, and the leucocytes were found to number 35,000 principally of the polynuclear type. Next in order was a lumbar puncture made by

Dr. Henry Heiman, whom I asked to see the case. Thirty-five c.c. of cerebrospinal fluid were drawn off. The fluid came out slowly by drops, and was thick with pus. Cultures of this, made by Dr. Heiman, showed a pure growth of the meningococci of Weichselbaum. At 7 p. m., two hours after the puncture, the pulse was 160 and the temperature 103.6°; and at midnight the temperature was 104.2°, showing considerable rise. The pulse was very rapid and of extremely poor quality all night. There were alternating delirium and stupor, and involuntary urination. Toward morning, the patient became quiet and his condition improved. The temperature was 101°; the pulse was of better quality, ranging between 120 and 130. The Kernig sign disappeared, and the back became less rigid. The patient was in a condition of mild stupor from which he could easily be aroused and made to answer questions. His condition continued to improve. On June 2nd, however, the patient developed a lobar pneumonia, and on June 7th an arthritis in one knee joint. These complications ran a regular course, the fever defervescing on June 9th. The symptoms from cerebral pressure never returned. The patient was convalescent by June 14th, and by the end of the month he was allowed to go out. His recovery was perfect, without any sequel whatsoever.

One of the interesting features of this case is, that according to the history, the patient either had a mild attack which was followed by a relapse five weeks later, or, as he did not recover entirely after what seemed a primary attack, he had what might perhaps be called a long prodromal period. This, while common in tuberculous meningitis, is unusual in the epidemic form, which most frequently has a sudden onset. The case may probably be placed in the same category with the atypical form described by Delafield, in which the symptoms are mild at first, resembling a walking typhoid or malaria, and after two weeks or more, the patient passes into a state of alternating delirium and stupor. These cases have been found by him to have a very high mortality.

The point of great interest, however, is, that the presence of a thickly purulent cerebrospinal fluid did not prevent an absolute recovery. According to statistics, the majority of the cases that recover are those with slightly turbid cerebrospinal fluid. When the fluid is markedly purulent, a recovery, and especially a perfect one, seems to be rare in consequence of the coexistent pathological conditions and the intensity of the toxæmia. Koplik states in his recent report, that he has been unable to save any of these cases. Nammack reports a case with purulent cerebrospinal fluid which recovered, seemingly, after treatment with ten per cent. lysol injection into

* Read before the Harlem Medical Association.

the spinal canal, the only sequel being a persistent sciatica.

50 WEST ONE HUNDRED AND TWELFTH STREET.

DRY GANGRENE FOLLOWING THE APPLICATION OF CARBOLIC ACID DRESSING COVERED WITH OILED SILK.

By VERTNER KENERSON, A. M., M. D.,

BUFFALO.

On October 16, 1904, an application of 1 to 50 carbolic acid on a light dressing was ordered for four hours for the purpose of aborting a felon, with instructions to remove the dressing as soon as the skin was blanched. The dressing was ordered about noon, and at five o'clock the finger was reported as blanched, but "prickling some." The solution was ordered to be diluted to 1 to 100.

At about this time the finger was seen by a friend who noticing the wet dressing offered to supply some oiled silk to keep the dressing from wetting the clothes. This was applied without consulting the doctor, and was left in situ over night. On October 17th the finger seemed numb, and although the finger was blanched, the dressing was still continued, and was still covered with the oiled silk. The patient telephoned that the finger felt "funny," and was told to come to the office at once. He came, and it was noticed that the finger was blanched and numb in sensation, but could feel pressure. The oiled silk was at once removed and a simple dry dressing put on, the nail of the finger having good color at this time. At six o'clock on October 17th the nail was black, the skin was dusky all over the part of the finger that had been covered with oiled silk, but the proximal joint was not so dusky as the tip and the second joint.

Return circulation was cared for as much as possible, by putting the finger in a warm poultice, and the circulation did return in the proximal joint to such an extent that the finger was saved to a point three fourths of an inch from the place where the string was tied about the oiled silk.

The circulation did not return at all in the distal joint, and dry gangrene followed, the skin all coming off and separation of the muscles occurring at the end of the eighth day. Amputation was performed October 27th, at the tip of the first phalangeal bone, cutting away the articular cartilage after disarticulating.

Carbolic acid is the best penetrating disinfectant in those infections that do not proceed from an open wound, as it has real penetrating power through unbroken skin, but it should never be covered with any material that will prevent evaporation, and should be applied only with a light dressing.

186 ALLEN STREET.

Gift to the Postgraduate School.—An anonymous gift of \$5,000 was made to this institution on January 27th.

THE NAUSEA OF SEASICKNESS.

By CHARLES W. HOGG,

S. S. *Arabic*, WHITE STAR LINE,

STATEROOM STEWARD.

After twenty-one years of practical experience in dealing with cases of seasickness, it gives me much pleasure to submit a few simple rules which the voyager will find of inestimable value both in shortening the duration of the attack and even in completely avoiding the malady.

The treatment should be begun at least forty-eight hours before sailing. The alimentary tract should be thoroughly cleansed by the use of suitable aperients, and the diet thereafter consist of very moderate quantities of plain and nutritious food.

Owing to the number of farewell dinners which the traveler frequently attends, this preparatory abstemiousness is seldom observed. This fact, together with the encouragement which the passenger receives from his belief that he is going to be seasick, accounts for a large proportion of the illnesses.

During the first twenty-four hours on shipboard the food should be simple, sparing in quantity, and liquids and fruits should be avoided.

Should a feeling of nausea develop, the subject should at once go to his berth and be perfectly still, seeing no one except those who are in attendance upon him, and talking to them as little as may be possible. Gruels, chicken, dry toast, and plain biscuit, or food which is equally light and digestible, should constitute the diet during the attack.

Since there is no known specific for seasickness, and since even the palliative effects of many of the remedies used are doubtful, the various "cure alls" advised by well meaning friends should be sedulously avoided. Complete rest is the safest and surest remedy.

As soon as the invalid begins to improve he should by all means spend an hour or two in the open air, even if able only to sit quietly in his deck chair, since the fresh air is of great benefit in expediting his recovery.

However hungry he now may be, the patient should still be abstemious in diet, but he may have a little champagne, which should be well iced, and which must be sipped very slowly.

Nothing is now better than plenty of exercise, such as walking, deck cricket, or any out of door game which will promote alimentation and help to restore the disordered system to its normal balance.

By following these directions, the traveler can usually escape any extreme degree of prostration and is frequently able to shorten the average week of discomfort to a period of forty-eight hours.

Correspondence.

LETTER FROM ALBANY.

(From a special correspondent.)

The Annual Meeting of the Medical Society of the State of New York.—Continued Work in the Attempt to Secure Union of the New York State Medical Association with the Society.—A Broader Basis of Membership Recommended.—Legislation During the Past Year.—The State Hospital for Incipient Tuberculosis.

ALBANY, N. Y., February 1, 1905.

The president of the Medical Society of the State of New York, in his inaugural address, in which he usually outlines the matters which he recommends for executive action by the society, dwelt especially on the necessity for reaffirmation of the resolution for the consolidation of the two State medical bodies. The reason for this lay in the fact that certain legal obstacles had arisen which had retarded the union. The committee appointed to act in the matter of union reported later, reiterating the need for some action along the line suggested in the president's address. They also gave notice of resisting the legal action brought to prevent the consolidation, and gave their reasons for this proceeding, and they intend taking further action on the matter at the special meeting, which will be held after the close of the annual meeting of the society. The recommendations of the committee were adopted by the society.

The president recognized the growing sentiment for a less exclusive plan of organization in the matter of membership and recommended that the delegate system, which had been the usage hitherto, be abolished and that eligibility to membership be based only on good standing in the county societies. Thus every member of a county society will become *ipso facto* a member of the State organization. The committee to whom this matter was referred recommended the adoption of a resolution embodying the president's suggestions, which was promptly presented and accepted by the society. This complete change in the method of membership was not hastily made, as a similar proposition is embodied in the resolution for consolidation with the State association, so that whatever may happen to the agreement for consolidation, whether success or failure, each member of a county society will be a member of that of the State also.

The Committee on Legislation reported that the only measure of interest related to acts enabling the two medical bodies of the State to unite, and these had been passed. There had been a marked diminution in the number of bills introduced affecting the medical profession, and every measure actively

supported by the profession had become a law, among them an act for the establishment of a standard of pure milk for cities. One of the bills opposed because of its tendency to undermine the present standard of medical education was the so called optometry bill, enabling all opticians to "refract" eyes, and creating a State board of examiners in optometry which was to pass upon the qualifications for fitness of applicants for registration. Many of the best men in the profession of medicine had fought for years to raise the standard of medical education high enough to keep out charlatanry, and it was felt that this bill was merely the opening wedge for a host of "pathies" which would follow in its wake. This bill was therefore vigorously opposed by the committee and failed of passage. The society at the present meeting adopted resolutions instructing the committee to oppose the bill which would again be introduced in the legislature at the present session.

The report of the superintendent of the State Hospital for Incipient Tuberculosis, at Raybrook, Dr. John H. Pryor, was appended to the report of the Committee on Hygiene. While, as Dr. Pryor says, the time has been too short since its establishment to show any very definite medical report, the results of treatment as shown by him are on their face very encouraging. Since the hospital was opened on July 1st, up to the end of the year 1904, there were admitted eighty-two patients, of whom eleven were discharged, three apparently recovered, the disease was arrested in one, four improved, and three did not. Of the sixty-six patients in the hospital December 31, 1904, there were nineteen who had apparently recovered, thirty-four in whom the disease was arrested, thirteen improved, and none was unimproved. The average length of stay of patients discharged as apparently recovered was 14.4 weeks, while the average length of stay in hospital of those remaining and regarded as apparently cured was 17.6 weeks. The average gain in weight of all patients from July 1st to December 31st was 1.5 pound. The greatest gain in any one patient was 6 pounds in one week. He speaks with much favor of the employment of expert examiners for the examination of applicants for admission and deplores the large number of cases which are still allowed to reach advanced progress before recognition, thus minimizing the chances of recovery. The tent camps have proved a great success and have been highly praised by many visitors. At the present time seventeen States are either building similar institutions or following the lead of New York State in establishing a hospital for the consumptive poor. He also approves of the means taken by the charitable organizations of cities of

large size, who are cooperating with the officials of the institution to secure outdoor employment for discharged patients. He further deprecates delay in sending a patient after examination has been made. A patient may be a very favorable one at the time of examination and a very unpromising one a month later.

On Tuesday evening Dr. Charles Harrington, secretary of the Massachusetts State Board of Health, addressed the society in the Senate Chamber.

LETTER FROM PARIS.

The Need of Preparation for Study in Paris.—Public Comfort Stations.—A Judicial View of Medical Fees.—Poisoned Ducks.—Priests in Medicine.

PARIS, January 20, 1905.

A perplexed American whom I met recently had only made the mistake that hundreds make in coming here to finish medicine without a knowledge of the first rules of the game. If one contemplates a year of study here, it is the part of wisdom to study French customs in advance, and to get advice of some who have gone before as to boarding houses, clubs, cafés, reading rooms, etc. The French mode of life is not to be adopted at a moment's notice, and of the American quarter the French students have but the vaguest ideas. There is abundance of material here at the hospitals—those wretched hospitals—but it is best to know the way about beforehand. I have met a student who was pleasantly surprised to hear, after he arrived here, that it was in Paris that the Salpêtrière was situated, and concerning the purposes of the Pasteur Institute he was decidedly hazy. A few letters of introduction will do no harm, and I have heard it said that a knowledge of the French tongue is apt to be of aid when conversing with a Frenchman. At the American Art Association, 74 rue Notre Dame des Champs, at Donald Downie's, 1 bis rue Scribe, and at the office of the *Paris Herald*, 49 avenue de l'Opéra, an American exile can get much comfort. But a proper preparation in advance is strongly to be advised.

An American friend writes of the eight "public comfort" stations that New York contemplates. There are here in Paris probably eight hundred. The need and the value of such stations are obvious. It is not the obvious need, however, that guides the Parisian health department, but rather the spectacular nature of the thing and the further fact that the little kiosques for the purpose are not eyesores, as might be sup-

posed, but have on the contrary a decorative effect—an important consideration in a "show" city.

To beautify the city, blocks of the slums will be torn down, but hardly will this be done where sanitation is the primary object. An action such as that of New York in tearing down the Mulberry Bend buildings would be a rarity. Familiarity with Parisian conditions almost forces me to think that humanity is a minus quantity, and while the big hospitals are doing great work, it is not humanity that underlies it. If there is a good to be done that is *bizarre*, or that the whole world can read about, it is done with a flourish. Anything connected with the government has a badge as big as a shield of Thor to blazon its purpose. But petition some official about the insanitary water closet in your hotel, and you might as well bay the moon. Ninety-nine out of a hundred water closets are probably worse. And if you are a Frenchman, what's the use of bothering about such pettiness? Don't you house your servants in leaky attics, feed them on scraps, arrange their hours of work so that no minute is left unoccupied, and pay them such a low wage that only one interpretation can be put on their finery? Fine folk who practise such refined cruelties can hardly be expected to care whether the ditch digger of the slums lives on the stale brains of the horse or not, and even if the fine folk have the degree medical they are not agitated by the fact that on one small block last year a hundred people died of consumption.

A French doctor has been adjudged extortionate, and the seventh chamber of the local tribunal has decreed that four hundred dollars is too much to charge for eighty visits. Said visits were made too frequently—"sometimes two a day." The nature of the illness did not justify such frequent visits or a fee higher than two dollars a visit. The complainant was an American!

Some months ago a large number of deaths were due to the eating of poisoned duck. But the duck is again in vogue, for the pleasant Loubet, in compliance with a petition from the game dealers, has included it again in the bill of fare of the palace.

When the Jesuits had their troubles, years ago, many of the proscribed ones took to medicine as a pursuit. Now that the congregation of the Propaganda has decided that a priest under some conditions may practise medicine, it is possible that a certain clerical element may enter into the schools again. This decision will be good news to the congregations that have been disbanded, and it is possible that science may profit by it.

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THE TONGUE IN TROPICAL ABSCESS OF THE LIVER.

A writer in the *Semaine médicale* for December 7th calls to mind the classical symptoms of acute hepatitis—jaundice of varying intensity; spontaneous pain in the right hypochondrium, sometimes dull and deep seated, at other times sharp and lancinating, radiating toward the epigastrium and the right shoulder, and much aggravated by pressure; an appreciable enlargement of the liver; localized œdema of the abdominal wall; and fever with loss of appetite, more or less vomiting, and occasionally hiccough. But this clinical picture, he remarks, is far from being always well defined. In fact, he says, there is not a single one of these signs and symptoms that may not be lacking; moreover, several of them are frequently absent. Then the diagnosis, especially at the outset, becomes obscure, and the obscurity is all the greater in subacute and chronic cases.

But the writer cites Dr. H. de Brun, professor of clinical medicine in the French faculty of medicine in Beyrut, as attaching pathognomonic significance to the condition of the tongue. The tongue in tropical abscess of the liver is, indeed, ordinarily described as dry, coated at the centre, and with a bright red margin. But this description is not sufficiently precise for M. de Brun.

The tongue, he says, is at first covered with a saburral coat, but it loses that, and then its edges become of a red color. Sometimes there is a third red stripe extending from the tip to the base in the median line. When this supplementary stripe is present, there is a striking appearance of the tongue with its three red rays converging to its tip. When the epithelium is shed—and the fall may take place sooner over one lateral half of the organ than over the other—the whole tongue becomes of a bright strawberry red. Doubtless much importance is to be attached to the observations of M. de Brun, but we fancy that few would thrust an aspirator needle into the liver on the strength of such an appearance of the tongue as he describes.

"CHLOROPALUDISM."

The French form of this word, *chloropaludisme*, is assigned by an Athenian physician, Dr. Sakorraphos, to a morbid condition that he thinks is very probably of malarial origin. In the January number of the *Revue de médecine* he gives the histories of five cases, and says that he has seen twice that number. They all occurred in persons between fifteen and twenty-five years of age. Most of these young persons had had intermittent fever in some rural district and had subsequently gone to live in Athens. It is stated concerning several of them that they had but few if any more febrile attacks after taking up their residence in that city, but became the subjects of the peculiar condition described.

Patients affected with "chloropaludism" are all pale, looking as if they had grave chlorosis or leucæmia, and they complain particularly of extreme weakness. On account of this weakness several of Dr. Sakorraphos's patients had to give up work, although they had gone to Athens in quest of employment. They had some enlargement of the liver and of the spleen, though the spleen was not so much enlarged as is commonly the case with persons who have long had malarial disease. There was extreme pallor of the skin, with decoloration of the visible mucous membranes. There were no enlarged lymphatic glands. In every instance the stomach was more or less dilated, and digestion was impaired. In no case was there any elevation of temperature.

The condition of the blood and the absence of cardiac signs and symptoms distinguished the condition sharply from simple chlorosis. There was no augmentation of the number of hæmatoblasts, and there was no disproportion between the amount of hæmoglobin and the number of red corpuscles. Moreover, there was no change in the shape of the corpuscles. There was always an increase of the number of lymphocytes, and this increase is held by the author to be indicative of past malarial disease. Nothing is said of the treatment employed.

"PROFESSIONAL" SYPHILIS.

Accidental inoculation with syphilis is an ever present danger with medical men. There seems to be a more or less current impression that syphilis following extragenital inoculation is exceptionally malignant, but at a recent meeting of the Berlin Medical Society (*Semaine médicale*, December 28th) Dr. Blaschko, who had observed twelve cases of such inoculation among physicians, combated the idea, suggesting that any apparent extraordinary malignancy in such cases was explained readily by the frequency with which the true nature of the initial lesion was overlooked for a time, so that appropriate treatment was not instituted early. On the other hand, it is not very uncommon for other lesions of the fingers to be mistaken for chancres, and in the discussion following the reading of Dr. Blaschko's paper instances of accidental vaccination of the fingers thus misinterpreted were mentioned.

The point was brought out that in operating on syphilitic subjects there was probably little if any danger of inoculation so long as the tissues operated on were not themselves the seat of syphilitic manifestations, the blood itself not being prone to convey the disease unless it gained access to the system of the recipient in considerable quantity, as was years ago maintained by the famous "anonymous surgeon of the Palatinate." Allusion was made, as it always is on such occasions, to the necessity of precautions as to the recognition of minute solutions of continuity of the skin of the fingers, as to the use of rubber coats and gloves, and as to the advisability of immediately cauterizing cuts and punctures of the fingers during operations, but nothing particularly new was mentioned.

We think it well to caution our readers against

too implicit reliance on the doctrine that syphilitic blood is not apt to convey the disease unless it gains access to the system in large quantity, and we do not advise trusting to the innocence of those tissues of a syphilitic that do not happen to be the seat of the peculiar manifestations of the disease. The only safety, it seems to us, lies in assuming that any patient may be syphilitic and that a syphilitic person is syphilitic throughout. Such an assumption can do no harm, and it may be the means of averting disaster.

EXPLORATORY ABDOMINAL SECTION.

There exist undoubtedly potent factors in the methods of practice and in the daily routine of a medical, as distinguished from a surgical, life which have caused the attacks which, from time to time, representatives of each cult have made upon the other and, to be more specific, which have led to the condemnation by medical men at various times, and notably recently, of exploratory abdominal section. Only when such a protest emanates from such a source as to be widely and deeply heeded need our position be defended, and it therefore seems to me that this is an appropriate opportunity. I believe, indeed, that this condemnation has been unfairly presented and that, moreover, there exists, upon grounds as old as the earliest history, a very potent reason why it should not be made at all by medical men unless they are ready to uphold equally sweeping condemnation of exactly similar proceedings upon the part of their own particular fraternity, and this whether or not one or both sides of the question are actually in need of any revision whatever, which latter point, to my mind, has never yet been clearly proved.

If there is aught which more than all else characterizes the work of the surgeon and distinguishes it from that of the medical man, in the strict, distinctive use of this latter term, it is the necessity for exactitude in his first, his working diagnosis, because of the absolute certainty that if he commits a diagnostic error, as his all-important therapeutics, his operation, follows this diagnosis often immediately, he will of necessity also commit a therapeutic error, and from the nature of his therapy this is an error which cannot be counteracted or undone, and which must, moreover, be immediately detected.

And such detection is rarely indeed confined to the surgeon and his personal assistants, but is, in the case of the specialist, shared by the physician who referred the case, by the nurses in attendance at the operation, and by the patient's family, because even though the surgeon might be found who would feel inclined, either through a natural chagrin or a less worthy motive, to conceal the error from these latter, the fact that the secret was shared by too many would prevent such a course. What, then, in a doubtful case is left but a choice between a passive watching of the inroads of a perhaps fatal malady and the exploratory section, which may be also used for therapeutic purposes once the diagnosis is thus correctly established?

But for a moment consider the other side of the question. The medical man goes his solitary round to visit his patients. One is encountered in whom the symptoms are such as to preclude the possibility of a definite diagnosis. His course is invariably to treat the symptoms while awaiting the development of additional factors which shall declare their cause unmistakably. Thus far the course of the physician and that of the surgeon have been identical, for certainly no surgeon advocates exploratory section in a case which can with safety be treated medically and symptomatically. But in the event of such declaration failing, with a steady sinking upon the part of the patient, in fact in the event of the arrival of the moment at which, in a surgical case, exploratory section would be indicated, what is the course of the medical man in a purely medical case? Consultation is advised, and, this resulting in a continued doubt, the treatment considered best for the most probable cause of the illness is instituted. Examples such as that of giving iodides in suspected, obscure syphilitic manifestations or quinine in similar malarial conditions are too familiar to need citation. But they are merely types of a large class. In comparative innocence these examples compare favorably with a well chosen, properly executed exploratory section. To state the case in another way, the medical man is making his form of exploratory therapeutics serve his diagnostic ends.

The cases in which this method of procedure is applicable may be dealt with in either of two ways. The physician may declare his doubt and his purpose, or he may allow those interested to believe

that the medicine is rationally indicated by a positive diagnosis, and none can be the wiser. To such "medical explorations" there are three possible terminations. The first is that the medical man, having, either to gratify the family or to hide his perhaps perfectly excusable doubt, given the disease a name, has declared a diagnosis in which he has not full faith. In watching the result of his "therapeutic exploration" the correct diagnosis becomes evident, the treatment is promptly adjusted, and all goes well, no one but the doctor himself ever suspecting that the original diagnosis was incorrect. The second eventuation is that of consultation and conjoint "therapeutic exploration," with or without a full statement of facts and with or without success. The third outcome possible is that of death resultant from a steady progress of an uncomprehended malady, generally in spite of and rarely because of the individual or conjoint "therapeutic exploration." But how, except in the items of the armamentarium, does this differ from the condemned exploratory abdominal section?

The existence of examples such as those above cited does not in any manner reflect upon those men, either medical or surgical, who frankly pursue the more dignified and open course, nor does it diminish the undoubted justifiability of either form of exploration in selected cases under correct circumstances. It is not my object to decry "therapeutic exploration" in such suitable cases, of which there are many, but simply to protest against its employment by the very men who deny our right to employ an exactly analogous resource in cases in which otherwise neither medical nor surgical means appear able to save the endangered life. My object is rather to hold up the mirror to those medical men, again in the restricted sense of the term, of note and fame who attack exploratory abdominal section and attribute to it a fictitiously high mortality, without also admitting that equal, if not greater, harm may be done by their "therapeutic exploration." In compiling statistics of mortality due to exploratory abdominal section the same error has been made by our confrères which is so constantly and unjustly made by the lay press, namely, that of confounding *post hoc* and *propter hoc*. The lay press invariably says that Mr. A. died as the result of a surgical operation, instead of having due regard to the use

of the English language and the truth and saying that Mr. A. died of his disease in spite of an operation undertaken for its cure.

Therefore our position is this: Cases that might perhaps otherwise end in recovery may very rarely be harmed or even fatally terminated by an exploratory abdominal section, but when compared with the number of cases in which the exploration results in a clear diagnosis, after which proper surgical therapeutics may be administered through this same incision and a life saved free from disease, they seem few indeed, and, though they were even greater in number, they would still be defensible. On the other hand, many cases of obscure disease steadily progress to a fatal issue in spite of an exploratory incision, their course being apparently in no wise affected by such incision. Neither of these postulates is, however, susceptible of absolute proof, because no man can forecast the duration of any human existence.

Medical men should, then, go over their own records and compile the statistics of those cases in which "therapeutic exploration" has been employed and tabulate them in parallel columns with their statistics of exploratory abdominal section, and give us both sides at a glance and let us all judge of their right to dictate or even criticise. But such figures must not be strictly personal on either side. If by such a method it still is found that either method is really wantonly destructive of life, either side will be ready to adopt safer methods if they are forthcoming, but in the mean time it appears that neither possesses the right to assail the other's use of methods the exact analogue of those constantly employed by those upon his own side of the question.

DANIEL H. CRAIG.

YEAST AS AN ADJUNCT IN THE TREATMENT OF PHLYCTÆNULAR CONJUNCTIVITIS.

It is a great mistake to take it for granted that a local morbid manifestation is amenable only to topical treatment. As an illustration of this fact we may mention the experience of Dr. E. Ginetous, of Bordeaux, in the internal use of yeast as an adjuvant in the treatment of phlyctænular conjunctivitis, cited in the *Semaine médicale* for January 18th. In the treatment of twenty-five cases he has found the cure indisputably hastened by the employment of yeast—a drachm in twenty-four hours in the case of adults, and half that quantity in children. In many instances the trou-

ble proved rebellious to local treatment alone, but at once began to yield when the internal administration of yeast was associated with it. The effect is explained on the theory that the affection is generally of staphylococcal origin.

MAJOR HODDER'S WORK IN THE DESTRUCTION OF MOSQUITOES.

It appears from a brochure recently issued by Major W. M. Hodder, of the Royal Engineers of the British Army, that very effective work has been accomplished under his direction in Santa Lucia in the suppression of mosquitoes in one of the West Indian islands. With the practical concord as to the part played by *Anopheles* and *Stegomyia* in the conveyance of disease that now exists, and virtually international cooperation in attempts to guard against their attacks, there ought soon to be accomplished a great deal in the way of permanently stamping out the diseases that are chiefly if not entirely propagated by those pests.

PRIVILEGES FOR HOSPITAL SHIPS.

A diplomatic conference called by the French government was recently held at the Hague and resulted in the appointment of a commission to prepare articles according certain privileges to hospital ships, especially that of exemption in time of war from charges in the ports of the signatory powers. Twenty-one such powers were represented, and others may become parties to the arrangement. It is to be regretted that, as we learn from the *Gazette médicale de Paris*, Great Britain's own maritime laws prevent her from taking part in the convention.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The ninety-ninth annual meeting of the society, held in Albany this week, dealt with an ample programme of scientific work and abundantly maintained the reputation of the organization as a representative of the profession of the State. In addition, all that was practicable was done toward bringing about the amalgamation of the New York State Medical Association with the society.

AN ASTOUNDING PIECE OF QUACKERY.

Last week the newspapers gave the particulars of the swindling of a man by a quack establishment in New York. Under the pretense of using a very expensive medicament, radium, the man was fleeced of thousands of dollars, though it appears that no radium was employed. Before the arrest of the chief perpetrator of this swindle the same newspapers had displayed his lying advertisements without any apparent hesitation.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 6th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, February 7th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, February 8th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, February 9th.—New York Academy of Medicine (Section in Pediatrics); New York Academy of Medicine (Section in Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, February 10th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, February 11th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. Matthias Lanckton Foster, to 616 Madison Avenue; telephone number, 1470 Plaza.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending January 28, 1905:

	January 28.		January 21.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	174	7	194	4
Diphtheria and croup.....	272	40	360	40
Scarlet fever.....	248	13	289	14
Smallpox	8	..	..	..
Chickenpox	174	..	179	..
Tuberculosis	389	167	404	153
Typhoid fever.....	41	14	50	12
Cerebrospinal meningitis.....	..	28	..	30
	1,306	269	1,476	253

Fire in a New York Hospital.—The chapel connected with the Misericordia Hospital in East Eighty-seventh Street, New York, was damaged by fire to the extent of \$5,000 on January 26th. The inmates of the hospital were removed to a distant wing, but they were at no time in danger.

Obituary Note.—Dr. Patrick J. McGrath, who acted as surgeon to one of Peary's arctic expeditions and who later served as an army surgeon in the Philippines, fell from the steps of his home

in East Thirty-fourth Street, New York, on January 28th, and died later of his injuries.

Mount Sinai Hospital.—The eighth annual reunion and dinner of the Associated Alumni of Mount Sinai Hospital was held at the Freundschaft Society on Wednesday evening, January 25th. The following officers were elected for the ensuing year: President, Dr. Fred. Mandelbaum; vice-president, Dr. Louis Houswirth; secretary, Dr. Leo B. Meyer; treasurer, Dr. Andrew Green Foord.

Bequest to Brooklyn Hospital.—The Brooklyn Hospital has just received from A. Victor Barnes and Harriet Barnes Newberry a gift of \$1,500 "to be used in any manner which seems advisable," in memory of their father, the late General Alfred Cutler Barnes. The hospital officers state that, in accordance with their custom in all cases of bequests they have added the Barnes gift to the permanent endowment funds.

E. R. Squibb & Sons, Incorporated.—The firm of E. R. Squibb & Sons, of Brooklyn, has been incorporated, and Mr. Theodore Weicher, formerly the senior partner in the firm of Merck & Co., has been elected president of the corporation. Dr. Edward H. Squibb and his brother, Mr. Charles F. Squibb, retain their interest in the firm, both being members of the board of directors, of which Dr. Squibb is chairman.

Dr. Cordelia A. Greene, aged 74 years, one of the oldest women physicians in the country, died in New York last week in spite of an operation. For nearly fifty years she had owned a sanitarium near Buffalo. Dr. Greene was a graduate of Western Reserve University and of the Woman's Medical College of Philadelphia, and was a member of the New York State, Wyoming County, and American Medical Associations. She was the daughter of Dr. Jabez Greene, of Clifton Springs and Castile, N. Y., famous years ago as a sanitarium physician.

Academy of Medicine.—A stated meeting will be held in Hosack Hall on Thursday, February 2nd, at 8.15 p. m. Order: The Hypodermic Use of Adrenalin Chloride in Asthmatic Attacks, by D. M. Kaplan, M. D.; Anæmia Due to Intestinal Parasites, by W. Gilman Thompson, M. D.; Cases of Anæmia Due to Intestinal Parasites, by Alfred Meyer, M. D., and W. P. Northrup, M. D. Discussion. The Limitations of the Value of Nitroglycerin as a Therapeutic Agent, by H. P. Loomis, M. D. Discussion. Charles F. Adams, M. D., assistant secretary, 104 West Seventy-third Street.

The section in surgery will meet on Friday, February 3rd, at 8.15 p. m. Order: Presentation of Patients; Chronic Osteomyelitis of Femur (two cases) Treated by Iodoform-wax Filling, by C. A. Elsberg, M. D.; Chronic Osteomyelitis of Ulna (two cases) Treated by Iodoform-wax Filling, by C. A. Elsberg, M. D.; Faciohypoglossal Anastomosis (two cases), by A. S. Taylor, M. D.; Keloid of Face, by H. P. Moseley, M. D.; Keloid of Anterior Thoracic Wall, by H. P. Moseley, M. D.; Keloid of Neck, by H. P. Moseley,

M. D.; Healed Keloid, by A. E. Gallant, M. D.; papers, On the Treatment of Chronic Osteomyelitis and of Chronic Bone Cavities by the Iodoform-wax Filling, by C. A. Elsberg, M. D.; discussion opened by Virgil P. Gibney, M. D.; Treatment of Keloid by the X Ray, by Henry Perkins Moseley, M. D.; discussion opened by Arthur L. Fisk, M. D.; The Present Status of Blood Examination in Surgical Diagnosis, by Frederic E. Sondern, M. D. Discussed by Dr. Joseph A. Blake, Dr. Francis H. Markoe, Dr. Edward Quintard, and Dr. Francis C. Wood. Presentation of new instruments: Special Instrument for Facio-hypoglossal Anastomosis, by A. S. Taylor, M. D. Samuel Lloyd, M. D., chairman; Warren S. Bickham, M. D., secretary, 10 East Fifty-eighth Street.

The section in pædiatrics will meet on Thursday, February 9th, at 8.15 p. m. Order: Presentation of Patients; Reports of cases: Syphilitic Pseudoparalysis, by Jacob Sobel, M. D.; paper, The Digestion of Caseins, and Its Relation to Certain Problems in Infant Feeding, by Thomas S. Southworth, M. D. Discussion by Dr. H. D. Chapin, Dr. W. Gilman Thompson, Dr. W. L. Carr, Dr. F. M. Crandall, Dr. C. G. Kerley, Dr. G. R. Pisek, and others. L. E. La Fetra, M. D., chairman; John Howland, M. D., secretary, 49 East Fifty-third Street.

The section in otology will meet on Thursday, February 9th, at 8.15 p. m. Order: Report of a Case of Double Mastoiditis with Extensive Involvement of the Zygomatic Cells, by W. P. Brandegee, M. D.; A Preliminary Report of a Case of Cholesteatomatous Disease, with Stenosis of the External Auditory Canal, Extensive Destruction of the Temporal Bone, and External Manifestations, by M. D. Lederman, M. D.; A Condensed Report of a Case of Streptococcic Otitis Media, Followed by Mastoiditis; Operation; General Septicæmia; Death, by C. G. Coakley, M. D.; A Report of a Case of Infective Sinus Thrombosis, Complicated by Meningitis; Lumbar Puncture and Subdural Irrigation, by J. D. Richards, M. D.; paper, Some Mooted Points in the Treatment of Protracted Cases of Acute Middle Ear Diseases and Their Complications, by Alfred Weiner, M. D. Emil Gruening, M. D., chairman; W. H. Haskin, M. D., secretary, 42 East Forty-first Street.

PHILADELPHIA.

Change of Address.—Dr. G. Hudson Makuen, to 1627 Walnut Street.

Sentenced for Criminal Abortion.—On January 25th, Mrs. Elizabeth Ashmead was sentenced to three years' imprisonment for performing a criminal operation, which resulted fatally.

Piano Recital for Jefferson Hospital.—Miss Adele aus der Ohe gave a piano recital in Witherpoon Hall on January 24th for the benefit of the Jefferson Maternity Department of the Hospital.

Northern Medical Association.—At the meeting of the Northern Medical Association, held January 27th, Dr. A. A. Eshner read a paper on

Epilepsy. The discussion was opened by Dr. W. E. Pickett.

Personal.—Dr. Francis M. Perkins was operated upon in the German Hospital on Sunday, January 15th, for appendicitis. Dr. Perkins's condition was satisfactory at the last report.

Dr. John H. Jopson has been elected visiting surgeon to the Presbyterian Hospital.

The board of trustees of the Medico-Chirurgical Hospital has promoted Miss Edith McPherson to be Superintendent of Nurses.

The West Philadelphia Medical Association was organized on January 14th with the following officers:

President, Dr. A. F. Targetts; vice-president, Dr. George C. Shammo; recording secretary, Dr. William D. Beacon; financial secretary, Dr. A. P. Good; treasurer, Dr. J. D. Brittingham; directors, Dr. J. H. McConnell, chairman, Dr. E. L. Graf, Dr. S. F. Gilpin, Dr. H. B. Smith, Dr. Frank B. Kirby, Dr. F. Mortimer Cleveland, Dr. F. R. Starkey, Dr. B. F. Wentz, Dr. A. P. Good, Dr. Charles E. Price, and Dr. J. D. Brittingham. The association will meet on the second Friday night of each month in Rittenhouse Hall, Fifty-third and Haverford Streets.

The Alumni Association of the Medico-Chirurgical College has elected the following officers:

President, Dr. William L. Shindel; secretary, Dr. Stillwell C. Burns; treasurer, Dr. Emanuel S. Gans; executive committee, Dr. W. Easterly Ashton, Dr. Albert E. Blackburn, Dr. Arthur C. Buckley, Dr. L. Napoleon Boston, Dr. Joseph A. Cramp, Dr. John Welsh Croskey, Dr. Morton P. Dickeson, Dr. John H. Egan, Dr. L. Webster Fox, Dr. Andrew Godfrey, Dr. Charles H. Gubbins, Dr. S. Leon Gans, Dr. A. Wiese Hammer, Dr. W. Frank Haehtlen, Dr. Harry Lowenburg, Dr. Francis Lammer, Dr. John A. McGlinn, Dr. John A. McKenna, Dr. George W. Pfromm, Dr. J. V. C. Roberts, Dr. Herbert J. Smith, Dr. John V. Shoemaker, Dr. M. P. Warmuth, Dr. John W. Wilkins, Dr. J. L. Widmyer.

Free Hospital for Poor Consumptives.—A bill to appropriate \$300,000 to the Free Hospital for Poor Consumptives at White Haven has been introduced into the State legislature by Representative Shern. Of this sum \$100,000 is for the maintenance of the sanatorium at White Haven; \$100,000 to assist in the erection and equipment of new buildings to increase the capacity to as near 300 beds as possible, and \$100,000 to assist in purchasing a site at a suitable location and in erecting buildings for the care of more advanced cases of tuberculosis than can be accommodated at White Haven.

Annual Meeting of the Managers of the Children's Hospital.—The forty-ninth annual meeting of the contributors and managers of the Children's Hospital was held on January 13th in the hospital. John Cadwalader, Jr., presided. The following were elected managers for three years: Richard Wood, Edward S. Sayres, Eckley B. Cox, Jr., William White, Jr., Emlen Hutchinson, and Clarence H. Clark. Dr. T. Hewson Bache was made director emeritus. Charles Platt was chosen president of the board of managers. The other officers elected were: Vice-president, Emlen Hutchinson; secretary, Edward S. Sayres, and treasurer, Charles W. Cushman.

Scientific Society Meetings for the Week Ending February 11, 1905.—Monday, February 6th, Philadelphia Academy of Surgery; Biological

and Microscopical Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, February 7th, Academy of Natural Sciences. Wednesday, February 8th, Philadelphia County Medical Society. Thursday, February 9th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, February 10th, Northern Medical Association; West Philadelphia Medical Association. Saturday, February 11th, West Philadelphia Branch, Philadelphia County Medical Society.

Wills's Hospital.—Realizing the importance of a society in which clinical workers in ophthalmology may be able to report their interesting daily cases and enjoy full and free individual discussion upon the same, and present theoretical and statistical papers upon ophthalmic subjects, Dr. Oliver, of Philadelphia, has recently organized the Association of Clinical Assistants of Wills's Hospital. Membership by ballot is open to all those who have been or are connected with one or more of the clinical services in Wills's Hospital for a period of not less than three months' time. Meetings are held at the hospital at 8.30 p. m. on the first and third Wednesdays of each month. All who are eligible are invited to attend and join.

The Health of the City.—During the week ending January 21, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	80	12
Scarlet fever.....	56	2
Chickenpox.....	94	0
Diphtheria.....	96	10
Cerebrospinal meningitis.....	1	0
Measles.....	12	1
Whooping cough.....	10	2
Tuberculosis of the lungs.....	35	62
Pneumonia.....	70	68
Erysipelas.....	12	4

The total death rate was 519, in an estimated population of 1,438,318, corresponding to an annual death rate of 18.76 per 1,000 population. The total infant mortality was 106; 93 under one year, and 13 between one and two years. There were 42 still births; 25 males and 17 females. The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 4; puerperal fever, 1; diarrhoea and enteritis under two years, 8. The weather was unusually mild and pleasant.

Appropriations Recommended for Charitable Institutions.—In the report of the State Board of Charities, which will be sent to the legislature during the first week in February, the State, partly State and private charitable institutions are recommended for appropriations aggregating \$9,406,923.75. The following are the amounts recommended for various Philadelphia hospitals: University Hospital, \$250,000; Jefferson Medical College Hospital, \$250,000; St. Timothy's Hospital, \$23,500; Kensington Hospital for Women, \$5,000; Philadelphia Polyclinic Hospital, \$65,000; Medico-Chirurgical Hospital, \$250,000; Rush Hospital for Consumptives, \$30,000; St. Mary's Hospital, \$8,500; St. Christopher's Hospital, \$15,000; Lying-in Charity Hospital, \$16,000; Ortho-

pædic Hospital, \$20,000; Maternity Hospital, \$6,000; Gynecean Hospital, \$25,000; Samaritan Hospital, \$40,000; German Hospital, \$30,000; Howard Hospital, \$5,000; West Philadelphia Hospital for Women, \$5,000; St. Joseph's Hospital, \$10,000; Wills's Eye Hospital, \$20,000; Frankford Hospital, \$50,000; Jewish Hospital, \$15,000; Frederick Douglas Hospital (colored), \$12,000; St. Agnes's Hospital, \$20,000; Women's Hospital, \$12,500; Western Temporary Home, \$3,500; Northern Home for the Friendless, \$12,500; Pennsylvania Children's Aid Society, \$30,000; Nazarene Home, \$7,500; Rosine Home, \$4,000; Friend's Home for Children, \$4,000; Philadelphia Working Home for Blind Men, \$35,000; Penn Asylum, \$5,000; Home for Infants, \$4,000; Union Home for Old Ladies, \$5,000; Home for Aged Veterans, \$15,000; Home for the Aged, \$4,000; Old Ladies' Home, \$6,000; Hayes Mechanics' Home, \$5,000; Evangelical Home, \$2,500; Philadelphia Protectory, \$15,000; Home for Incurables, \$25,000; House of Good Shepherd, \$8,000; Philadelphia Sanitarium Institution, \$5,000; St. Vincent's Home, \$2,500; Pennsylvania Anti-Cruelty Society, \$5,000.

The Influence of Filtered Water on Typhoid

Fever.—The following information concerning the influence of filtered water on the incidence of typhoid fever is obtained from the bulletin of the bureau of health for January 7, 1905. During the year 1904, the influence of pure water upon the occurrence of typhoid fever is conspicuously manifested in the twenty-first and twenty-second wards, which are supplied with filtered water from the Roxborough filtration plant, and a portion of the twenty-seventh ward, which is supplied from the Belmont plant. The population of the former district is about 100,000; of the latter, 47,000. The highest number of cases reported from the twenty-first and twenty-second wards in any one week was twelve (week ending August 26th). Up to and including the week ending December 24th, there were sixteen weeks in which two cases or less were reported. For the year, the occurrence of typhoid fever corresponds to a weekly average of 4.3 per 100,000 population. Filtered water has been supplied to a portion of the twenty-seventh ward for twenty-eight weeks and for fifteen of these weeks no case of typhoid fever was reported. The highest number of cases reported in a single week was three, in the week ending December 2nd. This corresponds to a weekly average of 1.4 per 100,000 population. During the same period the weekly average of cases per 100,000 for the entire city was 6. Between March 26th and May 14th the city experienced a serious epidemic of typhoid fever. During this time 2,291 new cases were reported, corresponding to a weekly average of 25.3 cases per 100,000 population. During the same period fifty-three cases were reported from the twenty-first and twenty-second wards; an approximate weekly average of 7.5 cases per 100,000 population. In other words, during a serious epidemic of typhoid fever in the city as a whole the case incidence in the district supplied with filtered water was 66 per cent. less than in the other parts

of the city. Many of the residents of these districts spent a part of each day in portions of the city supplied with raw water only. The twenty-seventh ward cannot be used in this comparison, because it was not supplied with filtered water at that time. The evidence at hand warrants the prediction that when the filtration plants are all completed and the entire city is supplied with filtered water, there will be a reduction of at least 80 per cent. in the occurrence of typhoid fever.

GENERAL.

Wesley Memorial Hospital, Atlanta, Ga.—Over \$30,000 was collected for this institution in the Methodist churches of Georgia on Christmas Day.

The Beth Israel Hospital, of Newark, N. J., is to erect a three story building, owing to the demands for more room. The hospital will then be able to accommodate fifty patients.

Wyoming County, N. Y., Medical Society.—The following officers have been elected: President, Dr. Z. J. Lusk, of Warsaw; vice-president, Dr. G. S. Skiff, of Gainesville; secretary and treasurer, Dr. L. H. Humphrey, of Silver Springs.

The Practitioners' Society of the Oranges, N. J., has elected these officers for 1905: President, Dr. Francis R. Lane, of East Orange; vice-president, Dr. D. Warren Poor, of Orange; secretary and treasurer, Dr. Edgar Siebert.

The Woodford County, Ky., Medical Society has elected officers for 1905 as follows: President, Dr. S. M. Worthington; vice-president, Dr. W. C. Parker; secretary and treasurer, Dr. W. C. McCauley.

Sixty-fifth Regiment of the N. G. S. N. Y., Buffalo.—The resignation of Dr. Frederick Carl Busch, assistant surgeon to this regiment, has been accepted, and Dr. Marshall Clinton succeeded him on January 24th.

Obituary Note.—Dr. H. B. McConnell, a prominent practitioner of Boston, aged 34 years, died on January 25th, in spite of an operation. He was a graduate of McGill and Trinity Universities, and was for several years house physician at the Massachusetts General Hospital.

Dr. Henry Boynton, well known as a surgeon in the Civil War, died at his home in Woodstock, Vt., on January 30th, aged 81 years. He was the author of several historical and biographical works.

To Enlarge the Craig Colony for Epileptics.—A bill has been introduced into the New York legislature, making an appropriation of \$90,000 for additional cottages for patients. The census of the colony at present exceeds 1,000, and there are more than 700 applicants on the waiting list who cannot be admitted on account of lack of room. If the amount asked for becomes available, buildings for 200 additional patients can be put up. The per capita cost of construction is fixed by law at not to exceed \$450. A new feature of the work at Sonyea that is about to be established is a special building for epileptic infants; children under five years of age. Such a structure should

find a useful place in a colony for epileptics like the one at Sonyea.

Statement of Mortality in Chicago for the Week ending January 28, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905, and of 1,932,315 for 1904:

	Jan. 28, 1905.	Jan. 21, 1905.	Jan. 30, 1904.
Total deaths, all causes.....	308	301	549
Annual death rate per 1,000.....	14.61	15.47	14.85
By sexes—			
Males.....	312	331	308
Females.....	246	260	241
By ages—			
Under 1 year.....	148	117	124
Between 1 and 5 years.....	45	55	36
Over 60 years.....	115	131	126
Important causes of death—			
Acute intestinal diseases.....	16	23	14
Apoplexy.....	12	19	13
Bright's disease.....	12	5	24
Bronchitis.....	15	18	40
Consumption.....	60	77	57
Cancer.....	16	19	19
Convulsions.....	12	9	14
Diphtheria.....	12	9	7
Heart diseases.....	36	37	56
Influenza.....	9	22	7
Measles.....	5	5	0
Nervous diseases.....	30	20	23
Pneumonia.....	96	120	121
Scarlet fever.....	0	3	3
Smallpox.....	0	1	1
Suicide.....	6	9	5
Typhoid fever.....	7	9	5
Violence (other than suicide).....	33	26	27
Whooping cough.....	3	2	0
All other causes.....	141	111	113

Happily the apprehensions entertained during December and the early part of the present month have not materialized, and the twenty-eight elapsed days of January show a death rate of only 13.43 per 1,000 of population. The mean January rate of the decade, 1895-1904, was 15.70, or 14.4 per cent. higher. These apprehensions were based on the epidemic prevalence of influenza and the deficiency of sunshine during the period. During December there was but 33 per cent. of possible sunshine, as against an average of 37 per cent. during the previous ten Decembers, and there has been only 34 per cent. this month, instead of the normal 42 per cent. of January sun. Sunshine is the most potent disinfectant and germ destroyer, and the cloudy, foggy weather would, it was feared, materially increase the prevalence and mortality of all the germ diseases. This has proved only measurably true, and the state of Chicago's health, as indicated by the declining death rate and the almost stationary hospital population, must be accounted satisfactory for the season of the year. The exception is in the pneumonia mortality. During November, the first month of the current pneumonia season, there were 260 deaths reported from this cause—a daily average of 8.6. In December there were 451 reported—a daily average of 14.5 and an increase of 40 per cent. During the 28 days of January there have been 459 pneumonia deaths—a daily average of 16.4 and an increase of 11.5 per cent. over the December rate.

The Pharmaceutical History of the Civil War.—The Committee on Historical Pharmacy of the American Pharmaceutical Association has undertaken to collate data bearing on the military and naval pharmacy of the civil war, and has issued an appeal for information from all who have any knowledge of this subject. All who are in a posi-

tion to furnish any information on the subject, or who can suggest possible sources of information, are requested to communicate with either one of the officers of the committee, as follows: Albert E. Ebert, chairman, 426 State Street, Chicago; Professor Edward Kremers, historian, University of Wisconsin, Madison, Wis.; or Caswell A. Mayo, secretary, 66 West Broadway, New York.

Trinity Hospital School for Nurses, Milwaukee.—Members of the graduating class of this institution are: Mary I. Anderson, of Sheboygan; Emily L. Buchen, of Cascade; Marion Carlton, of Avening, Ontario; Elma E. Carroll, of Northport; Minnie I. Currie, of Collingwood, Canada; Harriett Dunning, of Marinette; Emaline C. Eschenbach, of Abelmans; Grace Gorman, of La Crosse; Mabel Guinan, of Webster City, Ia.; Margaret M. Hartigan, of Lake Linden, Mich.; Sybilla Huber, of Richland Centre; Margaret R. Kelly, of Minneapolis; Mary A. McGivern, of Fond du Lac; Elizabeth M. Pattinson, of Merrill; and Mrs. Jennie A. Cromwell, of Kansas City, Mo.

Chautauqua County Medical Association.—The election of officers of this association took place on January 17th with the following result: President, Dr. V. D. Bozovsky, of Dunkirk; first vice-president, Dr. B. S. Sweetland, of Brocton; second vice-president, Dr. Morris N. Bemus, of Jamestown; secretary and treasurer, Dr. H. A. Eastman, of Jamestown, reelected; trustee, Dr. H. F. Hunt, of Dewittville, reelected. Fellows to the meeting of the New York State Medical Association at New York in October: Dr. William M. Bemus, of Jamestown; Dr. George F. Smith, of Sinclairville; and Dr. J. A. Weidman, of Dunkirk. Dr. E. M. Scofield was elected a member of the nominating committee of the fourth district branch of the State medical association, which meets at Rochester in May.

New York Legislature Bill Concerning Habitual Drunkenness.—A bill, framed by Magistrate Pool, was, on January 16th, introduced into the Albany legislature by Assemblyman McManus, of New York. The measure concerns the treatment of persons rendered mentally or physically incompetent by the excessive use of alcoholic liquors, opiates, or narcotics. It directs that New York shall provide a hospital and a competent staff of physicians to deal with such cases. It also directs that the mayor shall appoint three physicians to serve in the hospital, which is to be supported out of money collected for excise taxes. Commitment to this hospital is to be made on the sworn application of a father, mother, or some other relative or friend of the person affected, or by a city magistrate. The new hospital is designed to take the place of the present alcoholic ward at Bellevue Hospital.

Hennepin County, Minn., Medical Society.—The Hennepin County Medical Society held its annual meeting on January 9th. Officers for the ensuing year were elected as follows: President, Dr. D. O. Thomas; vice-president, Dr. A. B.

Cates; librarian, Dr. S. M. White; executive committee, Dr. C. H. Bradley, Dr. J. W. Bell, and Dr. George G. Eitel; board of censors, Dr. R. J. Hill, Dr. W. B. Pineo, Dr. J. C. Litzenberg, Dr. George D. Head, and Dr. J. D. Simpson; trustees, Dr. H. H. Kimball, Dr. Edwin Phillips, Dr. W. A. Hall, Dr. G. C. Barton, and Dr. R. J. Hill; delegates to State convention, Dr. A. W. Abbott, Dr. F. A. Dunsmoor, Dr. G. G. Eitel, Dr. D. O. Thomas, and Dr. A. B. Cates; alternates for the five delegates in the same order as above, Dr. J. W. Little, Dr. L. A. Nippert, Dr. C. G. Weston, Dr. H. B. Sweetser, and Dr. A. J. Murdock. Dr. F. A. Knights, the present secretary and treasurer, holds over.

Vaccination of School Children Sustained by Court of Appeals in New York State.—Opinion of the court:

"The appellant claims that vaccination does not tend to prevent smallpox, but tends to bring about other diseases, and that it does much harm with no good. It must be conceded that some laymen, both learned and unlearned, and some physicians of great skill and repute, do not believe that vaccination is a preventive of smallpox. The common belief, however, is that it has a decided tendency to prevent the spread of this fearful disease and to render it less dangerous to those who contract it. While not accepted by all, it is accepted by the mass of the people as well as by most members of the medical profession. It has been general in our State and in most civilized nations for generations. It is generally accepted in theory and generally applied in practice, both by the voluntary action of the people and in obedience to the command of law. Nearly every State in the Union has statutes to encourage or directly or indirectly to require vaccination, and this is true of most nations in Europe. It is required in nearly all the armies and navies of the world. Vaccination has been compulsory in England since 1854, and the last act upon the subject, passed in 1893, requires every child born in England to be vaccinated within six months of its birth. It is compulsory, or is aided, encouraged, and to some extent compelled in the other European nations. It is compulsory in but few States and cities in this country, but it is countenanced or promoted in substantially all, and statutes requiring children to be vaccinated in order to attend the public schools have generally been sustained by the courts.

The opinion further states, that a common belief like common knowledge may be acted on by the legislature and courts without proof, and the fact that it is not universal is not controlling, for there is scarcely any belief that is accepted by every one, and what the people believe is for the common welfare must be accepted as for the common welfare. "While we do not decide and cannot decide that vaccination is a preventive of smallpox, we take judicial notice that this is the common belief, of the people of the State, and with this fact as a foundation, we hold that the statute in question is a health law, enacted in a reasonable and proper exercise of the police power."

Meeting of the Michigan State Board of Health.—The State Board of Health met in the capitol, January 20, 1905. The members present were: Victor C. Vaughan, M. D., Honorable Henry A. Haigh, D. A. MacLachlan, M. D., Collins H. Johnston, M. D., and Henry B. Baker, M. D., secretary. Dr. Vaughan was elected president *pro tem*. After the auditing of bills and accounts and the disposal of other necessary routine work; Dr. Baker presented to the board an important written report as chairman of the Committee on the Relation of Preventable Sickness to Taxation. The facts arrived at in this compilation are believed to be valuable, both from a public health and from a practical standpoint. The information has been collected from clerks.

of counties and of local boards of health, and it is proposed to send in return to clerks, supervisors, and health officers the printed report, that the information supplied by them and thus combined may be made available for showing just what diseases cost localities the most money to restrict, and whether or not the gain to the State because of the restriction of certain diseases warrants the expenditure. The board directed that this report be printed for distribution, as indicated above. The members present having learned of the sudden death of the president of the board, Honorable Frank Wells, Dr. Vaughan spoke briefly of the very efficient work of the late president, in his connection with the State Board of Health and public health interests of the State, and mentioned the valuable services rendered the State through the loyal and devoted efforts of this good man. The other members present reiterated what had been said by Dr. Vaughan and each spoke in very high terms of their relations with Mr. Wells as a member of the board. Resolutions submitted by Mr. Haigh, chairman of the committee appointed for that purpose, were adopted by the board as follows:

Whereas, This board has learned with deep sorrow of the sudden and untimely death of Honorable Frank Wells, for 14 years a member of the board, and its president for twelve years; and

Whereas, The great services rendered to this board by Mr. Wells and through it to the people of the State of Michigan, in the advancement of sanitation and public health, call for deepest gratitude, and also for some expression of appreciation more worthy and extended than can be embodied in any formal resolution; therefore

Resolved, That the secretary of this board be instructed to prepare a suitable memorial of these services, setting forth their character and great value, and embodying the fact that during the latter years of his life, Mr. Wells devoted practically his entire time to the advancement of the public health interests of the State, and that he labored efficiently in season and out, and all without thought of compensation or reward, for the good of his fellow men.

Resolved, That such memorial be published in the next annual report of the board.

Resolved, That this board extend its sympathy and condolence to the family of the deceased, and that a copy of these resolutions be suitably inscribed and sent to them.

Resolved, That as a mark of respect this board attend the funeral of the deceased in a body.

Resolved, As a further mark of respect, that this board do now adjourn.

The State Board of Medical Examiners of Pennsylvania met at the Hotel Walton, Philadelphia, January 2, 1905, to compare the averages of those who had taken the examinations December 16 to 19, 1904. There were 126 applicants for licenses; of these 40 failed to attain the legal average, and one was held under advisement, owing to some defects in papers. H. S. McConnell, M. D., secretary. List of applicants who successfully passed the State board examinations in Philadelphia, December 16 to 19, 1904:

Alexander C. Abbott, 4229 Baltimore Avenue, Philadelphia, Pa.; Andrew Franklin Akers, Hollidaysburg, Blair County, Pa.; Emilio De Antonio, 346 Franklin Avenue, Scranton, Pa.; Raymond Barber, Samaritan Hospital, Philadelphia, Pa.; Bertram Alexander Beale, Driftwood, Cameron County, Pa.; Hyman Bernstein, Government Hospital for Insane, Washington, D. C.; Lewis Clyde Bixler, 206 Spring Garden Street, Easton, Pa.; George Henry Bolling, 6375 Amelia Street, Pittsburgh, Pa.; James Lenon Brennan, 27 Bennett Street, Williamsport, Pa.; Stod-

dard S. Burg, Northumberland, Pa.; Leslie Chamberlain, 32 Dearborn Street, Philadelphia, Pa.; Ralph Oakley Clock, 3422 Sansom Street, Philadelphia, Pa.; Thomas Nicholson Craig, Medico-Chirurgical Hospital, Philadelphia, Pa.; Omar T. Cruikshank, 2220 Woodstock Avenue, Swissvale, Pa.; George Aloysius Cunningham, 204 West Centre Street, Mahanoy City, Pa.; Beatrice Magdalene Curran, 824 South Forty-ninth Street, Philadelphia, Pa.; Edward Martin Dailey, 19 Hemlock Street, Danville, Pa.; Jonathan Raynor Day, West Finley, R. F. D. No. 75, Washington County, Pa.; Luther E. Evans, corner Broad and Centre Streets, Alton, Ohio; Mauricio Flores y Fernandez, 804 Ann Street, Homestead, Pa.; Harry Spaulding Fish, Waverly, Tioga County, Pa.; Wilbur Allen Foster, 533 South Main Street, Wilkes-Barre, Pa.; Samuel R. Fraker, Fort Littleton, Fulton County, Pa.; William Garretson, 1845 Forty-first Street, Philadelphia, Pa.; William Pounder Gillespie, Jr., 1725 North Twenty-ninth Street, Philadelphia, Pa.; Frank D. Glenn, 118 Fifth Avenue, Carnegie, Pa.; Lee McKluskie Goodman, Logantown, Clinton County, Pa.; John Odie Grove, Ligonier, Westmoreland County, Pa.; Jane Bruce Guignard, Twenty-second Street and North College Avenue, Philadelphia, Pa.; Katherine Sophia McKeon Hall, Woman's Medical College, Philadelphia, Pa.; Erle Goodfellow Hawman, 13 South Tenth Street, Reading, Pa.; Rena M. Heilman, Leechburg, Pa.; Louis Benjamin Heiner, 3207 Diamond Street, Philadelphia, Pa.; F. N. Henderson, Gynacean Hospital, 247 North Eighteenth Street, Philadelphia, Pa.; Bernard J. Henney, 419 Chestnut Street, Carnegie, Pa.; George Price Hill, Lansford, Carbon County, Pa.; Nathan H. Hornstine, 325 South Fifth Street, Philadelphia, Pa.; Clarence Willis Hotchkiss, R. F. D. No. 6, Conneautville, Pa.; Jacob Husik, 941 Christian Street, Philadelphia, Pa.; Alexander Spencer Kaufman, 3207 Diamond Street, Philadelphia, Pa.; Frank Keagy, 214 Sixth Avenue, Altoona, Pa.; Russell Henry King, 1327 Sheffield Street, Allegheny, Pa.; Harry E. Klase, 215 Water Street, Danville, Pa.; Florence Myrtle Kline, Leechburg, Armstrong County, Pa.; Harry Butler Knapp, 1809 Wallace Street, Philadelphia, Pa.; Nettie Evans Knapp, 1809 Wallace Street, Philadelphia, Pa.; Henry Adolph Laessle, 5900 Market Street, Philadelphia, Pa.; Harris Hamilton Lane, Pottsville Hospital, Pottsville, Pa.; Henry Cuthbert Lawton, 1706 Summer Street, Philadelphia, Pa.; Frank Alexander Lorenzo, Punxsutawney, Pa.; Eutimio Maselli, Dorset Hotel, E. E. Pittsburgh, Pa.; William J. Matthews, Johnson City, Washington County, Pa.; R. Fait McKenzie, 121 South Eighteenth Street, Philadelphia, Pa.; James J. McNulty, 2717 East York Street, Philadelphia, Pa.; Roy Clark Meals, 202 Lincoln Street, Oil City, Pa.; Herbert Paul Meyers, Markleysburg, Fayette County, Pa.; William C. Minnich, Bedford, Bedford County, Pa.; Rachel Tatnall Moon (under advisement), 4035 Parrish Street, Philadelphia, Pa.; Michael Joseph Noone, State Hospital, Scranton, Pa.; Thomas Edison Oggleve, Dickerson Run, Fayette County, Pa.; Walter Brown Orbin, 3745 Spruce Street, Philadelphia, Pa.; Charles Trumbo Pankhurst, corner Twenty-fourth and Sassafras Streets, Erie, Pa.; John Groh Philips, Onset, R. F. D., Lebanon County, Pa.; Julius Proper, 4370 Cresson Street, Manayunk, Pa.; Mazyck P. Ravenel, 908 Pine Street, Philadelphia, Pa.; Edwin R. Raymaley, Newlonsburg, Westmoreland County, Pa.; Daniel Schaeffer Regar, 123 North Sixteenth Street, Philadelphia, Pa.; Aba Reiss, 115 Pine Street, Philadelphia, Pa.; Jerome B. Rogers, Pottsville Hospital, Pottsville, Pa.; C. L. Santee, Wapwallopen, Luzerne County, Pa.; Arthur Philips Schaefer, 501 Avery Street, Allegheny, Pa.; Reuben Elmer Schall, Ford City, R. F. D. No. 1, Armstrong County, Pa.; Harry Budd Searles, Thompson, Susquehanna County, Pa.; Harry Abraham Shaffer, Williams-town, Dauphin County, Pa.; William Hamilton Shortt, Mercy Hospital, Pittsburgh, Pa.; William J. Steward, Delta, York County, Pa.; William Scott Tinney, Orthopaedic Hospital, Philadelphia, Pa.; George Trotter Tyler, 2114 Pine Street, Philadelphia, Pa.; Ralph Waldo Wakefield, 903 North Forty-first Street, Philadelphia, Pa.; Morris Weinberg, 501 Pine Street, Philadelphia, Pa.; Charles E. Wentz, 6602 Woodland Avenue, Philadelphia, Pa.; Frank R. Wheelock, 884 North Main Street, Scranton, Pa.; Edward Livingstone Whisler, Jollytown, Greene County, Pa.; Albert Woomer, Tamaqua, Schuylkill County, Pa.; Harry Jacob York, Warriorsmark, Pa.; George J. Youell, 2036 East Allegheny Avenue, Philadelphia, Pa.

Pith of Current Literature

PRESSE MEDICALE.

December 17, 1904.

1. Treatment of Cancer of the Tongue. By J. L. FAURE
2. Bacteriological Testing of Catgut, By HALLION and CARRION.

1. **Cancer of the Tongue.**—Faure prefers to divide the extirpation of cancer involving the tongue and the neighboring tissues in the neck into two operations, following the example of Poirier, in the hope of lessening the great mortality which follows attempts to remove all the diseased tissues at once. The first operation is performed wholly in the mouth, the second exclusively in the neck, to remove the glandular and other tissues involved.

2. **Bacteriological Testing of Catgut.**—Hallion and Carrion state that after cleansing catgut of the antiseptic substances used in sterilizing it by treating it two or three times with bouillon, a culture may finally be obtained; whence they conclude that there are living microbes in the catgut which are restrained from development by the presence of a bactericidal substance.

December 21, 1904.

1. Gigantism and Infantilism, By PH. PAGNIEZ.
2. Treatment of Nephritis by "Maceratio Renalina Porci," By MAURICE PAGÉ and DARDELIN.

1. **Gigantism and Infantilism.**—Pagniez in a review of a work on biological studies of giants by Launois and Roy defines gigantism as an anomaly of the growth of the skeleton which produces excessive stature as compared with the average size of his own race, and a morphological and functional lack of harmony characteristic of this morbid state. Infantilism he defines as an anomaly of development characterized by the persistence of morphological characteristics of infancy after the age of puberty. These two conditions can be united in one individual, as in one case described by Launois and Roy.

2. **Treatment of Nephritis by "Maceratio Renalina Porci."**—Pagé and Dardelin report remarkably good success in 18 cases from this treatment. A very fresh kidney from a pig is cut into minute pieces, washed with fresh water to remove the excess of urine, then hashed and pounded into pulp. This pulp is put into 300 grammes of fresh water, to which the physiological proportion of salt, 7.50 to 1000, has been added. It is then allowed to macerate for three hours, stirred occasionally and kept in a cool place to avoid fermentation. The red water of the maceration is divided into three parts to be drunk by the patient during the day.

December 24, 1904.

1. Surgical Treatment of Chronic Nephritis, By LE DENTU.
2. Œsophagosaltary and Œsophagolacrymal Reflexes, By PAUL CARNOT.

1. **Surgical Treatment of Chronic Nephritis.**—Le Dentu gives a brief historical account of the steps which led up to the present operation of de-

capsulization and finishes with extensive quotations from and praises of Dr. Edebohls.

2. **Œsophagolacrymal Reflex.**—Carnot adds to the Œsophagosaltary reflex recently described by Roger one which he calls the Œsophagolacrymal. Frequently the introduction of an Œsophageal sound will provoke an abundant secretion of tears which pour over the cheeks. The lacrymation is not proportionate to the pain, nor does it depend on emotion. It coincides with the salivary secretion and ceases with it, and is likewise due to the titillation of the Œsophagus.

December 28, 1904.

Treatment of Trichomycosis Circinata by the X Rays, By R. SABOURAUD and HENRI NOIRE.

Treatment of Ring Worm of the Scalp With the X Ray.—Sabouraud and Noire report excellent results from this mode of treatment. Among the results are increase in the number of cures without hospital treatment, lessened number of hospital cases, diminution of the length of hospital treatment, and the abandonment of special local provisions for such patients.

ZENTRALBLATT FUER GYNAKOLOG' E

December 17, 1904.

1. Uterine Trauma and Rupture of the Uterus in Pregnancy, By K. BAISCH.
2. Mesenteric Cysts, By W. HAAS.
3. Simple Ulcus Rotundum of the Vagina, By H. THOMSON.
4. Full Term Extrauterine Pregnancy Cured by Operation, By VON LINGEN.

1. **Rupture of the Uterus.**—Baisch reports a case of a woman whose uterus had been perforated by the finger during the removal of a placental polyp. Two years later the woman became pregnant again and in consequence of a placenta prævia, labor was induced. There was such a marked atony of the uterus that the organ was extirpated. At the site of the former perforation, there was a very thin scar which showed on microscopical examination an entire absence of muscular tissue. The author says that this condition accounts for many of the recently reported cases of uterine rupture during pregnancy.

4. **Full Term Extrauterine Pregnancy.**—Von Lingen describes the case of a thirty-seven year old multipara who was found to have a full term extrantrine pregnancy when her abdomen was opened. The fetus was dead, but the sac was uninjured and consisted of the tube which had the form of an hour glass. The peculiar form of the tube had led to a mistake in diagnosis. One part of it contained the placenta, the other the fetus and the umbilical cord. This was connected with the wall of the tube instead of with the placenta, as might have been expected.

December 24, 1904.

1. Audibility of the Heart Sounds in the Fourth and Fifth Months of Pregnancy, By O. SARWEY.
2. Treatment of Climacteric Hæmorrhages, By A. H. QUEISNER.

3. Colpeuryris and the Galvanic Current for Chronic Inversion of the Uterus. By J. VON JAWARSKI.
4. Antiseptic Details, By O. WILLE.

1. **Audibility of Fœtal Heart Sounds.**—Sarwey declares that he and Daederlein could distinctly hear the fœtal heart sounds in one case in the fifteenth week, and in another case, of twins, both hearts could be plainly heard in the sixth month immediately before delivery. After birth (in the latter case) the heart sounds could no longer be detected, although the heart was still beating. This the author ascribes to a change in the action of the heart induced by the birth.

2. **Hæmorrhages of the Menopause.**—Queisser reports two cases of obstinate hæmorrhage in the menopause which resisted all measures of treatment. He then drew the uterus down, split it, and sutured each split half to the incised vaginal mucous membrane. The mucosa of the uterus was then deeply burned with the Paquelin, and the hæmorrhages ceased.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 19, 1904.

1. Advantages and Disadvantages of Ficker's Method of Diagnosticating Typhoid Fever (*To be concluded*), By W. J. GÜTTLER.
2. Digalen, a Substitute for Digitalis Infusions, By E. BIBERGEIL.
3. Five Cases of Tumor of the Central Nervous System, By GRAEFFNER.
4. Hysterical Somnolence, By RÆCKE.
5. Hypochondria, By A. SCHOTT.
6. Psyche and Psychoses (*Concluded*), By P. KRONTHAL.
7. Syphilitic Inoculation of Horses. By PRORKOWSKI.
8. Prognosis and Treatment of Diabetes Mellitus, By DE LA CAMP.

2. **Digalen (Soluble Digitoxin).**—Bibergeil says that this remedy, used largely by Naunyn, allows of accurate dosage, is rapidly absorbed, and has a correspondingly rapid action. It does not upset the stomach as easily as an infusion of digitalis and does not have the cumulative effect of this preparation. It is best taken in vichy or sweet wine after meals in doses of one cubic centimetre.

3. **Tumors of the Central Nervous System.**—Graeffner describes five such cases, two of them cholesteatomatous formations, with descriptions of the autopsies.

4. **Hysterical Somnolence.**—Ræcke records twenty-three cases of this character, ten of which are ordinary cases of somnolence following hysterical attacks. Seven cases are described as those of lethargic attacks, and six are those of hysterical stupor long protracted with periods of delirium and general apathy. The differentiation of this condition from the status epilepticus is to be made in the free intervals and by the history, as well as by the condition of the pupillary and knee reflexes. The differentiation from catatonic stupor is more difficult.

5. **Hypochondria.**—Schott says this term includes many different diseases. It is to be re-

garded as a sign of degeneration and is frequently associated with neurasthenia and hysteria and some forms of insanity. Where hypochondriasis appears in connection with dementia præcox, it deserves an especially careful consideration. Severe hypochondriasis may lead to suicide or to self injury. All peripheral influences of injurious character must be guarded against. Medicines are rarely of value.

8. **Diabetes Mellitus.**—De la Camp regards alleged cures of diabetes as periods of latency. He divides the cases into three groups: the mild, the moderately severe, and the severe. The diabetes accompanying advanced age and that following organic lesions, he considers mild. He regards the albuminuria with hyaline and granular casts, seen in the severe cases, not as signs of nephritis, but as the expression of a chronic functional irritation of the kidneys. For the moderately severe cases, no definite prognosis can be given. The main purpose to be achieved in the treatment of diabetes is the attainment of an absence of sugar in the urine, although the tolerance by some patients of various articles of flour food must be taken into consideration.

RIFORMA MEDICA.

December 14, 1904.

1. Uric Acid in Transudates and Exudates, By FRANCESCO GALDI and GIULIO APPIANI.
2. Contribution to Our Knowledge of the Functions of the Pancreatic Cells (*To be continued*), By ETTORE SAVAGNONE.
3. The Behavior of Pancreatic and Hepatic Secretion in Animals Deprived of the Spleen, By E. GIROLAMO.
4. Anatomical and Experimental Research on Free Bodies in the Serous Cavities (*To be continued*), By LUIGI TOMELLINI.
5. The Spasmodic Syndrome in Infections and Intoxications, By R. MASSALONGO.

1. **Uric Acid in Transudates and Exudates.**—Galdi and Appiani report the following results obtained in investigating the uric acid contents of various effused fluids in the body: Uric acid is an ordinary constituent of effused fluids, and is derived for the most part from the nuclein of the corpuscles, cells, etc., contained in the effusions; it is present in larger amounts in exudates than in transudates. Among the exudates, those of tuberculous origin show the greatest amount of uric acid, provided the exudate is comparatively fresh. The amount in an effusion is usually proportionate to the specific gravity of the fluid in question, to the total amount of nitrogen, and to the amount of proteid material in the sample. In two cases of tuberculous meningitis there was a considerable amount of uric acid in the cerebrospinal fluid, but this fact cannot as yet be utilized because we have no data as to the amount in normal cerebrospinal fluid.

3. **Behavior of the Pancreas and the Liver in Animals Deprived of Spleen.**—Girolamo's researches proved that the pancreatic as well as the hepatic cells continued to functionate without change after the spleen of an animal had been re-

moved. This does not, to his mind, show that the spleen is devoid of influence upon the digestive glands. His researches merely show that the function of the spleen is, perhaps, not very important and that when the spleen has been removed, other structures in the economy take up its function of internal secretion.

5. Increased Tendon Reflexes in Infections.

—Massalongo takes the view that our ideas concerning the significance of increased tendon reflexes in diseases other than affections of the brain, the cord or the nerves, are in sad want of revision. He has paid special attention to the hypertenotonia of infections and intoxications of various kinds, and while making allowances for the individual equation in observations, he draws the following conclusions from his experience in this field: In acute infectious disease (his observations included only typhoid fever and pneumonia) the tendon reflexes are often increased. This is not seen, however, throughout the entire course of these affections and the occurrence of an epileptoid tremor is exceptional. The exaggeration of the reflexes usually is seen at the acme of the disease, and declines during convalescence. When this order is reversed and the reflexes are exaggerated during convalescence the disease is apt to assume a severe form and complications are apt to arise. There is no relation between the exaggeration of reflexes and the fever, and the former has no diagnostic significance whatever. Acute alcoholic, uræmic, and acetonaemic intoxications are followed by increased reflexes, an exception being the acetonaemia of diabetes. In about two thirds of all the cases of chronic affections of the liver and kidneys there are increased reflexes, and these are always associated with other evidences of toxæmia. In cardiac disease, exaggerated reflexes are more apt to be present in the arterial cases than in the endocardial, and in both types they are most apt to occur rather early in the disease. Increased reflexes are an important and often an early diagnostic sign of arteriosclerosis. The author regards this sign as an evidence of intoxication.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

November 27, 1904.

1. Abscess of the Liver, Opening Into the Lung. Importance of Radioscopic Diagnosis. Operation. Recovery. By CARLO QUADRONE.
2. Research on the Hæmolytic and Agglutinating Powers of the Blood Serum in Ankylostomiasis.

By DARIO ROMANI.

3. Contribution to the Study of Gastric Opothrapy, By UMBERTO BACCARANI.
4. Extremely Acute Tuberculous Infection and the Action of the Serum, By E. MARZAGALLI.

1. **Hepatic Abscess.**—Quadrone reports a case of abscess of the liver which ruptured into the lung. He emphasizes the fact that clinically this case resembled one of pulmonary tuberculosis and that the x rays were very useful in diagnosing the true condition of affairs. Exploratory punctures naturally cannot be employed in such deeply situated abscesses of the liver. After the abscess was localized by means of percussion, auscultation, and

the Röntgen rays, in this case, the patient was operated upon under cocaine anæsthesia. An incision 10 cm. in length was made from a point under the angle of the scapula to the paravertebral line, and the pleura was exposed and incised. Adhesions of a firm character were discovered between the lung and the diaphragm, and on separating these the abscess was reached. Proper drainage was established and the discharge soon ceased. The patient made a good recovery.

2. **The Blood in Ankylostomiasis.**—Romani's experiments showed that the blood serum of patients with ankylostomiasis did not possess the property of agglutinating blood cells any more markedly than normal blood serum. On the other hand, the corpuscles of patients with this disease were easily agglutinable. The serum of persons with ankylostomiasis was more markedly hæmolytic to the red cells of rabbits and hens, but not at all hæmolytic toward the red cells of healthy persons, or of persons with severe anæmia from other causes. The serum of persons suffering from ankylostomiasis was found to be markedly toxic, killing rabbits in a short time when small doses of it were injected. In non-fatal doses these injections produced illness and hæmoglobinuria.

3. **Opothrapy in Diseases of the Stomach.**—Baccarani recommends the use of natural gastric juice obtained from the hog in the treatment of gastric diseases of various types. He agrees with Von Noorden that only this natural gastric juice is able to supply the missing constituents in the gastric juice of diseased human stomachs in a perfectly natural manner. The cases of gastric disease which the author treated with more or less success by means of natural gastric juice included nervous and neurasthenic conditions, gastric atony, dilatation of the stomach, chronic gastritis, etc. The good results in neurasthenic gastritis, he thinks, were attributable to the fact that in this class of cases achylia gastrica is so frequently present. In atonic cases a few days' treatment, certainly a week's, showed marked improvement in almost all cases. The patient found that he could resume ordinary diet with impunity, and the gastric contents, when analyzed, showed marked improvements in the amount of free hydrochloric acid found. Patients with dilatation, with chronic gastritis, and with other forms of gastric disease with a distinct anatomical basis, did not show such a marked benefit from the use of natural gastric juice, but this is attributable to the fact that in this class of cases the functions of the gastric mucosa are very greatly impaired.

4. **Action of Antituberculosis Serum.**—Marzagalli, of Maragliano's institute, reports some experimental work which shows the action of the antituberculosis serum made by the Genoese clinician. He produced intense infections and toxæmia in guinea pigs by the intraperitoneal injection of live tubercle bacilli. The animals promptly died. In a second series of animals he injected antituberculosis serum with the bacilli and the toxæmia was arrested, a slow infection taking its place. Even if the bacilli had been injected in large amounts, the

serum sometimes succeeded in arresting the marasmus which followed in these guinea pigs.

December 25, 1904.

1. On Tuberculous Hyperglobulia, By C. TARCHETTI.
2. On Pneumococcus Arthritis, By LEONE SEGRE.
3. The Possibility of Tuberculous Infection Through Preserved Meat, By Dr. TONZIG.
4. On the Reducing Powers of Cerebrospinal Fluid, By A. TONELLO.

1. **Excess of Red Cells in the Blood of Consumptives.**—Tarchetti sharply criticises Mircoli on account of the latter's recent utterances as to the meaning of the excessively large numbers of red cells found in the blood of tuberculous subjects. Mircoli says that the fact that hyperglobulia is found in certain tuberculous persons accounts for the flushed face which often deceives the diagnostician in such patients. He seems to consider the excess of red cells as a favorable sign. Tarchetti calls attention to the fact that, in order to be really a good sign, an excess of red cells must be accompanied by a correspondingly high percentage of hæmoglobin. In tuberculous individuals who have over 5,200,000 red cells to the c.cm., however, the hæmoglobin is found usually very low. One of Mircoli's patients who had a high number of red cells was very pale, so that the theory advanced about the flushed face does not seem to be probable. The fact that the hyperglobulia described by Mircoli was only relative is proved by the observation that these patients for the most part had been subject to repeated hæmoptyses.

3. **Tuberculosis from Preserved Meats.**—Tonzig investigated the possibility of tuberculous infection from what he styles "bagged meats," i. e., sausages, etc., and other forms of meat which are enclosed in bags of animal membranes in the course of preparation. He thinks that *a priori*, the possibility of infection with tuberculosis from this class of meat products is greater than from other kinds of preserved meat, as the sausages of the market contain parts of the animal's body that ordinary meats do not, and thus are more apt to contain tuberculous glands, etc. Again, while the meat ordinarily bought is slaughtered in regularly inspected houses, that which goes into sausages is more apt to be slaughtered clandestinely. Thus the sources of sausage meats are notoriously uncontrollable. In order to determine the possibility of infection the author prepared some salami in which he incorporated the meat of a tuberculous animal, taking care to include portions affected with tuberculous lesions. The salami was prepared according to all the rules of the art, and was kept for a considerable time in order that it may resemble as closely as possible the products bought in the shops. With this he then inoculated two guinea pigs. He concludes from his experiments that infected salami is capable of producing tuberculosis in animals, but that the virulence of the bacillus of tuberculosis disappears in the sausage after a certain time, in this instance after five months, due, perhaps, to the salting and partly to the drying of the sausage.

ROUSSKY VRATCH.

December 18, 1904.

1. The Operation of Total Castration for Cancer in the Male, By V. V. MAXIMOFF.
 2. A Case of Infection of Unknown Origin, By A. M. KOTOVSHTCHIKOFF.
- (N. B.—This is the index number for 1904.)

1. **Emasculation for Cancer.**—Maximoff treats of the operation of "total emasculation" as suggested by Chalot in 1894. This operation consists of the removal of all the male external genitals including the roots of the corpora cavernosa, together with the enucleation of the inguinal glands on one or both sides. The term emasculation for this operation has since then been accepted among French surgeons. The operation itself is of ancient origin, having been used in antiquity in Greece, and in Rome in the sixteenth century in the castration of singers. It is still used to-day in the East in making eunuchs. The first attempt to perform this operation scientifically was made by Annandale in Edinburgh, in 1873, in a case of cancer of the genitals. Since then but few cases have been reported, until Chalot in 1892 described the technics of this operation in detail. The entire literature of the subject now embraces but twenty-three reported cases. The operation as yet has not gained popularity, and it is remarkable that no notice has been taken of it in the writings of German surgeons. The author reports two cases in which he performed total emasculation for cancer. He regards this method as the only suitable and perfectly rational one in those cases in which, not only the penis, but also the scrotum, the testes, etc., are involved in the cancerous process. The operation is not as dangerous as might appear at first sight, and among twenty-five cases thus far reported, there were only two deaths. As yet, however, the paucity of clinical material prevents a definite conclusion as to the dangers of this operation. The operation is well borne, even by patients in advanced years, and the wound heals without reaction with the formation of a linear scar. Maximoff, therefore, thinks that this operation should be employed more frequently than is the case now, in cases in which the simple amputation of the penis, in the nature of things, could not be hoped to accomplish much.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 28, 1905.

1. The Nature and Significance of Leucocytosis, By A. MANSFIELD HOLMES.
2. Chronic Arterial Hypertension, By HENRY WIREMAN COOK.
3. Therapeutic Value of Massage in Acute Diseases, By JAY W. SEAYER.
4. Report on the Progress of Actinotherapy During the Past Year, By WILLIAM S. GOTTHEIL.
5. The Dividing Line Between the Neuroses and the Psychoses, By RICHARD DEWEY.
6. Medical Practice in Siberia, By G. B. HASSIN.
7. Clinical and Histological Observations on Sympathetic Ophthalmia, By C. A. VEASEY.
8. The Genesis of Sympathetic Ophthalmitis, By SAMUEL THEORALD.

9. Operative Procedure on the Exciting and Sympathizing Eye in Cases of Sympathetic Ophthalmia, By JOHN E. WEEKS.
10. Fifty Consecutive Cases of Pneumonia Without a Death, By W. J. GALBRAITH.
11. The Most Ancient Medical Practice Laws. The Code of Hammurabi, 2200 B. C., By BAYARD HOLMES.
12. Immunity. Chapter I.

1. **Leucocytosis.**—Holmes asserts that the true significance of the various forms of leucocytes has not been determined. We very imperfectly understand the meaning of the varying percentages of the different forms of white cells. The author believes that it is fairly well established that the small lymphocytes are young cells, and that therefore the number of such young cells is an index of the resisting power of the patient. He has conducted a limited number of observations for the purpose of shedding light upon this subject. From these observations he concludes: (1) That poverty in small lymphocytes exists in connection with a great impairment in body nutrition and cell metabolism. (2) That this condition exists in typhoid fever, tuberculosis, and a variety of debilitated conditions. (3) That it cannot, therefore, be interpreted as being characteristic of any particular disease. (4) That whenever it exists it is always to be considered a potent factor when estimated in connection with the history of the case and the associated clinical symptoms. On the other hand, the lymphocytosis that so frequently accompanies a well marked convalescence, from a condition in which poverty of lymphocytes previously existed, would seem to indicate a condition of increased physiological activity, thus corroborating Virchow's theory of a nutritive and formative hyperacidity of a convalescent organism.

2. **Hypertension.**—Cook concludes: Chronic hypertension may be divided into 4 classes, according to ætiology: (a) arteriosclerotic; (b) cardiac, pulmonary, and cerebral compensatory; (c) toxic; (d) primary. The primary form of hypertension deserves recognition as a distinct disease. Early recognition of the tendency toward a progressive increase in pulse tension should prevent or delay the development of certain forms of cardiovascular and renal disease. In correcting hypertension sodium nitrite has many advantages over nitroglycerin.

5. **Neuroses and Psychoses.**—See this *Journal*, Vol. LXXX, page 89.

10. **Pneumonia.**—Galbraith believes that he has often been able to save life in pneumonia by the treatment he advocates. Two illustrative cases, which give the treatment in detail, are recorded. Quinine and the tincture of the chloride of iron are the "specifics." The iron is given in fifteen minim doses every three hours; the quinine according to the severity of the case. In the first case reported the patient received 90 grains of the drug in the first twenty-four hours, 40 grains in the second, and 45 grains in the third. In the second case the patient received 115 grains in two unequal doses in the first hour after his arrival at the hospital, and a total of 155 grains

in the first twenty-four hours. During resolution quinine must be used with care, as cinchonism may be produced by 5 to 10 grain doses.

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 26, 1905.

1. The Psycholeptic Crises, By Dr. PIERRE JANET.
2. Gastroenterostomy (a Preliminary Note), By JAMES G. MUMFORD.
3. The Prophylaxis of Syphilis, By WILLIAM G. MACDONALD.
4. The Ætiology of Pulmonary Tuberculosis Considered in Relation to Its Therapeutics, By LOUIS F. HIGH.
5. Points Pertaining to the Management of Diabetic and Non-Diabetic Glycosuria, By HEINRICH STERN.

1. **Psycholeptic Crises.**—Janet uses the term psycholeptic crises to denote a series of events which heretofore have not been looked upon as sufficiently well defined to constitute a definite condition. There are a number of patients who suffer from obsessions, impulses, manias of interrogation, tics, and phobias of different sorts in which such manifestations must be looked upon as symptoms of certain profounder disturbances of the feelings, the will, and the perception. If these mental troubles develop slowly and insidiously the author groups such patients under the generic term of psychasthenics. If, on the other hand, the symptoms appear rather stormily and reach a climax with considerable rapidity so that a veritable crisis is reached then such patients should be grouped by themselves and to the characteristic feature of their condition the author gives the name of psycholeptic crisis. A number of cases are reported which serve to make clear the author's views.

2. **Gastroenterostomy.**—Mumford advocates Chaput's operation with this difference: he advises cutting through the pylorus and suturing the cut ends.

3. **Syphilis.**—MacDonald holds that the true prophylaxis of syphilis must depend on education. Education of the infected as well as of the non-infected. The charitable people that support our hospitals should be made to understand that the treatment of acute venereal disease is of more far reaching good than the treatment of broken down syphilitics who have long passed the contagious stage.

4. **Tuberculosis.**—High holds that too much attention has been paid to the exciting cause of pulmonary tuberculosis, and too little to the predisposing factors which are the most important.

AMERICAN MEDICINE.

January 28, 1905.

1. The History and Development of Surgery During the Past Century (*To be continued*), By FREDERIC S. DENNIS.
2. Hepatic Abscess, By NORVELLE WALLACE SHARPE.
3. The Theory and Practice of Percentage Feeding in Infancy, By WILLIAM P. NORTHRUP.
4. Lobar Pneumonia in Infancy, By JOHN LOVETT MORSE.
5. Foreign Bodies in the Oesophagus, By CARL E. BLACK.
6. Strabismus and Its Treatment, By C. M. HARRIS.
7. The Health of the Nation, By WALTER WYMAN.

2. **Hepatic Abscess.**—Sharpe discusses hepatic abscess under the four heads: (1) History. (2) Distribution. (3) Frequency. (4) *Ætiology*. He summarizes his conclusions thus: (1) Hepatic abscess is a pathological condition that has been recognized for many centuries. (2) It is widespread in its occurrence. (3) The so called "tropic liver abscess" occurs most frequently in the hot countries. (4) Sporadic cases of tropic liver abscess are encountered as exotic manifestations in the temperate zones. (5) It is impossible to tabulate definitely a general ratio of frequency of occurrence. (6) Hepatic abscess is at times the result of trauma; usually, however, the result of invasion of the hepatic tissue by various forms of parasites, protozoa, and pyogenic organisms. (7) That form commonly known as "amebic abscess of the liver," is in reality not an abscess, but rather a necrosis and liquefaction of hepatic tissue. When pus is encountered, it is the result of contamination by pyogenic organisms.

4. **Lobar Pneumonia in Infancy.**—Morse describes what he believes to be the typical course of lobar pneumonia in infancy. His description differs somewhat from those usually given. The treatment he recommends follows: (1) In general, the treatment should be hygienic and supportive rather than medicinal. (2) Rest is essential. The patient should be kept in the open air if possible, if this cannot be done the bed should be placed near an open window. The diet must be weak enough not to overtax the sluggish digestion, yet forced feeding may have to be resorted to. (3) The chief therapeutic measures are: For stimulation, when needed, strychnine is best, at times alcohol is of service. For controlling the temperature the fan bath or the cold pack are better borne than sponge or tub baths. Bromides and codeine may be used for the restlessness and oxygen for the cyanosis. There are no specifics.

5. **Foreign Bodies in the *Œsophagus*.**—Black reports two cases of foreign bodies in the *œsophagus* (one a pin and the other a metal washer) in which the diagnosis was confirmed by means of the x ray. The author lays stress on the value of fluoroscopy during operations for the removal of foreign bodies.

6. **Strabismus.**—Harris lays stress on the fact that the fusion faculty is fully developed prior to the seventh year. Therefore if a complete cure of strabismus is desired the efforts to obtain it should be instituted before this period. However, improvement and even cure have occurred up to puberty so that hope should not be abandoned too early. The treatment of the condition necessarily depends on the cause of the strabismus.

MEDICAL NEWS.

January 28, 1905

1. Some Irregular Features of Lobar Pneumonia,
By CHARLES KNAPP LAW.
2. Excision of the Superior Cervical Ganglion of the
Sympathetic for Simple Glaucoma,
By COLMAN W. CUTLER.

3. Homicide by a Boy During a State of Somnambulistic
Automatism,
By T. M. T. McKENNAN and W. K. WALKER
4. Diagnosis of Diseases of the Upper Abdominal Region.
A Plea for Earlier Surgical Interference,
By C. D. HILL.
5. The Relation of Cholin to Epilepsy,
By JULIUS DONATH.
6. Ruptured Ectopic Pregnancy: with Reference to Cases
of the Acute Intraperitoneal Type,
By GROESBECK WALSH.

1. **Pneumonia.**—Law reports a few cases to illustrate some of the irregular features of lobar pneumonia. Attention is called to the following types of cases: (1) Pneumonia followed by pleurisy or empyema; (2) so called central pneumonia; (3) migratory pneumonia, and (4) pneumonia masked by referred pains.

2. **Sympathectomy in Glaucoma.**—Cutler asserts that before sympathectomy can be considered as an established method for the treatment of simple glaucoma, the two following questions must be answered: (1) Is the eye ever injured or the glaucoma aggravated by the operation? (2) Does sympathectomy offer a prospect of sufficiently prolonged relief to justify us in urging it in these desperate cases, either before or in place of iridectomy? The first question will probably eventually be answered in the negative. The objections that have so far been raised concerning the safety of sympathectomy are very inconclusive. The answer to the second question is more in doubt. On the whole, the author is of opinion that in a certain number of cases the excision of the cervical sympathetics is capable of doing good.

4. **Exploratory Laparotomy.**—Hill pleads for a more frequent resort to exploratory section in cases where the ordinary diagnostic methods of the internists fail to clear up and adequately explain abdominal and gastric symptoms. Four cases are reported in detail, which show how confusing and at times misleading certain symptom syndromes may be. Too often, if one waits for the diagnosis to be beyond doubt, the condition of the patient will not warrant surgical intervention.

5. **Cholin and Epilepsy.**—Donath believes that the convulsions of so called idiopathic epilepsy are due to cholin. In his paper he presents the facts on which his beliefs are based. They are of two kinds: (1) Those obtained from the study of the spinal fluid of patients suffering from brain and spinal cord lesions (sixty-four such cases were studied) and, (2) those obtained through experiments upon animals.

6. **Ectopic Pregnancy.**—Walsh wishes to emphasize but a single point, that is, that in operations for acute rupture of the sac of an extrauterine pregnancy no time should be wasted in attempting to remove the blood clots. They are sterile, and if left behind will help nourish the patient.

MEDICAL RECORD.

January 28, 1905.

1. Pathological Characters, Diagnosis, and Epidemiology of Bubonic Plague, By MARK JOHNSTON WHITE.
2. The Limitations of the Office Treatment of Rectal Diseases, By CHARLES B. KELSEY.
3. The Use and Abuse of Curettage of the Uterus, By E. K. BROWD.
4. Gluttony or "Food Poisoning" as a Cause of Symptomatic Epileptic Convulsions, By WILLIAM P. SPATLING.
5. Marked Mental Improvement Following Operation for Depressed Fracture of Skull, By B. VAN D. HEDGES.
6. Geheimrath Dr. Dettweiler. Eulogy Pronounced on the Occasion of the First Anniversary of His Death, By S. A. KNOPF.

1. **Plague.**—White has studied plague in California, Honolulu, and Hong Kong. His paper is formal in character and covers the chief points relating to the disease. Three types of plague are recognized: the lymphadenal, pneumonic, and septic. Each of these varieties is discussed in succession. Other points covered by the paper are: (1) Plague in insects, rats, and other animals; (2) clinical microscopy and cultures; (3) pathological diagnosis; (4) bacteriological diagnosis, and (5) epidemiology. The principal transmitters of infection from port to port are (1) imports likely to be eaten or infected by insects and rats; (2) persons, wearing apparel, and bedding; (3) scavenger, and possibly, granary insects; (4) rats and other animals.

2. **Rectal Diseases.**—Kelsey is not in favor of doing very extensive operations for the relief of rectal diseases in the office. It must be granted that many quite severe operations may be done painlessly under local anæsthesia, but subsequent shock and pain may be marked. In general, it may be said that local anæsthesia in no way reduces the gravity of a rectal operation and that the preparatory and after-treatment should be as thorough as in cases subjected to a general anæsthetic.

3. **Curettage of the Uterus.**—Browd attempts to define the kind of cases which are suitable for treatment by means of a uterine curettage. Experts disagree, so that the most general conclusion that can be drawn from the author's paper is that at times very serious injury follows the use of the curette and that therefore the operation should be looked upon as one to be done by the expert only. Four cases are reported which illustrate how much damage can be done through faulty judgment or defective technics.

4. **Gluttony and Epilepsy.**—Spatling within the past two years has had under observation some eighteen or twenty cases of symptomatic epileptic convulsions which occurred after gross overindulgence in eating and drinking. Such cases are usually amenable to treatment, provided the patient is able to control his vicious appetite. If he is not, he may develop into a confirmed epileptic of the so called habit type. The author is of the opinion that the cases to which he calls attention should be grouped alone, forming thus a distinct type of disease.

INTERNATIONAL JOURNAL OF SURGERY

January, 1905.

1. Practical Gynæcology, By SELLMAN.
2. The Relation of Deep Linear Strictures of Large Calibre to Disturbances of Micturition and Recurrent Posterior Urethral Inflammation, By LYDSTON.
3. The Essential Remedies in Emergency Surgery, By ABBOTT.
4. Practical Treatment of Diseases of the Eye, By COOKE.
5. The Mastoid Operation in Infants and Children, By JARECKY.

2. **The Relation of Deep Linear Strictures of Large Calibre to Disturbances of Micturition and Recurrent Posterior Urethral Inflammation.**—Lydston draws the following conclusions from his investigations and experience: 1. A relatively contracted or actually constricted condition of the membranous urethra, and of the bulbomembranous junction often exists in cases in which instruments of considerable size can be introduced into the bladder with more or less freedom. 2. This condition may cause recurring attacks of inflammation of the deep urethra and its annexa, including the prostate. 3. When instrumentation is painful, and there is spasmodic obstruction to the passage of instruments with subsequent inflammation, frequency of micturition, and chill and fever the condition described in this paper usually exists. 4. In the majority of cases of spasmodic stricture there is an organic foundation in the form of a narrowing, chronic inflammation, and hyperæsthesia of the membranous urethra. 5. A properly constructed bulb will demonstrate such strictures. 6. The severity of the resulting symptoms is usually out of proportion to the degree of contraction, the most intractable form of stricture in this location being one of large calibre located in the bulbomembranous junction. 7. The only satisfactory treatment is perineal section, with free division of all points of narrowing and complete dilatation of the deep urethra and vesical neck, followed by more or less prolonged rest and drainage.

BRITISH MEDICAL JOURNAL.

January 14, 1905.

1. Arteriosclerosis, By J. BARR.
2. The Effect of Salts of Potassium, Ammonium, and Bile Salts Upon Blood Pressure, By A. EDMUNDS.
3. The Sanatorium Treatment of Phthisis. Is It Worth While? By W. B. RANSOM.
4. The Influence of Rainy Winds, Soil, Poverty, and General Death Rate on the Phthisis Death Rate in Exeter, 1892 to 1901, By W. GORDON.
5. Results of Four Years' Sanatorium Work in the Treatment of Phthisis, By R. THURNAM and C. E. WHEELER.
6. Further Report on the Treatment of Phthisis by Iodoform Infusion, By T. W. DEWLE.
7. The Treatment of Hæmoptysis, By C. H. CATTLE.
8. Operative Methods—New and Old—in Tuberculosis of the Knee Joint, By SIR W. THOMSON.
9. Tuberculosis and Mortality in Childhood, By W. P. S. BRANSON.

1. **Arteriosclerosis.**—Barr, in the term arteriosclerosis, includes not merely the thickening of the small arteries and arterioles, but also the

atheroma and calcareous degeneration in the large arteries. It results from the presence in the blood of deleterious substances of varying nature: some increase the arterial tone by stimulating the unstriated muscle fibre directly, or indirectly through the nervous mechanism, while others have a depressor action. As an evidence of the presence of such bodies the author has found the freezing point of the blood lowered in all well marked cases of arteriosclerosis. Long continued straining of the arterial coats impairs the elasticity and nutrition of the vessels, and leads to chronic inflammation of the intima, with subendothelial cellular hyperplasia. This cell proliferation appears as white patches, which break down, leading to ulceration and aneurysm, or lime salts are deposited, leading to calcification. The arch of the aorta suffers most in this process. In smaller arteries, not subject to strain, there is hypertrophy of the muscular coat and subendothelial hyperplasia. It may be that there is an excess of adrenalin secreted in this case, leading to high tension and its evil results.

3, 4, 5, 6, 7, 8, 9. **Tuberculosis.**—Ransom discusses the sanatorium treatment of pulmonary tuberculosis, and the questions as to whether our expectations have been justified, and this costly movement worth the while. He concludes that in sanatoriums, as now managed, from one fourth to one third the patients regain their working capacity for at least four years, and that those who survive that period will live longer. Most of the relapses occur in the first two years after discharge. The earlier the patients are sent, the larger the number of recoveries. The home or out patient treatment of the consumptive poor is a failure: but undoubtedly a sequence of treatment in a hospital and a convalescent home does good.

Gordon has studied the effect of various influences on the phthisis death rate in Exeter and from statistics claims to show that in that city: 1. The streets whose roadways are swept by the prevalent rainy winds—S. W., W., N. W.—suffer more from phthisis than those whose roadways are sheltered. 2. The streets built on relatively impervious soil tend to suffer more than those on relatively pervious soil. 3. The streets inhabited by the poor suffer more than those inhabited by the well to do. 4. General death rate, apart from poverty, does not seem to affect the phthisis death rate. 5. Exposure to rainy wind exerts a greater influence than soil or poverty. 6. The influence of rainy wind appears to be direct upon the people exposed to it, not, as some have suggested, indirect, either through closure of doors or windows or through wet driven into walls.

Thurnam and Wheeler report the results obtained at the Sanatorium of Nordrach-upon-Mendip, where 289 cases of pulmonary tuberculosis have been treated within the past four years. *Severe* cases, 56 died within twelve months of beginning treatment: percentage, 30.6; 23 died within two years: 12.7; 30 were followed for two years, and then lost sight of; 39 are in fair health, but are unable to do any heavy work; per cent., 21.3; 35 patients are in enjoyment of

normal health and at work; per cent. (cured) 19.1. *Moderately Severe.* 84 cases in all: 5.8 per cent. died within two years: 22.6 per cent. alive, but lost sight of: 13 per cent. in fair health: 58.3 per cent. cured. *Slight.* 22 cases in all. None dead: 4.5 per cent. alive two years after: 4.5 per cent. in fair health: 90.9 per cent. cured. The above figures emphasize the desirability of early treatment. The total percentage of cures was 35.9.

Dewar gives further results obtained with his method of treatment of pulmonary tuberculosis by means of the intravenous injection of iodoform dissolved in ether. He now adds 40 per cent. of liquid paraffin to the solution, making it less irritating to the veins. Nine illustrative cases are cited, in all of which improvement took place, five of the cases showing arrest of the disease. All the cases were severe.

Cattle says that even in the mildest cases of hæmoptysis the patient should be placed at rest in bed. For an ordinary hæmorrhage of moderate amount, a quarter of a grain of morphine should be given hypodermically: the only exception is where the bleeding is so profuse as to suffocate the patient, and here he should be encouraged to cough up the blood. Only syncope can stop the bleeding in such cases. Free purgation by means of salines is a useful measure, but should be omitted in severe cases. Calcium chloride in twenty grain doses is said to increase the coagulability of the blood and thus check bleeding. An icebag to the chest is rarely required. Adrenalin should not be given: it does constrict the blood vessels, but also brings about a greatly increased blood pressure. The inhalation of nitrite of amyl is a much more rational plan of treatment.

Thomson reviews the old and new operative methods of treatment of tuberculosis of the knee joint, and holds that the elder procedure, excision, is still to be preferred. It is definite, comparatively short in treatment, very free from serious after complications and quickly restores a patient to active life. Erosion is not definite, after-treatment is long, complications are always imminent and frequently develop, the patient is not speedily restored to active life, and, lastly, when the surgeon ceases to look for a movable joint, the whole position is surrendered to excision.

Branson has studied the influence of tuberculosis on mortality in childhood, and concludes as follows: 1. That among poor children in London tuberculosis is absolutely most fatal during the first two years of life, but, relatively to all other causes of death, becomes progressively more fatal until the fourth year. 2. That there is no specific relation between measles and whooping cough on the one hand and tuberculosis on the other. 3. That catarrhal lesions of mucous membranes are the paramount predisposing causes of tuberculosis in early life, and measles and whooping cough are potent in this regard only through the catarrhs accompanying them. 4. That about fifty per cent. of children dying of tuberculosis in childhood have had neither measles nor whooping

cough. 5. That while the infection of tuberculosis in childhood is mostly air borne, primary infection of the abdomen is by no means a rarity.

LANCET

January 14, 1905.

1. Emergencies in Ophthalmic Practice. By M. RAMSAY.
2. The X Ray Treatment of Leucæmia. Report of a Case with Abstract of the Literature.
By J. C. G. LEDINGHAM and R. G. MCKERRON.
3. The Influence of Rainy Winds on Phthisis (*Continued*).
By W. GORDON.
4. Some Clinical Observations with New Remedies.
By N. TIRARD.
By D. BLAIE.
5. Hæmorrhagic Typhoid Fever.
6. Injuries to the Eye by Penetrating Foreign Bodies and the Results After Magnet Operations.
By L. BUCHANAN.

1. **Ophthalmic Emergencies.**—Ramsay offers some points of guidance in the commoner emergencies in ophthalmic practice. When a wound implicates the margin of the eyelid the edges must be brought accurately together, in order to prevent inversion of cilia and scratching the cornea with the movements of the lids. In wounds of the inner canthus there is a risk that the tear passages be wounded, and closed up by the subsequent cicatrization, and the patient suffer from persistent watery eye. In extensive lacerations of the eyelids, always make sure that the globe itself is not implicated. Observance of this precaution will often prevent infection of the globe and loss of the eye. The swelling, hæmorrhage, and pain may be so great as to necessitate the use of an anæsthetic. In eye injuries the pain and distress are often in inverse proportion to the gravity of the injury. In such cases the application of two per cent. cocaine solution permits of examination, and appropriate treatment. Burns are the most disastrous of all injuries to the conjunctiva, especially those due to chemical irritants, and the prognosis must be very guarded. Symblepharon will certainly occur in every case where the retrotarsal fold of conjunctiva has been destroyed. After the eye has been burned, it should be irrigated thoroughly with any bland fluid, and then a few drops of cocaine in castor oil instilled. An iced compress should then be applied, and kept on for at least twelve hours. Leeches and morphine may be required to relieve the pain. Contusion of the eyeball leads to subconjunctival or intraocular hæmorrhage. Unless there is structural damage, the dimness of vision due to shock soon disappears. In intraocular hæmorrhage sight is always interfered with. Atropine should be instilled, and iced compresses applied. An ophthalmoscopic examination should be made as soon as possible in order to determine the extent of the structural damage. Subconjunctival hæmorrhage sometimes follows whooping cough in children. When the bones at the inner side of the canthus are fractured, emphysema of the eyelids may occur, with epistaxis. Here a firmly applied bandage is essential. If there is total loss of sight the optic nerve has probably been injured. Sudden permanent blindness without a history of injury is usually the re-

sult of embolism of the central artery of the retina, but it must not be confused with the dim vision of glaucoma or the transitory blindness of migraine. Glaucoma comes on suddenly with intense pain and inflammation of the eyes, but these symptoms may be temporarily masked by a so called "bilious" attack. If there is any complaint of swelling of the eyeballs the globes should be palpated to ascertain if the ocular tension is increased. A dilated pupil, a shallow anterior chamber, and a stony hard eyeball, are absolutely characteristic. Atropine must never be used. Instead, instil eserine, apply leeches to the temples, and fomentations to the eyes. If the pain is not relieved in a few hours, the tension may be reduced by opening the eyeball at the corneal angle. And finally it may be necessary to perform iridectomy.

2. **Leucæmia.**—Ledingham and McKerron report a case of splenomyelogenous leucæmia in a boy aged 11 years. The spleen was enormously enlarged, and the leucocytes numbered 234,000 per cubic millimetre. Arsenic was tried, but could not be borne. He remained under observation for a year and a half with little or no change. Following the suggestion of Senn treatment with the x rays was then begun, the rays being applied over the splenic tumor and the lower epiphyses of the femora. The exposures lasted about ten minutes, and were given every other day. No disagreeable sensations were complained of. In six weeks the leucocyte count came down gradually from 222,000 per cubic millimetre to 23,000, after which time it oscillated around 30,000. The red cells varied greatly, a count of over 5,000,000 being noted several times. The myelocytic leucocytes showed no tendency to disappear, and the blood picture in stained specimens remained abnormal. The splenic tumor became softer and diminished in size, and the patient's weight increased materially. The authors have analyzed the literature of the treatment of leucæmia by x rays and find that with one or two exceptions, all the cases of myelogenous leucæmia have been greatly benefited, both objectively and subjectively. In the later stages of fibrosis of a splenic tumor, but little decrease in size can be expected. It is suggested that the x rays act by destroying the lecithin of the leucocytes and thus cause their death.

3. **Rainy Winds in Phthisis.**—Gordon, having shown in the first part of his article that rainy winds have an extremely deleterious effect on the course and prevalence of phthisis, here considers the relative strength of the other influences known or supposed to affect phthisis, as follows: Soil, altitude, temperature, dry winds, especially when dusty, rainfall, density of population, insantiation, poverty, occupation, race, preventive measures, other forms of tubercle, other respiratory diseases, and malaria. And he concludes from statistics and other lines of reasoning that exposure to rainy winds has a greater effect in increasing the phthisis death rate than any other influences, except those of extreme difference of race and injurious occupation.

Letters to the Editor.

THE COLLEGE OF MEDICINE OF THE UNIVERSITY OF NEBRASKA.

LINCOLN, NEB., January 20, 1905.

To the Editor,

Sir: My attention has only just been called to one item in the report on the Curricula of American Medical Colleges, printed in your issues of July 23 and 30, 1904. In the College of Medicine of the University of Nebraska 780 hours are not devoted to orthopædic surgery. This represents the time devoted to general and orthopædic surgery together. As the record in the report passes an unmerited criticism upon our curriculum, I beg you will give the correction the same prominence which was accorded to this report.

HENRY B. WARD.

MEDICAL MEN AND PATENTS.

103 STATE STREET,

CHICAGO, January 20, 1905.

To the Editor,

Sir: My attention was recently called to Dr. Lydston's admirable editorial entitled *Should the Physician Patent His Ideas?* which appeared in your issue of September 3, 1904. I fully indorse the several claims and deductions set forth therein, but wish to call attention to one point of importance which the writer omitted.

To my mind one of the strongest arguments in favor of the patenting of surgical instruments is that the inventor may so control instruments of his design that defective and inferior patterns will not be made and sold under his name and without his consent. At present it is the custom for each manufacturer to turn out such new instrument as he desires without consulting the inventor thereof, and frequently without being first provided with a correct model, and, in fact, he may even introduce some modification of his own. In this way there is often a material difference found between the productions of different instrument makers when their respective patterns of some one given instrument are compared, and the changes from the original are most often disadvantageous, and may destroy some of the most important and salient features of the instrument, so that it could not be used with satisfaction by the inventor himself. Hence the sale of such defective products may reflect discredit upon him, and also constitute an injustice to the innocent purchaser. I have frequently seen instruments purporting to be of my design, and sold under my name, which did not possess the essential characteristics of the original, and which I could not myself employ with any degree of satisfaction.

At present the first maker of a new instrument asks for it at the start a much higher price than it will command at a later date, for he wants to be reimbursed for the extra cost of the first lot before competitors copy it and thus reduce the price, which may eventually, through competition, be made so low as not to warrant good

workmanship. In this way the first purchasers are charged too high a price, while the greater number of later purchasers will get an article of inferior grade. My nasal speculum, which has been extensively sold, is a good example to illustrate this state of affairs.

On the other hand, if surgical instruments were patented the reputation of the inventor would not suffer by defective styles of his instruments being sold, as each instrument would be made by only one manufacturer, whose aim would be to have it furnished correct in all ways, and as he would for several years, during the life of the patent, control such instrument, he would be willing to assume the extra expense incurred in the making of the first lot, so a fair price would from the start be adopted, thus granting early purchasers the advantage of the fixed price, and guaranteeing subsequent purchasers an instrument of correct pattern. Furthermore, in the case of a delicate instrument where such care is desirable, each lot turned out could be inspected by the inventor. In this way the interests of the profession would be benefited, and for these reasons, as well as for the several other reasons cited by Dr. Lydston, it should not be considered unethical to patent instruments.

There is, though, unfortunately another and commercial reason why this plan cannot be generally followed, and that is owing to the comparatively great expense required in the taking out of a patent, which, including attorney's fees, approximates \$75, and this is a much greater sum than the prospective sales of a large majority of new instruments would warrant.

EDWIN PYNCHON.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of November 23, 1904.

The President, Dr. ROLAND G. CURTIN, in the chair.

Skigraph of an Old Ununited Fracture of the Scaphoid Bone, Illustrating the Value of the X Ray in the Diagnosis of Such Fractures.—Dr. L. J. HAMMOND reported the following case: A young medical student had consulted him for a condition of pain in his right wrist, from which he had been suffering for more than two years. There was no tenderness or any visible sign of inflammation, and it was only when the wrist was abducted that the pain was intense. The condition had been variously diagnosed as rheumatism, sprain, tuberculous periostitis, and tenonitis. Treatment for these various conditions had given no relief. The x ray revealed a fracture of the scaphoid bone, the fragments of which were united by a very loose fibrous connection. The interposed fibrous tissue was removed and the fragments of bone were wired together. Perfect apposition of the fragments was secured and they were held together by two small silver wire sutures. There was perfect restoration of all the wrist movements with entire absence of pain.

An interesting point was the fact that, while the patient recalled having fallen with the hand outstretched and abducted, no immediate symptoms of pain, swelling, or ecchymosis were sufficiently pronounced to demand surgical aid. Dr. Hammond said that experience in the surgical out patient departments of city hospitals showed the frequency of unrecognized fractures of the bones of the wrist and ankle joints. The only treatment was to secure bony union, which could only be done by securing perfect apposition, either by wiring or any other of the mechanical means for this purpose. He believed wiring to be by far the most reliable procedure.

Dr. CHARLES LESTER LEONARD referred to the obscure character of these fractures, which could be demonstrated in no other way than by the x ray.

Dr. HAMMOND agreed with Dr. Leonard that fractures like that in his case were not rare, and were sure to be overlooked and the condition treated as a sprain or some constitutional fault. The object of the paper was to show that fracture in this type of case should be thought of and a diagnosis made by means of the x ray.

Typhoid Fever in Philadelphia.—Dr. RANDOLPH FAIRES, in the consideration of this subject, said that typhoid fever did not exist in Philadelphia to such an alarming extent as the general public had been given to believe. The apparently large proportion of the disease in the city he attributed to three conditions: Errors in diagnosis, cases contracted elsewhere, and duplicate cases. He enumerated sixteen diseases which might be mistaken for typhoid fever. No case should be reported to the board of health as typhoid fever unless a Widal reaction had been taken and in addition the urine, feces, and catarrhal secretions examined. Special care should be taken in examining the liver and spleen, and in noting the course of the temperature, the nature of the pulse, and the amount and kind of stupor, as well as the nervous symptoms present. Stress should be laid upon the rose spots, and a blood count should be made. With the municipal improvements of cleaner streets, better surface drainage and perfect deep drainage, the abolition of cesspools, houses constructed with better scientific ventilation, careful disinfection of everything whereby typhoid might be transmitted, and extreme vigilance on the part of the health authorities in reference to impure milk, adulterated foods, impure water, and a constant instruction to the general public in reference to those foods by which typhoid was often conveyed, such as raw oysters, lettuce, overripe and unclean fruits, etc., it was reasonable to suppose there would come a time when very few cases of typhoid fever, if any, would exist in Philadelphia.

Dr. EDWARD MARTIN, director of the Bureau of Public Health, observed that statistics showed a certain amount of transfer of typhoid fever from one case to another, and that the reason for reporting the cases, so far as the public health was concerned, was to prevent this direct transfer and to take precautions against a local epidemic. In most of the cases of typhoid in the well to do the community was properly protected, but in the cases

seen by the corps of assistants to the Bureau of Health the importance of a report was very great. The bureau had rather have a report of a case which was not typhoid, and look it up, than to have the case unreported, with a possible spread of the contagion. The question of the disinfection of the dejecta he regarded as a difficult one, and thought we should not be indifferent to the people who got water below our pollutions. In the walking cases the urinary secretions might remain for a week a prolific source of infection. The Bureau of Health had made a statistical study of wells and cesspools, and had been astonished to find upward of one hundred in such juxtaposition that the water must be infected. He regarded the water supply as the main source of infection, and felt that Philadelphia would still be a typhoid cursed city until it had a filtered water supply.

Dr. FAIRES said that many of the cases were reported too quickly, but that the remedy was difficult, since the assistant inspectors of the health department were not allowed to interfere with the family physician. It was therefore manifestly the duty of the family physician to be especially careful in his diagnosis. While it was possible to ascertain the exact number of cases outside of the city, and the duplicate cases, it was not possible to estimate the cases of error in diagnosis.

Trachoma Successfully Treated With the X Ray.—Dr. W. S. NEWCOMET and Dr. J. P. KRALL reported this case and exhibited the patient, who was a girl of eighteen. She had been subjected to all the operations for the cure of the condition, but without success. Treatment was begun in July, 1903, and continued until the first of the year. The inflammatory reaction was so intense that it was thought better to abandon the treatment. Later, however, it was found that she could count fingers at close range. The cornea of the eye that had been treated was entirely clear and only with special illumination could there be seen fine blood vessels. The eye not treated with the x ray showed all the symptoms that the treated eye had formerly exhibited. The condition had been present since infancy, and the girl had been unable to see across a room. Treatment was given every other day for five minutes for about six weeks, when the burn developed and treatment was withheld. The result, Dr. Newcomet believed, was due to the accidental burn produced in the course of treatment.

Dr. JAY F. SCHAMBERG referred to a case of trachoma seen in the Polyclinic Hospital, less pronounced than the case exhibited in the vascular injection of the cornea, but having a tremendous growth of vegetative excrescences upon the conjunctivæ. The man had received about twenty treatments. The growths had almost entirely disappeared in both eyes, and the conjunctivæ were fast approaching a normal condition. In technique, the eye was exposed by means of a clamp, the upper lid was everted, and the clamps were held by weights.

Dr. GEORGE E. PFAHLER referred to the paper of Dr. Mayo, of London, and his results in treatment of trachoma by the x ray, and especially to the value of the method in clearing up the cornea. He did not understand that any burns had been

produced in the cases of Dr. Mayo. The face at first was covered with a mask, but later no precaution was taken. The tube, a soft one, was placed at about nine inches from the patient, and the treatments were from three to five minutes in length. Personally, Dr. Pfahler had had no experience with the method.

Dr. LEONARD regarded the case as of much interest, both from the aspect of the ophthalmologist and from that of the x ray worker. The condition still present in one eye, which had been symptomatically cured in the other, he thought showed a marked illustration of the possibilities of the x ray in chronic conditions about the eye. The value of the method, he believed, depended, not upon the production of a burn, but upon a specific action of the x ray upon the autolytic ferments contained within the cells themselves. The x ray, he stated, was not a cure-all, but an agency which assisted Nature by stimulating to action the elements contained within the cells.

Dr. M. K. KASSABIAN agreed with Dr. Leonard regarding the stimulating and irritating action of the x rays upon the tissues, but believed, further, that there was a germicidal or inhibitory action upon the germ. In technique, he covered the Crookes tube with a dark cloth and darkened the room, preventing injury to the patient from the light, because of the excessive photophobia. He attached the everted eyelids by adhesive plaster to the forehead. He had had four cases in the Philadelphia Hospital, two acute and two chronic. In the acute cases there had been severe photophobia and lacrymation, and they were improved after four or five exposures.

Dr. NEWCOMET said that he had been impressed, when in London, with what might be called the carelessness with which the cases there were treated; one half of the men used little or no protection in the treatment, and one man used only wet gauze. Dr. Newcomet used a shield, and as much as possible avoided handling the eyes.

Dr. KRALL agreed with Dr. Leonard in regarding the effect of treatment as due to the stimulation of some of the ferments, and not to a germicidal action.

Meeting of December 28, 1904.

The First Vice-President, Dr. B. FRANKLIN STAHL, in the chair.

Food Preservatives and Food Adulteration.—Dr. H. W. WILEY, chief of the Bureau of Chemistry of the United States Department of Agriculture (by invitation), read a paper on this subject. He said that the necessity of preserving food in some way had been recognized since man emerged from his savage state. The development of the science of chemistry had placed in the hands of the manufacturer the means of preserving food before unknown and the means of matching foods in tints and colors. He believed that the education of the public in regard to artificial coloring of foods was quite as effective as legislation. After the 2nd of February, he said, the food law would require that all food products entering this country artificially colored should bear a label so stating. The material for coloring need not be declared, except in the one case

of sulphate of copper. His advice to food makers was to cease using colors, and especially if the coloring was under suspicion of any kind. Concerning antiseptics in relation to foods, he thought the rights of the consumer were paramount. He believed that there never should be antiseptic admitted to foods, except when absolutely necessary, unless the consumer ordered it for himself. There was, he thought, a legitimate use of sulphurous acid, as employed in the fumigation of dried fruits and the burning of the sulphur match in wine barrels, which method had come down from antiquity, but when it was used, as at the present time, in enormous excess for preserving a poor wine and putting on the market a new wine before it was ripened, he declared its use to be unpardonable. He believed that the application of the principle of honesty would cover all the needs of a food law. Were Dr. Wiley to write a food law, it would require that every food product be marked and be exactly what it was said to be.

Defects in Pennsylvania Food Legislation.—WILLIAM W. SMITHERS, ESQ. (by invitation), read a paper with this title. He said that the laws upon this subject now being enforced in Pennsylvania were not the expression of the wishes of the people, and that they resulted in unnecessary interference with manufacturers and merchants. He advocated the repeal of the act of 1895 and the enactment of laws based upon the preservation of health and protection against fraud. In conclusion, he stated his belief that the office of Dairy and Food Commissioner was unconstitutional, the existing food statutes were imperfect and open to many just complaints, and every effort should be made to secure reasonable and adequate legislation upon this important subject.

The Evaluation of Evidence as to the Pharmacological Action of Food Preservatives.—Dr. THOMAS LUTHER COLEY, in this paper, stated that as an economic principle it was apparent that a nation of eighty million people could not be fed from the farm to the table or from the local abattoir to the table, and there arose the complex problem of transportation of food in an edible condition. The use of chemical preservatives therefore had become a necessity. Dr. Coley went over the grounds upon which these were used and reviewed the chief objections against their use. The dangers arising from reputedly prepared food to which preservatives had been added were as nothing in comparison with the dangers from foods that had undergone putrefactive changes. A problem of such importance should be settled by medical men, and not in courts of law with a lay jury. Legislative enactments should not be made in advance of scientific knowledge. There must be disabuse of the mind of the criminality of intent on the part of reputable manufacturers, and a sharp line should be drawn between adulteration and food preservation. The question to be decided was that of the action of very minute amounts of food preservatives over a protracted period. In order to illustrate the faulty interpretations from research work undertaken on a wrong basis, Dr. Coley

cited the papers of Pfeiffer, Kionka, and Harrington dealing with sulphite of sodium. In all these studies the amount of the drug used had been higher than that employed for preservative purposes; too great quantities of meat were fed to the animals and no variety of diet was allowed. Further, the animals were confined and of questionable health in the beginning of the experiments, and the deductions of these authors were not warranted, so far as the use of sulphite of sodium as a food preservative was concerned.

Book Notices.

Essentials of Medical Chemistry, Organic and Inorganic. Containing also questions of Medical Physics, Chemical Philosophy, Analytic Processes, Toxicology, etc. Prepared Especially for Students of Medicine. By LAWRENCE WOLFF, M. D., formerly Demonstrator of Chemistry, Jefferson Medical College; Physician to the German Hospital of Philadelphia, etc. Sixth Edition, Thoroughly Revised. By A. FERRE WITMER, Ph. G., formerly Assistant Demonstrator of Physiology, University of Pennsylvania; Neurologist to the Out-Patient Department of the Hospital for Ruptured and Crippled, New York City. Philadelphia, New York, London: W. B. Saunders & Company, 1904. Pp. 225. (Cloth, \$1.00.)

Whatever opinions may be held regarding the value of the system of teaching provided in question compends, no doubt can exist of the popularity of books of this class. The one before us has demonstrated its practical usefulness by passing through five editions. Dr. Witmer's sixth revision contains much new matter pertaining to recent important discoveries in physics and inorganic chemistry, and is calculated to be of considerable service to those for whom it is intended.

A Textbook of Physiological Chemistry. By OLOF HAMMARSTEN, Professor of Medical and Physiological Chemistry in the University of Upsala. Authorized Translation from the Author's Enlarged and Revised Fifth German Edition by JOHN A. MANDEL, Sc. D., Professor of Chemistry and Physics and of Physiological Chemistry in the New York University and Bellevue Hospital Medical College. Fourth Edition, First Thousand. New York: John Wiley & Sons; London: Chapman & Hall, Limited, 1904. Pp. viii-703. Cloth, \$4.00.)

The rapid progress of physiological chemistry during the last five years has necessitated a thorough revision of most of the chapters of this well known textbook, and it has been improved in other respects, chiefly by the omission of certain parts containing statements which have been proved untenable by more recent research. While the volume has not been brought into smaller compass by such elimination, too great an increase in its size has been prevented. The literature of physiological chemistry becomes more specialized every year, and the descriptions of chemical methods which were treated of more fully in preceding editions are

somewhat curtailed in this, only those methods which are of first importance for the physician and student being described at length. The general plan of the book remains unaltered, the author's addenda having been incorporated into the text. The fact that the book has passed through so many editions in such a comparatively short period, coupled with the knowledge of its very general adoption as a textbook in teaching institutions, affords ample evidence of its enduring usefulness.

V. Internationaler Dermatologen-Kongress abgehalten in Berlin vom 12 to 17 September, 1904. Verhandlungen und Berichte herausgegeben von Sanitätsrat Dr. O. ROSENTHAL, General-Sekretär. I. Band. Berlin: August Hirschwald, 1904. Pp. v-394.

While rather disappointing to any one seeking for new ideas in regard to leprosy, this work is rather interesting to any one seeking for the latest statistics as to geographical distribution, measures taken for isolation, treatment, etc. The American report, by Dr. Isadore Dyer, is especially painstaking and shows a woeful lack of precautions against the spread of the disease by our neighbor Mexico.

Official News.

Public Health and Marine Hospital Service Health Report:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending January 27, 1905:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Colorado—Garfield County.....	Dec. 1-31.....	11	
Colorado—Lake County.....	Dec. 1-31.....	5	
Colorado—Larimer County.....	Dec. 1-31.....	18	
Colorado—Las Animas.....	Dec. 1-31.....	1	
Colorado—Weld County.....	Dec. 1-31.....	1	
Dist. Columbia—Washington.....	Jan. 8-21.....	4	
Florida—Jacksonville.....	Jan. 8-14.....	1	
Illinois—Chicago.....	Jan. 15-21.....	18	1
Louisiana—New Orleans.....	Jan. 15-21.....	13	
Michigan—Detroit.....	Jan. 15-21.....	2	
Missouri—St. Louis.....	Jan. 15-21.....	24	1
Tennessee—Memphis.....	Jan. 15-21.....	10	
Tennessee—Nashville.....	Jan. 15-21.....	3	
Wisconsin—Milwaukee.....	Jan. 15-21.....	6	

Smallpox—Foreign.

Austria-Hungary—Prague.....	Dec. 25-31.....	5	
Brazil—Pernambuco.....	Dec. 2-15.....		85
Brazil—Rio de Janeiro.....	Dec. 26-Jan. 1.....	73	23
France—Paris.....	Dec. 1-7.....	10	1
Great Britain—Dundee.....	Dec. 25-31.....	3	
Great Britain—Leeds.....	Jan. 1-7.....	4	
Great Britain—London.....	Jan. 1-7.....	1	
Great Britain—Manchester.....	Jan. 1-7.....	1	
Gt. Britain—Newcastle-on-Tyne.....	Jan. 1-7.....	1	
Great Britain—Nottingham.....	Jan. 1-7.....	1	
India—Karachi.....	Dec. 17-25.....	2	
Italy—Catania.....	Dec. 30-Jan. 5.....	1	
Peru—Callao.....	Dec. 17.....		4
		1 from St. Loá, Valparaiso via immediate ports.	
Russia—Moscow.....	Dec. 8-14.....	2	1
Russia—Odessa.....	Dec. 25-31.....	1	
Russia—St. Petersburg.....	Dec. 25-31.....	3	3
Straits Settlements—Singapore.....	Dec. 4-10.....	2	
Turkey—Constantinople.....	Dec. 26-Jan. 1.....	24	
Turkey—Smyrna.....	Nov. 20-27.....	1	
Venezuela—Maicao (vicinity of).....	Jan. 1-7.....	15	
<i>Yellow Fever.</i>			
Brazil—Rio de Janeiro.....	Dec. 26-Jan. 1.....	1	
Cuba—Havana.....	Jan. 10.....		1
		From Ss. <i>Dora</i> from Lagayra and Colon.	
Panama—Panama.....	Jan. 1-15.....	5	1
Venezuela—Caracas.....	Dec. 17-Jan. 7.....	1	
Venezuela—Laguayra (vicinity of).....	Jan. 1-7.....		6

Cholera.

Russian Empire—Astrakan Gov- ernment	Nov. 23-Dec. 7	6	
Russian Empire—Baku Govern- ment	Nov. 23-Dec. 7	66	
Russian Empire—Erivan Gov- ernment	Nov. 23-Dec. 7	502	238
Russian Empire—Samara Gov- ernment	Nov. 23-Dec. 7	32	
Russian Empire—Sarator Gov- ernment	Nov. 23-Dec. 7	40	19
Russian Empire—Tselisvetopol Government	Nov. 23-Dec. 7	68	
Russian Empire—Trans-Caspian Territory, Serach's Province	Nov. 23-Dec. 7	47	27
Russian Empire—Ural'sk Gov- ernment	Dec. 28	12	Epidemic
Turkey (general)	Nov. 28-Dec. 12	396	287

Plague.

Arabia—Crater (hospital)	Dec. 25-31	41	33
Arabia—Maafra	Dec. 25-31	2	
Arabia—Hedra (hospital)	Dec. 25-31	2	
Arabia—Alia Islands	Dec. 25-31	2	
Argentina—Salta State	Dec. 14	1	
Brazil—Rio de Janeiro	Dec. 26-Jan. 1	20	11
Cape Colony—Port Elizabeth	Dec. 4-10	2	
Chile—Africa	Dec. 1	Present	
Formosa	Dec. 5-11	44	25
India—Karachi	Dec. 19-25	54	51
India—Eten	Nov. 1-Dec. 11	24	
Peru—Lambayeque	Nov. Dec. 11	13	
Peru—Lima	Nov. 16-Dec. 11	14	
Peru—Pacasmayo	Dec. 11	Present	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending January 25, 1905.

EARLE, B. H., Assistant Surgeon. Granted leave of absence for three days from January 21, 1905. Granted extension of leave of absence for four days from January 25th.

FOSTER, S. B., Acting Assistant Surgeon. Granted leave of absence for twelve days from January 24th.

GOODMAN, F. S., Pharmacist. Granted leave of absence for seven days from January 24th.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending January 28, 1905:

BRECHEMIN, LOUIS, JR., First Lieutenant and Assistant Surgeon. Left Fort Baker, Cal., on thirty days' leave of absence, from January 17, 1905.

FORD, CLYDE S., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Barrancas to Ormond, Florida, on public business.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending January 28, 1905:

BAKER, M. W., Assistant Surgeon. Detached from the *Brooklyn* and ordered to the Naval Hospital, San Juan, P. R.

CRANDALL, R. P., Surgeon. Detached from the *New Orleans* and ordered home to await orders.

CURL, H. C., Passed Assistant Surgeon. Detached from duty with the Isthmian Canal Commission on the Isthmus of Panama and ordered to the *Boston*.

ELY, C. F., Assistant Surgeon. Detached from the Naval Academy and ordered to duty with the Marine Detachment on the Isthmus of Panama, sailing from New York on January 31, 1905.

GEIGER, A. J., Assistant Surgeon. Detached from the *Prairie* and ordered to the Naval Station, Port Royal, S. C., for temporary duty.

GUTHRIE, J. A., Passed Assistant Surgeon. Ordered to the *Dirie*, sailing from New York on or about February 4, 1905.

GROVE, W. B., Surgeon. Ordered to the Naval Hospital, Chelsea, Mass.

HENNEBERGER, L. G., Medical Inspector. Detached from the *Olympia* and ordered home to await orders.

LEYS, J. F., Passed Assistant Surgeon. Detached from the Naval Station, Guam, L. I., and ordered home to await orders via the *Solace*.

ODELL, K. E., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York, N. Y.

STEEP, J., Assistant Surgeon. Ordered to the *Constellation* and to additional duty at the Naval Training Station, Newport, R. I.

TAYLOR, J. L., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, from December 17, 1904.

WILSON, G. B., Surgeon. Detached from the Naval Hospital, Chelsea, Mass., and ordered to the *Olympia*.

Births, Marriages, and Deaths

Married.

BARBEE—FERGUSON.—In Bozeman, Montana, on Wednesday, January 4th, Dr. Charles Minton Barbee and Miss Olla Ferguson.

DANFORTH—MATTICE.—In Gilboa, N. Y., on Wednesday, January 18th, Dr. Edward Danforth and Miss Helen E. Mattice.

LEMKE—HAMMOND.—In Baltimore, Maryland, on Thursday, January 19th, Dr. George Lemke and Miss Annie T. Hammond.

NEUWIRTH—MAGENHEIMER.—In St. Charles, Missouri, on Monday, January 2nd, Dr. Joseph Neuwirth and Miss Annie Magenheimer.

PAINE—FRYE.—In St. Louis, Missouri, on Sunday, January 22nd, Dr. G. F. Paine and Mrs. Dora Frye.

SANDERS—BENNETT.—In Jefferson, Georgia, on Tuesday, January 3rd, Dr. Laetus Sanders and Miss Mary Bennett.

WYRICK—FISCHER.—In St. Louis, Missouri, on Tuesday, December 27th, Mr. Taylor Blow Wyrick and Miss Stella Ethel Fischer, daughter of Dr. Joseph A. Fischer.

Died.

BLINN.—In Chicago, Illinois, on Friday, January 20th, Dr. Odella Blinn, in the sixty-first year of her age.

CANTRELLE.—In New Orleans, Louisiana, on Thursday, January 19th, Dr. J. A. Cantrelle.

CORY.—In Washington, D. C., on Friday, January 27th, Dr. B. F. Cory, in the eighty-sixth year of his age.

Craven.—In Philadelphia, on Thursday, January 10th, Dr. Edward R. Craven, in the eighty-third year of his age.

DUMOND.—In New York, on Saturday, January 21st, Dr. Cornelius J. Dumond, in the sixty-ninth year of his age.

ELIOT.—In New York, on Monday, January 23rd, Anna, wife of Dr. Ellsworth Eliot, in the eightieth year of her age.

ENSMINGER.—In Chicago, Illinois, on Wednesday, January 18th, Dr. W. H. Enslinger, in the sixty-first year of his age.

FABER.—In St. Louis, Missouri, on Thursday, January 12th, Paulina, wife of Dr. John E. Faber, in the sixty-sixth year of her age.

FOUDRIAT.—In New Orleans, Louisiana, on Saturday, January 14th, Dr. L. E. Foudriat, in the sixty-fourth year of his age.

HARWOOD.—In Atwood, Tennessee, on Saturday, January 14th, Dr. J. W. Harwood, in the sixty-sixth year of his age.

HELLYER.—In Philadelphia, on Monday, January 16th, Dr. Edwin Hellyer.

HERRING.—In Lancaster, Kentucky, on Tuesday, January 17th, Dr. H. C. Herring, in the seventy-third year of his age.

HITT.—In Atlanta, Georgia, on Tuesday, January 17th, Dr. Virginia G. Hitt, in the sixty-fourth year of his age.

HUNT.—In Newtonville, Massachusetts, on Friday, January 20th, Dr. Otis Eugene Hunt, in the eighty-third year of his age.

O'NEILL.—In San Francisco de Malabon, Philippine Islands, on Tuesday, January 24th, Dr. Joseph A. O'Neill, United States Army.

Miscellany.

Contributions to the Study of Spontaneous Rupture of the Aorta.—Tolot and Sarvonat, in the *Revue de médecine*, for November 10, 1904, offer the following conclusions: In spontaneous rupture of the aorta the blood may penetrate into the pericardium through the external coat of the vessel which has been separated and saturated with blood, but not perforated. Rupture frequently occurs at the site of atheromatous patches, but often at other points, even though there may be many distinct areas of atheroma in the vessel. It would therefore appear that the rôle of atheroma is not very important, and may even have no significance at all in the pathogenesis of rupture of the aorta. The action of syphilis has not yet been sufficiently investigated, though its effect upon the middle coat of the aorta is well known. New investigations may give increased significance to its presence.

The New Treatment of Cancer.—Doyen, in the *Revue de chirurgie*, for November 10, 1904, refers to the method of preparation of the fluids which he uses in the treatment of cancer and to the results which this mode of treatment has given him thus far. Of 242 cases of cancer of every variety, treated by his method there have been 42 in which there were no symptoms of recurrence for about four years. There are 46 cases which are still under observation, in most of which the prospects are favorable. In 20 cases no report as to the result has been received, and in 128 cases no benefit has resulted, either because the treatment was begun when the disease was too far advanced or because it was interrupted contrary to the wishes of the surgeon, before it could have produced any permanent effect. In 6 cases death occurred from accidental causes at a time when the cure of the cancerous disease seemed probable.

Referring to the indications in the author's method of treating cancer, he considers that the cases which should be subjected to treatment are:

1. All cases of tumors which are positively malignant in which the disease is still localized and which according to the experience of the past are almost certain to have a recurrence of the disease should an operation be performed.
2. Cases of cancer in which the disease is still localized, but in which complete removal is impossible on account of complications with vital organs.
3. Cases which are inoperable on account of the extent of the disease, but in which vital organs have not as yet been attacked, for example, cancer of the breast *en cuirasse*. It is, of course, apparent that no treatment whatsoever can restore ad integrum essential organs, the tissue of which has been entirely destroyed. The possibility of inoculating those who are threatened with cancerous disease, either from heredity or from suspicious general or local conditions, is suggested, and it is believed that immunity could thus be secured at least for a long period. The discussion of this paper before the French congress of surgery elicited opinions which were unfavorable in the main to Doyen's hopes and contentions.

Nephritis Symptomatology and Diagnosis.—Eshner, in *Medicine*, for December, 1904, recalls the facts that the excretion of water, certain products of retrogressive metamorphosis, and of certain substances which may be introduced into the body in various ways constitute the function of the kidneys, while there is no reason for believing that they have an internal secretion. In health the kidneys prevent the passage of the albumin of the blood into the urine. The factors which cause nephritis are infective or toxic and when this inflammatory process occurs it probably involves both kidneys. Under favoring conditions the tissues of the affected organs may be restored to their normal condition. Clinically three varieties of nephritis may be considered, acute parenchymatous, chronic parenchymatous, and chronic interstitial. The distinctive feature in all of them is the presence of albumin and tube casts in the urine, both factors ranging under certain well recognized conditions. The albumin may be serum albumen, serum globulin, nuclealbumen, albumose, or peptone.

Tube casts result from coagulation of the products of disintegration of the epithelial cells of the uriniferous tubules.

Albumin is abnormal when present repeatedly or continuously in large quantity. Tube casts are probably never present under wholly normal conditions. (Edema is probably due to the action on the blood vessels of the causes which underlie the inflammation of the kidneys. With oedema and transudation into serous cavities there may also be inflammation of serous membranes.

In parenchymatous nephritis the quantity of urine diminishes with the intensity of the inflammation, in interstitial nephritis the quantity is increased until the disease approaches its termination. The specific gravity and the intensity of color of the urine bear an inverse relation to the quantity voided. Hypertrophy of the heart and increased vascular tension are almost always present in chronic nephritis. Retinitis is one of the distinctive features of nephritis, and amaurosis may result. Anæmia is a constant feature of parenchymatous nephritis, the number of red cells and the percentage of hæmoglobin being diminished, and the leucocytes remaining unchanged. The most important complication is uræmia and it may be present with either the acute or the chronic disease.

Albumin and tube casts may be absent and nephritis still be present; again they may be present and be due to some cause other than nephritis. Systematic examination of the urine should always be made. In acute parenchymatous nephritis there is a history of infection, intoxication, or exposure to cold. There may be a chill, drowsy, diminished urine, elevation of temperature, acceleration of pulse and respiration, headache, nausea, and vomiting. In chronic parenchymatous nephritis there is a history of a previous attack, diminution of urine, possible uræmia, cardiac hypertrophy, and increased arterial tension. Recovery is rare though the disease may continue for years. In chronic interstitial nephritis the invasion may not have been noted, the urine is increased, the heart hypertrophied and arterial tension increased. Dropsy and uræmia may be late symptoms, and there may be hemorrhages from mucous membranes.

Parturition Observed Upon the Isolated Uterus.—Kurdinowsky, in *Fortschritte der Medizin*, for October 10, 1904, reports interesting physiological and pharmacological experiments with reference to the contractions of the uterus. Having performed abdominal section on a number of rabbits he injected the uterus, from the aorta, with Locke's fluid, so that the blood was completely removed. He then extirpated the uterus with the annexa and broad ligaments and placed them in a chamber moistened with Locke's fluid. Notwithstanding the fact that the blood had been completely withdrawn from the uterus it could be excited by irritation even on the second and third days after its removal, producing contractions which followed a definite curve. One such uterus remained active forty-nine hours and forty minutes. On two occasions he observed the entire act of parturition from beginning to end on the pregnant uteri of rabbits. The contraction waves began at the tubal end of the cornua and progressed toward the corpus, the result being the gradual removal of the connection between the ovum and the uterine wall. After it was entirely separated the ovum was slowly but uninterruptedly projected by means of continued contractions through the cornu and toward the corpus. The same procedure was observed in the second cornu with the second ovum, until both ova were present within the corpus. Then one of the cornua contracted more forcibly and more frequently than before until its entire contents had been projected into the corpus. The next step consisted in energetic contractions of the broad ligament which surrounds the corpus upon all sides. These circular contractions transverse to the uterus squeezed the contents of the corpus into the vagina. As soon as an ovum had been transferred to the vagina the contractions of the broad ligament ceased. As the second ovum entered the vagina it pushed the first one forward. The round ligaments also contracted in a circular manner from above downward during the progress of the ovum through the corpus and vagina.

From these demonstrations it is possible to say with definiteness that a uterus entirely removed from the influence of the cerebrospinal nervous system is competent to perform the function of parturition; in other words, that it has an entirely independent action. During the emptying of the uterus the fetuses died as a rule, after violent contractions, but in one case a fetus lived about fifty minutes, and for thirty-five minutes it lived outside the uterus.

The isolated uterus is therefore adapted for observation of the physiology of this organ, and gives evidence of its automatic action. Thermal and chemical irritants increase its contractions and often produce contractions of a tetanic character. Electrical irritation on the other hand seemed to have very little influence.

The contractions of the broad ligaments are of particular interest. The question of the local innervation of the uterus is thus seen to be a matter of the greatest importance.

The uterine horn contracts peripherally upon the uterus and is independent of the narrowing of the blood vessels. Narcotic poisons, such as

chloral and alcohol, have little influence upon the isolated uterus. Clinical studies upon this subject in relation to the act of parturition will be of the greatest importance.

The Prognosis of Epilepsy.—Turner, in the *Edinburgh Medical Journal*, for December, 1904, states that Herpin in 1852 first gave detailed attention to this phase of the question of epilepsy. His percentage of cures was much greater than that of more recent writers upon this subject.

It does not seem that the use of the bromides has improved the prognosis to any great extent. Sex has little to do with the question of prognosis. More males than females show arrest of seizures, but there are also cases of epilepsy in males than in females. There is a greater percentage of epileptic dementia in females, while in males the most frequent mental condition is impairment of memory and blunting of the higher mental faculties.

With regard to heredity, there is as great a probability of arrest of the disease in those who have a family history of epilepsy as in those who have not. General improvement is more likely to occur in those who have no hereditary taint in this direction. If there is hereditary tendency to epilepsy or insanity, it increases the probability that the disease will be permanent and that dementia will result.

Epilepsy commencing in infancy or childhood is most likely to be persistent. The type which begins during puberty is the most favorable one. Adult epilepsy is unfavorable, senile epilepsy is tractable.

The earlier a case is brought under treatment the greater is the probability of improvement. There is a progressive tendency for the disease to become confirmed the longer it lasts without definite treatment. The longer the interval between the attacks the greater the prospect of arrest or improvement. If attacks are of daily or weekly occurrence the chances of recovery are not good, and there is grave prospect of mental impairment. The major attacks are more influenced by drugs than the minor ones. Mental disturbance is more frequent with *petit mal* than with *grand mal*, but is the more profound when the two varieties are combined.

Remissions are a characteristic feature of this disease. When the disease begins in infancy it may remit during childhood and recur at puberty. Several years may intervene between the first and the second attacks. Remissions sometimes occur under the influence of bromides, the disease returning if the drug is omitted. A remission may be terminated by a blow upon the head, a fall, childbirth, an inflammatory disease, etc.

In general terms it may be said that the disease is curable, but there is great difference of opinion as to the period of remission which constitutes a cure. The author does not consider any case as cured in which the seizures have not been in abeyance nine years. In his analysis of a large number of cases he has found that in 10.2 per cent. only was there a remission for that period. If improvement is to occur at all as the result of treatment it will be likely to occur within a year from the time that treatment is begun.

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THE DIAGNOSIS OF TUMORS OF THE CEREBELLUM AND THE CEREBELLOPONTILE ANGLE, ESPECIALLY WITH REFERENCE TO THEIR SURGICAL REMOVAL.

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In time it is probable that as regards tumors of the cerebrum, especially those located on its lateral aspect anywhere from the cephalic tip to the occipital pole, success both in diagnosis and in operative treatment will reach from twenty-five to fifty per cent. By success is meant the exact localization and removal of tumors, the operation from the surgical point of view being entirely successful, and partially so from the point of view of the removal of the disease. Supposing that fifty per cent. of such cases are reached, ten to fifteen per cent. will not recur, or at least not in periods varying from three to ten years. In the remainder the painful and distressing general symptoms of brain tumor will be removed for a time, the neoplasms recurring in some cases after an interval, while in others the cases may terminate fatally. Life in most instances will not only be prolonged, but will be made much more comfortable. Tumors of the mesal aspect and of the base of the brain will always be uncertain in result, although an occasional growth situated on the orbital or temporal surface may be successfully reached. We must, therefore, after growths located on the lateral aspect of the cerebrum, look to tumors of the cerebellum and cerebellopontile angle for our next highest percentage of successes in spite of the hitherto unsatisfactory, and in some instances even disheartening, results of surgical procedure.

The surgical aspects of the subject, including the methods and results of operation and statistical details, will be fully considered by Dr. Frazier;

but as I have had much experience in observing operations on the cerebellum, I may be permitted, in introducing a discussion of the symptomatology and diagnosis of cerebellar tumors, to say a few words about the accessible sites for operation.

Although an operation is difficult and often unsuccessful, tumors in certain cerebellar locations may be regarded as "operable." These are: 1. Tumors situated wholly or in large part in one lateral lobe. 2. Tumors situated upon or in part invading the vermis or middle lobe. 3. Tumors of the cerebellooblongatopontile angle. Only in the case of a tumor located in large part in one lateral lobe of the cerebellum does an operation afford a really good chance for success, but in rare cases both tumors of the vermis and of the cerebellobulbar angle can be reached and removed.

With regard to tumors of the vermis or middle lobe, the writer has had no personal experience with operative procedure. I believe, however, that in some instances tumors resting upon or even invading the vermis may be reached and removed. The operation in this case should include an opening on each side of the median line, and possibly the ligation of the sinus and the removal of the bone intervening between the two openings. Such an operation is feasible, although, perhaps, difficult.

The diagnosis of the existence of a tumor in the cerebellum is as a rule comparatively easy, but to exactly locate and infer the size and extensions of such a growth is a more difficult task; and yet when operation for removal of the tumor is under discussion, the focal diagnosis becomes of paramount importance.

In the first place, brief consideration will be given to general symptomatology and diagnosis. In a large majority of cases of cerebellar neoplasm the well known general symptoms of brain tumor, namely, headache, nausea, and vomiting, optic neuritis, and vertigo, are present and are of pronounced character.

While the headache in many cases is intense, and in some even agonizing, in others it is of

moderate severity and in rare instances, of which a few have come under my observation, it may be entirely absent or it may not appear until late in the course of the disease. In about half the cases the headache is referred to the back of the head or to this region, and at the same time to other parts, as to the nape of the neck and various portions of the cranial vault. Frontal headache of a severe type is occasionally observed in cases of cerebellar tumor, just as in some instances of frontal neoplasm the pain is most intense or is present alone in the occipital region. Too much stress therefore must not be placed on the site of the pain.

Nausea and vomiting are symptoms of frequent occurrence, although they occasionally disappear for long periods in the progress of a case. The mechanism of these symptoms is much the same as that of the vertigo due to dural irritation, which will presently be considered.

With regard to optic neuritis and its consequences, it is only necessary to say that our experience is similar to that of others who have found this sign of intracranial tumor more constant in cerebellar tumors than in those located in almost any other region of the brain. The development of the choked disc or optic neuritis is often rapid, or at least goes on at a much accelerated pace after it has reached a certain moderate height. The choking of the disc is extreme, and hæmorrhages are numerous. Unless operative interference checks the progress of the inflammation, blindness speedily occurs, and this is one of the reasons for early surgical procedure, even when the case has not a hopeful outlook as regards removal of the growth.

Dr. de Schweinitz, in his paper on the ocular phenomena of tumors of the cerebellum, to which the reader is referred, fully considers the ophthalmoscopic appearances and conditions in this affection. Nearly all the cases included in the series from which the inferences contained in this paper are drawn were seen by him.

The vertigo which is so frequently a general symptom of brain tumor, wherever situated, is usually due to irritation of branches of the trigeminal nerve, which are distributed near the inner surface of the dura, the irritation of the fifth nerve being reflected to the bulbar nuclei of this nerve and thence to the pneumogastric nucleus. This is usually one of the causes of the vertigo in tumors of the cerebellum when the growth is connected with the dura, which is not the rule. In other cases it should be regarded as a focal rather than as a general symptom of cerebellar tumor, as it is caused by the disturbing

influence exerted by the tumor upon the cerebellovestibular apparatus.

A distinction must always be made between cerebellar vertigo and cerebellar ataxia, although the two are often so interblended that this is not easily done. Subjective vertigo is common, the patient usually describing it as a feeling of dizziness. Both subjective and objective vertigo may be extreme and exhibit striking characteristics which indicate their focal origin. In a case recorded by Osborne,¹ for example, in which a large glioma was situated in the right cerebellar lobe, the patient was unable to sit up, and could not turn her head without having an attack of vertigo. The dizziness was relieved by complete rest in bed, but came on again with less frequency, although with much severity. The patient would always lie with her head to the right, saying that she became dizzy if it were turned to the left. Later epileptoid seizures took the place of the vertigo.

I shall discuss next the strictly focal symptoms of tumor of the cerebellum.

Nystagmus is one of the most frequent symptoms of cerebellar tumor. It is present in growths variously situated in the cerebellum or jointly in the cerebellum and adjacent parts, as for instance in the middle lobe, in one lateral lobe when the neoplasm is close to its junction with the middle lobe, in the prepuncle or jointly in this and the oblongata. A tumor or other lesion confined to the flocculus is said to give rise to nystagmus. The nystagmus of cerebellar or cerebello-pontile disease may be of various types, as regards the manner of its occurrence, its direction, and the rapidity or slowness of the oscillations. It may be present when the eyes are quiet and looking straight forward, or under these circumstances it may be absent, but capable of being elicited by having the eyes turned either to the right or to the left, or upward or downward. It may be horizontal or vertical or both in the same case. The movements are sometimes rapid and fine or slow and comparatively coarse. In the case of Bruce referred to later in this paper, the nystagmoid movements, which were present in all positions, were increased on lateral movements; on looking to the right the oscillations were slower and larger. They were of intermediate rapidity and extent in looking upward or downward. It has been suggested that the nystagmus can be brought out when it is not present, or that it is greater if present, when the eyes are turned toward the side of the lesion, a

¹ Osborne, O. T., *Journal of Nervous and Mental Disease*, N. Y., Vol. xxix, October, 1902.

view which was supported by one case of cerebellar abscess recorded by Spiller,² but was not confirmed by a case of cerebellar tumor reported by this writer in the same paper. We have not been able as yet to make any inferences of localizing value from a study of cerebellar nystagmus, although it would seem probable that in a case of destructive lesion affecting the cerebellovestibular tract, the nystagmus would be greater when the eyes were directed toward the side of the tumor. I shall refer presently to the views of Bruce on this subject.

The question of the existence of a true paresis or paralysis as the result of a cerebellar lesion is one that has been discussed both by physiologists and clinicians. That a general paralysis has been observed as both the result of experimental lesions of the cerebellum and of cerebellar hæmorrhage, tumor, or abscess in man cannot be doubted, but in many cases at least this symptom is due to the effect of the lesion on neighboring parts, as for instance on the pyramidal tract or tracts. Asthenia or muscular weakness is, however, a real cerebellar symptom. Sometimes it is overlooked, the symptoms which are dependent upon this weakness being attributed to incoordination or other cause.

In a valuable paper by Grainger Stewart and Gibson³ these writers report at length their observations with regard to the state of voluntary movements in the five patients which form the basis of their paper. In all of these cases the patients exhibited weakness of the legs, as tested not only in standing and walking, but also by movements in bed. Weakness of the spinal muscles was present in three cases. Niemeyer, Hughlings Jackson, and Risien Russell, who are cited by Stewart and Gibson, have shown that paresis or weakness of the spinal or trunkal muscles results from cerebellar lesion. Jackson believes that destructive lesion of the vermis causes paralysis or paresis, most marked in the muscles of the trunk, next in the lower extremities, and least in the upper limbs. Discussing the weakness of the spinal muscles, Stewart and Gibson referred to the relief which is sometimes afforded by the use of crutches. In several cases of tumor of the cerebellum I have observed distinct evidences of weakness of the muscles supporting the vertebral column. It is probable that some of the difficulty experienced by the patients in maintaining their equilibrium, and some of the tendency to fall or pitch to one side or the other, are

dependent in part at least upon asthenia or paresis rather than entirely upon incoordination. In Case V of the series appended to this article and that of Dr. Frazier the general musculature was flaccid, and the head showed a tendency to fall backwards or a little to one side, apparently because of weakness of the supporting muscles of the neck.

Batten⁴ has called attention to what he believes to be the diagnostic value of the position of the head in cases of cerebellar disease. He refers to the fact that Risien Russell has observed in animals after ablation of a cerebellar hemisphere, that the head sinks on the shoulder on the side on which the operation is performed, the eyes being deviated to the same side and upward, and the chin to the opposite side. The spinal column is concave on the side of the ablation. Batten observed a case of tubercle of the right lateral lobe of the cerebellum in which the patient's head sank towards the left shoulder, the face looked upwards toward the right and the chin rotated to the right. The spinal column, as in animals experimented upon, was concave towards the same side. The same symptoms have been observed by Batten in hydrocephalus.

At a meeting of the St. Louis Medical Society on September 17, 1904, at which some remarks were made by the writer on the diagnosis of cerebellar tumors, Dr. J. J. Putnam, of Boston, spoke in the discussion of a case in which this symptom or some modification of it was present.

The symptom known as hemiasynergia, first described by Babinski,⁵ who believes it to be present on the side on which a cerebellar tumor or other lesion exists, has been sought for in all cases of cerebellar tumor recently observed, but so far it has not been found a reliable sign of cerebellar disease. This symptom is brought out in the lower extremity by having the patient, with his eyes shut, flex the leg fully on the thigh and the thigh on the abdomen, and then require him to extend the limb to its full length. If the extension is done normally, the leg and thigh movements are performed synchronously or rather synergically, but the leg is first straightened out and then the entire limb is brought to a horizontal position by a second movement. I have noted the presence of this symptom in several cases, but in some instances when shown at one examination it would fail to be elicited at another in the same extremity. It was present on the side of the lesion on several occasions when one of the cases recorded in connection with this paper was examined. On other occasions

² Spiller, W. G., *Amer. Jour. of the Med. Sciences*, February, 1904.

³ Stewart, T. Grainger, and Gibson, G. A., *Edinburgh Hospital Reports*, Vol. v, Edinburgh and London, 1898.

⁴ Batten, T. E., *Brain*, Part 101, Spring, 1903.

⁵ Babinski, *Revue neurologique*, May 30, 1902, p. 470.

the limb was extended synergically. Shortly after eliciting the sign at an examination made in the ward of the hospital, this patient was taken before the class in the amphitheatre and hemiasynergia could not be demonstrated. In the case of Spiller, several times referred to in this paper, it was present on the side of the tumor and was observed by the writer.

As is said elsewhere, a tumor circumscribed to the outer part of one lateral lobe may not give rise to any symptoms, or at least, to any of diagnostic value. Excepting cases of this kind, all tumors of the cerebellum cause, or at least may cause, incoordination. Some grade of ataxia has been present in all cases of cerebellar tumor studied by me. The degree and character of this ataxia have varied greatly in different cases. It is always present in tumors of the vermis, unless it may be in cases to which Bruce has referred, in which a symmetrical distribution and slow development of the tumor prevent the appearance of the ataxia. The Romberg symptom is practically always present, but it may differ greatly in degree. It differs from the static ataxia of a case of advanced tabes in that it is much less markedly increased by closing the eyes. The sway is, however, usually somewhat increased with the eyes shut; but unless the cerebellar disease is much advanced, the patient will often be able to keep relatively steady on his feet for a considerable time.

The cerebellar gait is, as it has often been described, a staggering or titubating gait. The steps are more irregular in their lateral and vertical amplitude than those of a tabetic, unless the disease in the latter case is advanced to a point where the patient can barely maintain himself in the erect position while walking. The pose and the gait of a case of cerebellar tumor, or of other lesions of the cerebellum, are due not alone to incoordination. Vertigo and muscular weakness, specially weakness of the muscles attached to the spinal column, as well as incoordination, act in their production.

The direction in which the patient sways on standing or tends to pitch or fall in walking may be a matter of much diagnostic importance. Often it plays a considerable part in the discussion of the site of operation. According to Starr⁶ the staggering in four fifths of the cases of cerebellar tumor is away from the side of the lesion. This is not my own experience. In those cases coming under my observation in which either necropsy or operation has revealed the tumor, the swaying or staggering has been of-

tener toward the side of the lesion than toward the opposite. In two cases reported by Schede,⁷ because the patient tended to fall toward the left, the tumor was located on the right, and in both cases an operation showed that it was situated on the left. In one of these cases the tumor could have been successfully removed. In several cases of which the writer has personal knowledge the focal diagnosis was wrong as to the side on which the operation was performed, although we should certainly have the data to enable us to avoid this mistake—one which is not made by skillful diagnosticians with regard to any other region of the brain, unless it is occasionally the prefrontal.

In discussing this question of the side of the cerebellum on which a lesion is situated, as determined by a study of the symptomatology of the case, it should first be borne in mind that one half of the cerebellum exerts its influence on the same side of the body as itself, its action on the spinal cord being direct and not crossed. Bruce has so well presented the facts which should guide us in determining the side on which a tumor is situated that I shall take the liberty of presenting his views, founded as they are upon both close pathological and clinical investigation.

The limits of a paper intended to be chiefly clinical will not permit me to present at length the facts and arguments of this article, one of the most valuable contributions to cerebellar localization of recent years. I shall, however, summarize a few of its most salient points.

The cortex of the vermis contains the termini of at least six different tracts from the spinal cord. Bruce⁸ holds that the direct cerebellar tract and the anterolateral tract of Gowers, which go to the cortex of the middle lobe, are afferent to the cerebellum. One tract from the nucleus of Deiters passes downwards into the anterolateral column of the spinal cord; another tract sends fibres to both the sixth and the third nuclei. The first of these tracts, which has been given the name of the vestibulospinal tract, has been traced to the lowest part of the thoracic cord, and gives off fibres to the anterior cornua, these distributions being to the same side of the spinal cord as the nucleus. The third connection of Deiters's nucleus is with the roof nucleus of the middle lobe of the cerebellum. This tract is efferent. The cortex of the middle lobe of the cerebellum is connected by sagittal fibres with the roof nuclei.

The dentate nucleus is the chief seat of origin of the peduncle, fibres passing by way of the

⁷ Schede, *Deutsche med. Wochenschr.*, July, 1900, No. 30.

⁸ Bruce, Alexander, *Trans. of the Edinb. Medico-Chirurgical Soc.*, January, 1899.

⁶ Starr, M. A., *Organic Nervous Diseases*, 1903, p. 612.

prepeduncle to the red nucleus and the thalamus. This nucleus being partly in the middle and partly in the lateral lobes, a tumor situated deeply enough to invade it or fibres passing from it to the prepeduncle will cause disturbance of equilibrium of a peculiar kind.

"We may expect," says Bruce, "disturbances of equilibrium to be produced by symmetrical lesions situated within an area bounded by the intracerebellar path of the two inferior peduncles, of the two superior peduncles, and the dentate nuclei, in which the latter arise. This area contains the middle lobe (superior and inferior vermis, the roof nuclei, and the sagittal fibres connecting the latter with the cortex), and the cerebellovestibular tracts from the roof nuclei to the nucleus of Deiters. Lesions within this area may produce no such disturbances, provided they are symmetrically situated with reference to the mesial plane, and especially if their growth is so slow that compensation is established *pari passu* with the disturbances they may tend to cause. On the other hand, lesions situated in the lateral lobes may produce no disturbance of equilibrium, provided they are situated entirely external to the intracerebellar paths of the upper and lower peduncles and of the nucleus dentatus (area of possible latency). If, however, these structures are interfered with, either by pressure or by direct involvement, then the characteristic symptoms of cerebellar disease will be produced, and will depend in their character and amount on the nature and extent of this interference. If the cerebellovestibular tract, or Deiters's nucleus, be injured, then the usual stimuli will not pass either to the anterior cornua of the cord or to the sixth (fourth) or third nuclei. Hence may result the weakness of the same side, the tendency to fall to that side, the impairment of the conjugate deviation to that side, the tendency of both eyes to be directed to the opposite side, and the lateral nystagmus which occurs, especially when the eyes are directed towards the same."

In what is here said the tumor is regarded as acting destructively, but if it acts as an irritative lesion it may cause rigidity or spasm of the same side, with a tendency to fall toward the opposite side, the eyes being turned to the same side by irritation of the sixth nucleus of that side.

It may be asked, How is one to determine whether the tumor is acting as an irritative or a destructive lesion? The answer to this should be found in a study of the spastic or non-spastic condition of the limbs of one side, and a careful consideration of the side to which the eyes are turned.

In the case of Dr. Spiller, which was operated on by Dr. Frazier, the patient tended to always pitch or fall toward the right, and the tumor was found at necropsy on this side. The same was true of several cases observed by me.

Bruce,⁹ in a second paper, has recorded a case of cerebellar tumor in which the principles of localization as taught in his first paper, were successfully put into practice. In this case the ataxic, asthenic, and ocular symptoms pointed to the left side, the patient pitching towards the left. The tumor was found on this side.

The diagnosis of a tumor confined to the middle lobe is relatively easy, and has already been indicated in the references just made to the two articles by Bruce.

In one of three cases recorded by Preston¹⁰ a tumor of the vermis, probably "operable," was revealed by necropsy. This case exhibited abolition of the muscular sense (?) in both arms and legs, with inability to stand or walk and a tendency to always fall backward, never to either side. Necropsy showed a bilobar tumor compressing the vermis like a saddle in its inferior part. It also exerted some compression upon the quadrigeminum; it apparently had attachments to the callosum, falx, and tentorium.

While all the facts necessary for final decision regarding the effects on the brain of the direction of movement of lesions situated in different parts of the vermis are not yet at our command, it is probable, as usually taught, that destruction of the cephalic portion of the vermis will cause a tendency to fall forwards and irritation a tendency to fall in the opposite direction; while destruction of the caudal portion will cause a tendency to fall backwards, and irritation will bring about the muscular adjustment necessary to counteract this tendency. It has already been shown that destructive lesion involving the lateral lobe and vermis or that part of the lateral lobe containing portions of the cerebellovestibular and cerebellospinal mechanisms causes a tendency to sway or fall to the side of the lesion an irritative lesion bringing about the opposite result.

In connection with these discussions of the direction of movement as symptom of cerebellar tumor, it is probable that the lesions more often act as destructive than as irritative factors.

Physiologists, as the results of their experiments upon animals, have frequently observed spasticity or rigidity. In some cases curvatures of the body, apparently the result of spastic conditions, have taken place. In some clinical re-

⁹ Bruce, Alexander, *Scottish Medical and Surgical Journal*, September, 1899.

¹⁰ Preston, *Alienist and Neurologist*, St. Louis, April, 1892.

ports spasticity and contractures are set down as among a comparatively common phenomena of cerebellar tumor.

Retraction of the head and neck, opisthotonos, and general tetanic rigidity have been recorded. In the experience of the writer tonic spasms and contractures are very rare in tumors strictly limited to the cerebellum. I have, however, seen these symptoms associated with hydrocephalus and in cases in which the tumor has invaded parts outside of the cerebellum, as for instance, the oblongata or pons. When present, the tonic spasticity may be on the side of the lesion or on the opposite side. The spasticity may be a transient symptom. It has never proved of diagnostic importance in my studies of cerebellar disease.

One reason for the difference between the reported results of lesions of the cerebellum experimentally produced and the effects of tumors resides in the fact that the former immediately and for a long time are irritative phenomena, while the latter, owing to their usually slow growth, produce their effect by inhibition, pressure, and destruction.

The asthenia, atonia, and astasia which Luciani so strongly emphasizes as the chief effects of destructive lesions of the cerebellum experimentally produced are well illustrated by clinical facts. The case of cerebellar tumor is asthenic, although not paralyzed, is atonic or flaccid rather than spastic, and is astatic or incoordinate. The extent and position of his asthenia, atonia, and astasia depend upon the extent and location of the lesion.

While clonic spasm is an infrequent local symptom of cerebellar tumor, it is occasionally observed. In a case recorded by Spiller, which was seen by the writer in consultation, the patient had at times fine twitching movements of the right extremities, although at times the movements were on both sides of the body.

Tremor, especially of the head and upper extremities, has been recorded as one of the results of physiological experiment on the cerebellum. It occurs in a large percentage of the cases of cerebellar tumor, and was a notable symptom in one or two of the cases seen jointly by Dr. Frazier and the writer.

My experience indicates that the muscular sense is not lost in cases of cerebellar disease. The patient may be ataxic as well as asthenic and atonic, and yet on testing him carefully for the muscular sense or its components, the so called senses of pressure, weight, posture, location, etc., these are not affected. Grainger Stewart and Gibson carefully tested the muscular sense and

found it unaffected in their five cases. Others have recorded the loss of muscular sense in cerebellar lesions, but as a rule without any details, and it is a question in these cases whether the loss of muscular sense has not been confounded with other manifestations, such as ataxia. Stereognostic perception is also unaffected in tumors and other lesions of the cerebellum.

In a series of cases appended to the papers of Dr. Frazier and the writer, the muscular sense, stereognostic perception, and all forms of cutaneous sensibility were studied, but with negative results, except in one instance in which a doubtful cutaneous hypæsthesia was present. When impaired sensation in the distribution of the fifth nerve is present in cerebellar disease it is probably an indirect or pressure symptom. I am not speaking now of cases of tumor of the cerebello-pontile angle, in which the fifth nerve or its roots may be directly implicated. The cerebellum is above all a motor organ; its most distinctive focal symptoms, vertigo, ataxia, asthenia, and nystagmus being affections of motility.

A few words might be said in this connection about the diagnosis of cerebellar neoplasms from tumors of one or two other regions of the brain.

Tumors situated in one lateral lobe, but invading deeply so as to involve the cerebellovestibular apparatus and perhaps the vermis, may need to be differentiated from tumors of the superior parietal region. The chief diagnostic points in favor of the tumor being cerebellar are the absence of astereognosis and that of symptoms showing the loss or disturbance of muscular or cutaneous sensibility. Nystagmus as a rule is not present in parietal tumors, although this is a rule not without exception, especially if the tumor should extend far enough backward to involve the visual motor region of the cerebral cortex. Vertigo may be present in a parietal tumor, but the peculiar and extreme form of vertigo which has been described as due to disturbance of the cerebellovestibular tracts and centres is not observed in parietal cases. These cases are generally more distinctly unilateral in their symptoms, although unilaterality is occasionally quite marked in cerebellar tumors. The invasion symptoms of parietal tumor will help in diagnosis.

Tumors of the cerebellum need occasionally to be differentiated from prefrontal growths. This diagnosis is difficult only when the tumor is confined to the external portion of one lateral lobe, so that the symptoms given, such as ataxia and nystagmus, are not marked or are not present at all. I have seen but little of the frontal ataxia of Bruns; so little indeed as to make me doubt-

ful of its existence as a true ataxia. The symptom when present is probably a pseudoataxia due to the impaired mentality of the patient in consequence of which his powers of attention and inhibition are so affected that he does not govern his movements quite normally. When a prefrontal growth is situated on the left, mental symptoms of a distinctive character are present, these being absent in cerebellar growths. The cerebellar patient is often feeble in pursuing his mental processes, which, however, are in themselves quite clear. If the prefrontal tumor invades backward, aphasia, agraphia, and unilateral motor paralysis may ensue.

As indicated when discussing the subject of nystagmus, disorders of ocular movements, and especially of associated movements, are among the most frequent symptoms of cerebellar disease. Various cranial nerve symptoms are often observed in tumor of the cerebellum, but these are not necessarily present. They are the result either of pressure in the case of tumors of large size and marked density or of the invasion of the oblongata and pons and the nerve roots by tumors situated toward the inferior surface of the cerebellum. I am not speaking here of the special forms of tumor of the cerebellopontile angle, as, for instance, those which arise from the eighth nerve, but of growths which originate in the cerebellum proper. Neural symptoms when present are of much importance in questions of focal diagnosis and of prognosis; in the former in deciding the side on which the lesion is situated, in the latter by pointing to a less favorable outcome than when the neoplasm is confined to the substance of the cerebellum.

The nerve symptoms may be referable to any of the cranial nerves or their connections from the third to the twelfth. Among the most frequent are those indicating paralysis or paresis of associated ocular movements, paresis of the musculature supplied by the sixth or the seventh nerve, impairment of hearing from implication of the cochlear portion of the eighth nerve, disorders of taste due to involvement of the glossopharyngeal or chorda tympani, and loss or perversion of sensation because of trigeminal disturbance. The nerves, their roots, or the tracts with which they are connected in the oblongatopons may be involved separately or conjointly. When the neural symptoms are due to pressure they are probably usually to be referred to direct nerve or nerve root involvement. While unilateral symptoms may point to true nerve implication, this distinction is by no means a sufficient one, as tumors of the cerebellum not infrequently

involve jointly one lobe, one peduncle, and one side of the oblongata or pons.

Among the pontooblongatal pressure symptoms which may result from a cerebellar tumor are hemiparesis and vasomotor, cardiac, and respiratory disturbances. Convulsions, unilateral or general, but more commonly the latter, with unconsciousness, have occurred in a considerable percentage of the cases which have come under my observation.

With our present knowledge and views regarding the anatomy and physiology of the cerebral olfactory apparatus, it is at times difficult to determine how loss of smell, which is common in cerebellar tumors, is produced. In some cases it may originate in much the same way as optic neuritis and blindness occur, that is, from neural inflammation or from nerve choking.

With regard to the deep reflexes, little that is of value in focal cerebellar diagnosis is as yet at our command. We have observed the knee jerks lost, exaggerated, crossed, and differing on the two sided either as regards loss, impairment, or increase. Unilateral differences are sometimes of corroborative value when the question of the side on which a tumor is situated is under consideration. In one of the cases appended, for instance, the knee jerk was exaggerated on the side opposite to that on which the tumor was presumably situated, probably because the neoplasm exerted pressure downward on the pyramidal tract before its decussation. The Babinski response is usually absent, although it was present on the side opposite the lesion in one case. The superficial reflexes are usually unchanged.

Incontinence of urine and feces is present in a few cases apparently as symptoms referable to the presence of the tumor. Such incontinence is of course present in cases of tumor of the brain, no matter what its situation, when the disease has advanced to such a point, or the suffering of the patient has become so great that his mind is obtunded.

Other symptoms which have been occasionally recorded in cases of tumor of the cerebellum are polyuria, glycosuria, and muscular wasting.

In the discussion of the papers of Bruce reference is made to the fact that tumors of one lateral lobe of the cerebellum may in some instances not give rise to symptoms, and, as indicated by Bruce, this is in those cases of lateral lobe disease in which the lesion does not extend inward far enough to invade the cerebellovestibular or cerebellospinal apparatus. This is not, however, the only explanation of cerebellar lesions without

cerebellar symptoms. In other cases of very slowly developing tumors the cerebellum gradually accommodates itself to the lesion. It is well known that cases both of cerebral and cerebellar tumors are recorded in which the growths have undoubtedly been present for many years, and the fact was not discovered until they were unexpectedly revealed by necropsy.

Bruce, as already indicated, has also called attention to the fact that a tumor symmetrically disposed as regards the vermis, that is so developing as to uniformly implicate both halves of the vermis and equally the adjacent portions of the lateral lobe may not cause marked disturbance of equilibrium. Those cases of tumors of parts adjacent to the cerebellum, like the quadrigeminum, for example, in which symptoms are not present, although necropsy seemed to show that the cerebellum was markedly compressed, can only be explained on the theory of compressed brain substance accommodating itself functionally to the gradually developing conditions. The same thing is observed in a notable degree in some cases of internal hydrocephalus in which, although the brain is almost reduced to a shell, the cerebral centres and tracts continue to functionate.

With regard to cases such as have been recorded by Spiller and others, and which are referred to by Weisenburg, in which a large portion or almost the entire cerebellum has been absent or sclerotic, some evidences of the lack of cerebellar influence will usually be found on close investigation.

In a series of eight cases, Nonne has reported three cases which presented the symptoms of tumor of the cerebellum. The symptoms of brain tumor disappeared either under mercurial treatment or spontaneously. Nonne believed that in none of them was syphilis present. Partial nerve atrophy was left in some of the cases. Nonne,¹¹ in his discussion of the cases, excluded such diagnoses as encephalitis, meningitis, abscess, thrombosis, multiple sclerosis, chlorosis, nephritis, intoxications, and infections, also syphiloma and tubercle. He also believed that they were not cases of hydrocephalus, although he was somewhat doubtful on this point.

In two cases of tumor not situated in the cerebellum, but so located as to obstruct the ventricular outlets, hydrocephalus was produced and the symptoms of cerebellar tumor were present. In three other cases in which no signs of internal hydrocephalus were present, cerebellar symptoms were exhibited. The necropsy in these cases showed absolutely nothing.

Cases such as these must be borne in mind when considering the diagnosis of a tumor of the cerebellum.

TUMORS OF THE CEREBELLOPONTILE ANGLE.

With regard to the connections of the growths with the nervous system, at least two forms of tumors are found in the cerebellopontile angle or recess, and this fact should be recognized when surgical procedure is contemplated. In the first place, the tumor mass may involve the substance of the cerebellum or one of its peduncles, and the oblongatopons, and, secondly, the tumor may originate in one or two of the cranial nerves and be largely confined to them, the acoustic being especially the seat of such growths. With regard to tumors in both the substance of the cerebellum and of the bulb, many have been put on record and several have been seen by the writer. In a case of multiple sarcomatosis for several weeks under my care, and later passing into the hands of Dr. Spiller,¹² who records the case in full in a paper on multiple sarcomatosis, tumors, probably sarcomatous, involved the nervous substance in both cerebellar recesses, numerous other tumors being present in other regions both of the brain and spinal cord. When a tumor involves somewhat deeply the substance of the cerebellum and pons, it can only be partially removed, and even to accomplish this it will be necessary to assume considerable risk, as the operation is both difficult and dangerous. The cerebellopontile tumors most amenable to operation are the fibromata of the eighth nerve, which will next be briefly considered.

Besides reviewing the literature of the subject, Fraenkel and Hunt have recorded five cases of tumors of this kind with necropsies. With regard to the particular nerves on which these tumors occur, they say that "the eighth shows a marked predisposition and is most frequently involved, rather rarely on both sides. The trigeminus is next in order. The facial is believed by some to be occasionally the seat of these tumors; its proximity to the acoustic nerve renders pathological decision difficult." One point of great importance with regard to these tumors of the acoustic nerve is their peculiar formation, the manner in which they are encapsulated and the ease with which they can be removed with operation if they are or become accessible through the work of the surgeon. They are usually oval or rounded and vary in size, some being as large as a hen's egg. They are attached to the nerve trunk, which has undergone atrophy because of their presence.

¹¹ Nonne, *Deutsche Zeitschrift für Nervenheilkunde*, Vol. lvi, 1904.

¹² Spiller and Hendrickson, *Am. Jour. of the Med. Sci.*, July, 1903.

The pathology of fibromata of the acoustic and other cranial nerves is fully considered by Weisenburg.

Although an acoustic neurofibroma is so closely related to the brain stem as to be within a few millimetres of it, nevertheless the symptoms of bulbar involvement may be entirely absent. This has been pointed out by von Monakow, in whose case vomiting, difficulty in deglutition, and bulbar disorders of circulation and respiration were entirely absent. Von Monakow¹⁸ indicates as the best diagnostic points for a neurofibroma of the acoustic, the absence of such symptoms as vomiting, dysphagia, etc., on the one hand, and on the other hand, the presence of general symptoms of cerebral tumor, such as headache, vertigo, and choked discs in association with cerebellar ataxia, rapidly developing deafness, paresis of the seventh and fifth nerves on the same side as the deafness, with associated ocular palsy, also on the same side, dysarthria and Gerhardt's symptom being absent. In such cases in addition, peripheral ear disease should be excluded. If ataxia is present, the tendency will usually be to deviate or fall toward the side of the lesion.

In the five cases of cerebellopontile nerve tumors reported by Fraenkel and Hunt, operation was attempted in only one; it would probably have been successful in one or two others if the procedure had been undertaken at the right time. In the case on which operation was performed the growth was nodular, was in the left ponto-oblongatal cerebellar space, and was of about the size of a hen's egg. It was broken up by the index finger and the fragments removed. The patient died of symptoms pointing to central cardiac and respiratory disorders.

Two cases of fibromata of the acoustic, of which photographic illustrations are given in the paper of Dr. Weisenburg, have recently fallen under my observation. In one case an operation was performed over the cortical facial region and a lesion was found in this position. The main lesion, however, was undoubtedly the tumor of the cerebellopontile recess. The chief focal symptoms were one sided deafness, tinnitus, facial monospasm, hypæsthesia on one side of the face, nystagmoid movements, slight paresis of right abducens, vasomotor and cardiac disturbances; severe headache, nausea, vomiting, and optic neuritis were also present.

The fuller history of this case is given in the paper of Dr. Weisenburg. The notes of the other case are appended.

In this case a fibromatous tumor of the acoustic was unexpectedly found at necropsy in the

cerebellooblongatopontile space. The record of this case is given to show how such a growth can be entirely overlooked. The necropsy revealed not only the presence of this tumor, but also marked hydrocephalus, which may have accounted for most of the symptoms presented by the patient, such as spasticity, mental hebetude, headache, and optic neuritis, but it was insufficient to account for them all. The patient's hearing on each side was never positively determined. Examinations for any of the special senses were unusually difficult after she came to the hospital, and grew more and more so as days advanced. It is probable that she had loss of hearing on the side of the growth.

The patient was a woman forty-eight years old. The facts which could be obtained regarding her history before admission to the University Hospital were meagre. It was learned, however, that three or four years before she had an attack which was supposed to be one of grippe, and following this, inflammation of the middle ear on both sides accompanied by pus, which required the membrane of the tympanum on the right to be opened. This history clouded the diagnosis as regarded involvement of the acoustic nerve by intracranial neoplasm; in addition, as already stated, it was difficult to make a careful examination, owing to her mental state.

It was also learned from one of her physicians that two or three years before coming into the hospital she had complained of a feeling of cushions under her feet, and that at this time she had some anesthesia of the right side of the face and of the right hand and leg. About a year before admission her legs began to grow stiff and she had sharp shooting pains in them. This stiffness increased and she had some difficulty of gait. At times she had been troubled with double vision. She had always been a sufferer from headache, but it was stated that this had not increased. For a year she had had difficulty in controlling her bowels and bladder.

Examination showed the patient to be dull and apathetic. Her memory was greatly impaired, she was easily confused, and it was at times almost impossible to fix her attention. Her legs were markedly spastic, being flexed at nearly a right angle. The Babinski reflex was not present. The knee jerks were exaggerated. The left pupil was considerably larger than the right. Sensation was apparently everywhere preserved, although it was difficult to test for fine differences in sensation. Facial and masseter paralysis were not present, and except as above noted, the examinations, which were thoroughly made, were negative. An eye examination by Dr. de Schweinitz showed double choked discs and many hemorrhages; there was no apparent muscle palsy.

An operation was performed by Dr. Frazier in this case for the relief of her general symptoms, the prefrontal region being selected. The ventricle was reached a short distance from the surface after the trephine opening had been made.

¹⁸ *Berl. klin. Wochenschr.*, August 13, 1900, No. 33, p. 721.

Probably a diagnosis could have been made in this case if the patient had been studied early and continuously. Late in the case the general symptoms were those of brain tumor, but the only focal symptoms which could be clearly determined by a study of the case and its history were the anæsthesia of one side of the face, and the probable impairment of hearing. Some of the symptoms, like the double spasticity, paræsthesia of the feet, and sharp shooting pains, seemed to point to spinal disease.

(To be concluded.)

Chronic Colitis and Its Treatment Based Upon Surgical Experience.—Von Beck, in *Fortschritte der Medizin*, for October 1, 1904, thinks the treatment of chronic colitis should be based mainly upon its ætiology. The physician should not be satisfied with such a diagnosis as chronic catarrh of the large intestine of nervous origin, for the nervousness is usually the result of the colitis. In 500 cases which came under his observation he found chronic inflammation in the region of the large intestine in 394 of them. The cure of the colitis depended in greater or less degree upon the removal of this inflammation. The most common varieties of this inflammation were perityphlitis, disease of the stomach and gall bladder, and disease of the female genital organs. Other causes which were discovered in certain cases were carcinoma, tuberculosis, and actinomycosis. In five of the cases in which there were persistently recurring attacks of colon disease, notwithstanding vigorous dietetic and other methods of treatment, the entire colon was excluded by anastomosis of the sigmoid flexure with the ileum. This procedure produced satisfactory results. On the basis of this experience the author offers the following propositions with reference to the treatment of chronic colitis:

1. The cause of colitis must be determined in every case and the treatment must be based upon the ætiology.

2. If the colitis is due to inflammatory processes in the vicinity of the colon, their fundamental foci must be controlled or removed, and operative procedures must be employed if possible.

3. If the causes are to be found in carcinoma, tuberculosis, or actinomycosis of the colon, the colon disease must be attacked by radical or palliative operative measures, including resection, enteroanastomosis, or colostomy.

4. If the colitis is due to a cause of some other character, dietetic or other symptomatic treatment may be attempted.

5. If the colitis is obstinate and yields to none of the methods which have been mentioned, it may be necessary to exclude the entire colon by anastomosis of the sigmoid with the ileum.

The author believes, as the result of his observation, that the large intestine in man is of minor importance, is a relic from the herbivora, and is so susceptible to chronic inflammations and malignant tumors that its exclusion can be well tolerated and can lead to no bad results.

THE CEREBELLAR SEIZURE (CEREBELLAR FITS) A SYNDROME CHARACTERISTIC OF CEREBELLAR TUMORS.

By CHARLES L. DANA, M. D.,

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Among the most important contributions of recent periods to the symptomatology of cerebellar, or, at least, of posterior fossa tumors, are those of Dr. Fraenkel and Dr. Hunt, on the fibromata of the cerebellopontine angle. While the fact that tumors are frequently situated at this spot has long been known, and their symptomatology has been, to some extent, described, the fact that the existence of tumors in this position can often be recognized in the very early stage, that they are usually benign fibromata, at least at the beginning, and that they are often pedunculated, and could be very easily removed, if they could be safely reached, has been brought out very clearly and convincingly. The symptomatology of these "acoustic fibromata" thus forms a distinctly new chapter in the description of tumors of the posterior fossa. Knowing now their insidious beginning and slow onset, the watchful physician should learn to recognize them very early, and it is to be hoped that the time will come when the surgeon can always successfully remove them, as has already twice been done.

Since the original papers of Fraenkel and Hunt, the last of which appeared not many months ago, a case was recognized and observed by Dr. Waterman, the house physician in my wards, at Bellevue, and another case has been observed by Dr. Hunt, and verified by autopsy, while a third case is now being operated upon in successive stages by Dr. Woolsey. The article of Dr. Fraenkel, which accompanies this, is devoted in part to a further exposition of the symptoms of this group of what may still be called "cerebellar" tumors, since they, at least, produce largely cerebellar symptoms. It has been found, since the publication of the articles of these two physicians, that the problem is not always perhaps such a simple one as had been hoped, because, at times, in addition to the presence of a pedunculated fibroma in the cerebellopontine angle, there may be another tumor in the substance of the cerebellum. Furthermore, the tumors of this space, though usually fibromatous, may sometimes be tuberculous or sarcomatous or even bony, and there may be a picture of a cerebellopontine angle tumor, having the accompaniments of rapidity of progress, and other symptoms, which indicate that it does not belong strictly to the fibrous and pedunculated type.

Some years ago I had under observation a case in which I made the diagnosis of tumor of the

cerebellopontine angle, but in which the course of the symptoms was such as to lead me to think that it hardly belonged to the pathological group, that the authors referred to have described. The development of the symptoms, and the course of the disease, were so characteristic that no doubt of the existence of the tumor and its location could exist. My apology for presenting the story now is that it adds something to the symptomatology of tumors in that region and especially illustrates the phenomena of cerebellar seizures, which I shall refer to later, which I believe form a distinguishing syndrome of cerebellar disease, and more particularly perhaps of those tumors lying mainly outside the cerebellar.

The patient was a lady, aged 29 years, unmarried. Her mother was a healthy woman and her father a large, strong man, but he had become an alcoholic in later years. The brother and sister were well. The patient herself was born at full term (a fact which I mention because in one case of cerebellar tumor the patient was a seven months' child, and I was asked to state if that were a causative factor). The girl was of a nervous temperament, but grew up in fairly good health, and had no particular infections, aside from the ordinary ones of childhood. At the age of 15 years she had a polypus removed from her throat. At the age of 27 years she began to suffer from headaches and vomiting, and at the same time, or a little later, she suffered somewhat from deafness in the right ear. About six months later, the headache having continued, she developed some diplopia, and a year from the beginning of her trouble she lost the sight of the right eye. The deafness, meanwhile, was steadily increasing in the right ear. At this time she was seen by a neurologist, who made a diagnosis of cerebellar tumor. About a year after the onset of the symptoms she began to lose the sight in the left eye, and at this time she began also to have some ataxia in her gait. Thus, there was a gradual development of symptoms, first, of headache, occasional vomiting, deafness, ocular motor symptoms, optic neuritis, first in the right, then in the left eye, and awkwardness of gait. She had all along had occasional very annoying attacks of tinnitus and vertigo, but at the end of the first year these attacks began to be more frequent and severe, and they were, in fact, the most characteristic and distressing symptoms of her malady from that time on. She would have suddenly "rushes of blood to the head," during which she would feel a terrific roaring and crackling in the head and great dizziness, so that she could not stand, and would sink suddenly to the ground with at times loss of consciousness, but without nausea. The face was flushed and the pulse rapid. The attacks would last from five to thirty minutes. During this second and last year of her illness these seizures would come on every week or two, sometimes oftener; rarely she went three or four weeks without any. Usually they occurred in the day time when she was awake, but once or twice they came on while she was sleeping at night. As the disease

progressed they became more severe until, toward the end, they were always accompanied by loss of consciousness, and a stiffening and irregular tonic spasm of the limbs, but without any actual convulsions or forced movements. She would, in other words, suddenly fall down, and lie unconscious in a sprawling attitude, such as one would expect in a person with an injured cerebellum. There was no impairment of the intelligence at any time in the course of the trouble. I saw her only during the last three months of her illness. She then had an unsteadiness and awkwardness of gait, increased somewhat by her complete blindness. There was no paralysis, though the right arm was slightly weaker than the left, and there was no ataxia in the arms. The knee jerks were even and a little exaggerated. There was no anæsthesia or paræsthesia of the extremities. The optic atrophy in both eyes was complete. Deafness had extended from the right to the left ear, but the hearing was not entirely lost in the left ear. The sense of smell was lost, but that might have been due to some previous condition. The sense of taste was present. The ocular movements were irregular and ataxic, but there were no distinct paralyses of the ocular muscles. Toward the last there developed a paresis of the right side of the face, and a slight anæsthesia of the fifth nerve, with neuralgic pains on the same side. The patient finally died of exhaustion. The cerebellar symptoms, and the progressive involution of the eighth, seventh and fifth nerves, showed conclusively, it seems to me, the seat of the lesion.

The particularly interesting clinical symptom is that connected with the seizures which this patient had. At the beginning they were not much different from the ordinary vertigo and tinnitus, which come on with cerebral and cerebellar tumors. But their later development, into what may be termed strictly cerebellar or cerebellopontile seizures, seems to be an instructive feature of the case. They were, I presume, due originally to irritation of the labyrinth, and later to pressure upon and irritation of the pons and cerebellum. The patient had no forced movements, or any particular tendency to walk to one side more than the other.

The vertiges and seizures of cerebellar tumors have seemed to me a subject of special interest, and one about which not much has been written. Reviewing my own experience and that of other writers, I find that this cerebellar syndrome is not infrequent. A patient under observation now with cerebellar tumor experiences suddenly a sense of pain beginning at the occiput, and running over the brow, followed at once by tinnitus, vertigo, apparent loss of consciousness, and instant sinking to the ground, not so much due to loss of consciousness as, apparently, to a sudden absence of cerebellar innervation, and a total loss of power of equilibrium.

A patient with acoustic fibroma, also now under observation, has a sudden increase in tinnitus, vertigo, and blackness before the eyes, and he has to seize something or he would fall. In a few severer seizures he entirely lost consciousness, fell to the ground, and remained for several minutes in a tonic spasm. In cases of cerebellar tumor one characteristic of the vertigo is that it is brought out on sudden change in the position of the body. This

was not seen in the extracerebellar cases. In pons tumors there is sometimes a sudden short coma, and we may attribute the short seizures with loss of consciousness to involvement of the pons and pressure upon its vessels. General convulsions do at times occur in cerebellar tumors when these are large and rapid in growth, but they are not characteristic or frequent in cerebellar disease. Changes in pulse rate and respiration sometimes accompany the cerebellar seizures, but they also are not frequent or characteristic.

But the special syndrome of cerebellar and posterior fossa tumors causing irritation and pressure is seizures characterized by:

1. Loud, high pitched tinnitus or roaring and crackling noises, suddenly increased in intensity.
2. Vertigo usually objective and with or without forced movements.
3. A tendency to drop or fall in one direction or another instantly to the ground.
4. Sometimes sudden blindness and loss of consciousness.
5. In severe attacks, tonic spasms generally of an extensor type. This lasts from one or two to five or ten minutes.

A closer study of the subjective states of individuals with cerebellar tumors will, I believe, show more strikingly than is supposed the uniformity of the tinnitus seizure, the severity of the vertigo, and the tendency to lose consciousness or vision for a moment. The sudden dropping down or falling to one side is a feature also that I believe will be found not uncommon. These seizures, I may add, are probably more common and typical in the older patients than in young children.

It may be said that this syndrome is essentially only a labyrinthine vertigo, but I believe it to be more than that. The sudden falling, a forced movement, the loss of consciousness, the tonic spasm are very rare in simple labyrinthine disease. In this latter condition there is often also a tremendous subjective vertigo, nausea, and a compelling desire to lie down and keep very still. The cerebellar "fits," I may add, I have seen rather typically in a case of hereditary cerebellar defect.

53 WEST FIFTY-THIRD STREET.

Clinton County, N. Y., Medical Society.—The following officers have been elected for the ensuing year: President, Dr. G. D. Dare; vice-president, Dr. J. H. LaRocque; secretary, Dr. D. S. Kellogg; treasurer, Dr. Frank Madden; delegate to State medical society, Dr. J. H. LaRocque. After the close of the meeting the Plattsburgh Physicians' Club was organized, with the following officers: President, Dr. Frank Madden; secretary, Dr. T. A. Rogers; committee on entertainment and programme, Dr. Silver and Dr. Rogers; committee to draft by-laws, Dr. Madden, Dr. Fairbanks, Dr. Ransom, and Dr. Woodruff. The first meeting of the club is to be held January 24th, at the home of Dr. Frank Madden.

REMARKS UPON THE SURGICAL ASPECTS OF TUMORS OF THE CEREBELLUM.

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ANATOMICAL CONSIDERATIONS.

The difficulties that attend any attempt on the part of the surgeon to expose, much less remove tumors from the cerebellum, differ very materially from those encountered in tumors of the cerebrum. Speaking upon this subject on another occasion I said that it seemed as though, in encompassing the cerebellum with such large cranial sinuses, nature has intimated that this organ was never to be subjected to exposure at the hands of the surgeon. When one takes into consideration the position of the lateral and the occipital sinuses with relation to the only means of access to the cerebellum, and the plane of the tentorium cerebelli, one realizes at once that there are especial technical difficulties in surgical attacks upon the cerebellum. (See Fig. 1.) Furthermore, it must be remembered that there are very distinct dangers attending manipulations upon the cerebellum and more particularly, if, in an attempt to get sufficient exposure to excise a tumor, one should make too much traction upon the medulla oblongata. Even when one has removed a considerable portion of the skull below the superior curved line, there will be exposed to view but a small portion of the gross surface area of the cerebellum. Neither the upper surface, that is in relation with the tentorium cerebelli nor the anterior surface which is in relation with the petrous surface of the temporal bone, nor the mesial surface will be exposed to view by this procedure; whereas in the cerebrum the entire cortex and a considerable portion of the base can be laid bare by a very simple osteoplastic operation. Furthermore the cavity of the cerebellum is very much smaller than that of the cerebrum, so that there is very much less space in which to conduct the manipulations necessary either for exposure or removal of the tumor. In the adult skull one hemisphere of the cerebellum is contained in a cavity whose greatest dimension is only 10.5 cm. In addition to the difficulties that are associated with operations in a space so small and difficult of approach one is hampered further by the fact that even under normal conditions the cerebellar hemispheres are compressed in a relatively smaller space than the hemispheres of the cerebrum, and are under such tension that when tension is relieved by the reflection of a dural flap the cerebellar tissue almost invariably protrudes through the opening. The tissues cannot be displaced or retracted neither to the same degree nor with as much ease as can

the cerebral lobes. Thus the operator will be embarrassed in attempting to expose a lesion deeply situated, as for example at the cerebellopontile angle, a favorite seat for tumors.

In addition to the larger sinuses, the lateral and occipital, certain tributaries of sufficient size to cause, when injured, profuse and sometimes alarming hæmorrhage, penetrate that portion of the occipital bone which must be removed. The most constant of these is a branch of the lateral sinus which passes obliquely through the skull and appears in the surface between one and two centimetres to the inner side of the mastoid process; occasionally one or more will be found just below the superior curved line in the neighborhood of the occipital protuberance.

The occipital bone overlying the cerebellum is very variable in thickness. In the region of the mastoid process and of the occipital protuberance the bone is exceedingly thick, but from these two processes the thickness of the bone gradually decreases until at a point about midway between the two it will be found comparatively thin.

INDICATIONS FOR OPERATION.

In general terms it may be said that the indications for operation in cases of suspected tumors of the cerebellum do not differ materially from those which have been endorsed in the treatment of tumors of the cerebrum. In both classes of cases once the diagnosis has been made, operation if it is to be performed at all, should not be postponed for any length of time. Physicians are too prone to put off the time indefinitely almost and to spend months in the often fruitless administration of antisyphilitics, or to spend an unwarrantable amount of time in efforts to establish a diagnosis beyond a peradventure of doubt, or to localize the tumor with mathematical accuracy. Kocher says there should be less delay in bringing to the surgeon a lesion of the encephalon, whether it be a neoplasm, tubercle, gumma or abscess. "There is no more excuse to-day for delaying operation in cases of tumors because the tumor could not be exactly localized, than there would be for declining to operate upon a case of intracranial hæmorrhage because one was unable to determine positively the seat of the clot. Failing in one place to find the tumor, other trephine openings may be made or a very extensive area may be exposed by an osteoplastic resection. How often, Kocher says, has one trephined over the anterior branch of the middle meningeal artery when the autopsy revealed the clot in the region of the posterior branch." The surgeon might come in for his share of criticism because of his lack of precise knowledge concerning the neurological aspects of the disease. In order that the very best

results be obtained the internist and the surgeon must work hand in hand in this as well as other fields. In cases of suspected tumors of the viscera an exploratory operation is now regarded as perfectly justifiable, and why? Because physicians have come to realize that if operation is postponed until the presence of the tumor can be demonstrated by palpation or other means, the lesion is by this time so extensive that the time for a radical operation has passed. As the exploratory operation is recognized as the surest, safest, and most reliable diagnostic measure in tumors of the stomach, it should be considered of equal value and importance in tumors of the brain. Postponement of operation should be discountenanced if for no other reason than because in cases of long duration patients with tumors of the brain make very poor subjects for operative intervention; the operation is of itself one of considerable gravity and the condition of the patient should be so good as to enable him to withstand its depressing effect.

Unfortunately tumors of the cerebellum are in the majority of instances more difficult of localization than tumors of the cerebrum and in many cases localization is well nigh impossible. Instead of regarding this, as has been the case so often, as a reason for delay, the difficulty of localization should be considered rather as an indication for an early exploratory operation. Just so soon as the diagnosis is with a reasonable degree of certainty assured, just so soon should the operation be performed, providing other measures have failed and the operation per se is not contraindicated.

Operation as a Palliative Measure.—Under certain circumstances we despair of being able to perform a radical operation; either the tumor cannot be found or cannot be localized; it may be inaccessible, or it may have attained such proportions as to make its removal impracticable. In any of these contingencies a palliative operation is justifiable and in some cases should be regarded as imperative. The headache, vertigo, and vomiting, so constant in cerebellar tumors, make the life of the patient pitiable and yet he may be relieved of all of these symptoms for a considerable time by adopting such measures as will relieve pressure. But the strongest argument against delay of operation in the treatment of cerebellar tumors is the possibility of being able to save the patient's vision: choked disc is one of the most constant symptoms and if permitted to continue unrelieved too long, an optic neuritis will develop and the time for complete or even partial restoration of vision will have passed. Nothing could be more striking than the results of palliative operation in one of our patients (Case 4). The patient before the operation suf-

fered from intense headache, was almost blind, and vertigo was so pronounced that he could not stand without support. The tumor could not be found but a large portion, perhaps one third to one half of one cerebellar hemisphere, was removed. His headache was relieved at once, within a week he was able to see as he lay in bed small specks on the ceiling, and on getting up was able to go about with but very little instability. Nothing could be more gratifying to the physicians in attendance than the relief which was afforded the patient by this comparatively simple procedure. In one of Krause's cases, after a palliative operation, the patient was relieved of many of the subjective disturbances and lived for a period of three years in comparative comfort.

Operative Technique.—Regarding the position of the patient, it is advisable to operate with his head and shoulders considerably elevated. This will diminish the hæmorrhage to a certain extent. The effect of the elevated position upon the blood pressure may be counteracted by applying a firm bandage to the lower extremities. In order to afford greater freedom for the necessary steps of the operation, I use an extension—a very simple appliance—which is easily attached to the operating table and upon which the head rests (see Fig. 2). While using it in all operations upon the brain I find it most serviceable in operations upon the cerebellum where the quarters are especially cramped. In two operations upon the cerebellum Schede placed his patients in the sitting posture, leaning far forward. This posture, according to Schede, diminishes to a considerable degree the hæmorrhage, but the position is a very awkward and difficult one in which to retain the fully anæsthetized and relaxed patient. The patient may be placed upon his side but it is difficult to retain the patient in this position and there is always the tendency of the patient to roll over on his side, in which position the respiratory act will be embarrassed, and, inasmuch as many of the sudden deaths are due to respiratory failure, it is advisable to take such precautionary measures as will avoid any disturbance of the respiration.

Incision.—The incision should begin at the tip of the mastoid process on the affected side and follow a line parallel with, but one centimetre above the superior curved line, to the median line. From this juncture a vertical incision may be made downwards to enable one to reflect the flap sufficiently to expose the field of operation. Hæmorrhage from the scalp in this region is so profuse that some precautions should be taken to reduce to a minimum the amount of blood lost. A very excellent plan is to incise but an inch or an inch and a half at a time, proceeding at once to arrest the hæmorrhage in one

section before incising the next. Considerable bleeding may be prevented if one reflects the pericranium simultaneously with the overlying muscles and their attachments. If this precaution is taken the muscles will not be mutilated to the same extent as would be necessary if an attempt was made to reflect them independently of the overlying periosteum. What may be not only a troublesome, but an alarming feature is the hæmorrhage from the various sinuses that traverse the occipital bone; these have already been referred to in the section on the anatomy. Suffice it to say that one should always be prepared with suitable means for controlling the bleeding from this source, since if uncontrolled, the patient may lose in a very short time a pint of blood or more. In one of our cases (Case 5) two anomalous sinuses almost as large in diameter as a quill were found near the occipital protuberance. Before the hæmorrhage could be checked the patient lost so large a quantity of blood that it was deemed advisable to suspend further interference until the patient had recovered fully from the effects of this complication. Following the administration of appropriate remedies, the patient reacted within a reasonable time, but about twelve hours after the operation, suddenly and without any warning, the cardiac and respiratory functions failed and within ten minutes the patient was dead. Whether the loss of so much blood had anything to do with the termination of the case, is a matter purely of speculation. This instance is cited solely as an illustration of what may be a very serious complication, namely, hæmorrhage from the venous channels traversing the occipital bone. One should try to control the bleeding first with Horsley's wax and if, as in the case above referred to, this fails, the outlet of the sinuses should be closed with plugs of wood, which can be whittled to the proper thickness and length from ordinary swab sticks.

There need be no anxiety about the cranial sinuses as a possible source of hæmorrhage. The lateral sinus is fully exposed to view when the bone has been removed, and injury to this structure could result from carelessness only. The occipital sinus does not come within the field of operation unless one intends to remove the intervening bone, in which case the sinus will be exposed to view, and if necessary may be ligated (see Fig. 5).

Removal of Bone.—With Krause, Schede, and others I believe that it is unnecessary to preserve the overlying bone, therefore, the osteoplastic flap, which has done so much to revolutionize the surgery of tumors of the cerebrum, is not to be employed in the exploration of the cerebellum. As both V. Bergmann and Kocher have said, the muscles and

aponeurosis are thick enough at this point to offer adequate protection to the underlying structures and to make bony closure of the opening unnecessary.

An opening in the skull is made preferably with a chisel at a point about midway between the occipital protuberance and mastoid process. Here the bone is comparatively thin and as Foirier says this is the point of greatest safety. The opening so made is enlarged with rongeur forceps in all directions; outwards as far as one can go without opening the mastoid cells, upwards until the lateral sinus is entirely exposed to view, inwards to within a centimetre of the median line, and downwards to a point at least one centimetre distant from the foramen magnum. The removal of bone will be facilitated by using rongeur forceps, the blades of which are at an angle of about 65 degrees with the handles. As one approaches the region of the lateral and occipital sinus, the forceps should be laid aside for a moment and a dural separator introduced to separate the dura and the sinuses from the skull.

I prefer the chisel to the trephine for making the initial opening for two reasons: first because the opening can be made more rapidly with a chisel, and secondly because the operation of a trephine in this region is a somewhat awkward procedure.

Exploration.—After a dural flap, with its base downwards, has been reflected, one proceeds to search for the tumor, unless it has been decided to resort to the *two stage operation*. The principles which we have applied in deciding this question are precisely those which have been adopted in our operations for tumors of the cerebrum (see *American Journal of the Medical Sciences*, February, 1904). If, when the preliminary stages of the operation have been completed, the condition of the patient, as revealed by the blood pressure and pulse record, is one of depression or shock, the final stage of the operation should be postponed until the patient has reacted. Having decided to continue the operation the surgeon proceeds to inspect and palpate the surface exposed to view. If the cerebellar tissues protrude considerably through the opening once the dura is incised, the presence of a tumor or an internal hydrocephalus should be suspected. It should be borne in mind, however, that under normal conditions the cerebellum is under greater tension than the cerebrum, and when the dura is incised the normal cerebellum will protrude in many cases through the opening to a slight degree.

If the clinical symptoms, to which are added the presence of an anomalous condition revealed by the sense of sight or touch, lead one to believe the tumor is situated in the lateral hemisphere, the

subsequent steps of the operation should consist in an exploratory incision into the cerebellar tissue, and, if the tumor is found, in its complete extirpation. The impunity with which we can freely incise the cerebellar hemisphere without the risk of such disturbance of function as would follow a similar procedure in the motor area of the cerebral cortex should be borne in mind. A failure to find or expose a tumor of the cerebellar hemisphere because of an insufficient exploratory incision should be regarded as inexcusable unless the tumor was of very small dimensions. If on the other hand there is reason to believe the growth is situated at the cerebellopontile angle, a favorite site for cerebellar tumors, the subsequent steps of the operation will be attended with some difficulty. It may be possible in exceptional cases with the aid of a retractor to displace the cerebellar tissue sufficiently to expose the tumor, but in the great majority of cases one must resort to one of two methods to bring the tumor into view; either a portion of the cerebellar hemisphere must be removed or the ventricles must be punctured.

PUNCTURE OF THE VENTRICLES.

This procedure has been resorted to for two purposes, first as a purely palliative measure to relieve tension and again to relieve tension in order to render it possible to make a more thorough exploration of the cerebellar surfaces. Puncture of the ventricles is unfortunately an operation of unusual gravity and the danger attending it is so great in comparison to the possible benefit as to make it a procedure of questionable propriety. Many cases have been reported in which the results were disastrous. In one reported by Krause, a scalpel was introduced into the lateral ventricle, a drain introduced and about 200 c.c. of cerebrospinal fluid were withdrawn. The intracranial tension was relieved to such a degree that the operator was able to see the superior vermiciform process, but the patient collapsed immediately after the fluid was withdrawn. Heidenhain's experience was equally disastrous. Thinking he was dealing with an idiopathic hydrocephalus and that the relief of pressure would have a beneficial effect he tapped one lateral ventricle and the patient died suddenly on the night of the operation. Heidenhain attributed his death to the sudden disturbance of pressure. The operation has been practised by a number of surgeons, and in one instance with favorable results, but in the majority of cases the patient died immediately or soon afterwards.

LUMBAR PUNCTURE.

V. Bergmann attributes the relief which follows palliative operations for tumors of the brain more

to the escape of cerebrospinal fluid than to the removal of a large section of the skull. Therefore in those cases in which the pressure symptoms are very marked but the tumor cannot be localized he recommends the removal of the cerebrospinal fluid by Quincke's lumbar puncture. This procedure he says is much to be preferred to any others, but failing in this recourse should be had to direct puncture of the lateral ventricles. According to Oppenheim lumbar puncture is indicated in a very limited number of cases, chief among which are those in which the tumor is associated with an internal hydrocephalus and especially when the tumor encroaches upon the posterior fossa and threatens the life of the patient. In a series of 50 cases collected by Piolet (*Archives provinciales de chirurgie*, Vol. x, p. 728) lumbar puncture was employed in eight cases; in four patients there was transitory amelioration, and four died within a few days. The sudden disturbance of pressure is no doubt responsible for a large majority of the fatalities. In a few cases the fatal issue has been attributed to the pressure of the structure of the posterior fossa against the foramen magnum, an accident which could easily happen when the communication between the cerebral and spinal cavities was partly or altogether shut off and the vacuum created by aspiration drew the pons and medulla forcibly into the foramen magnum. If lumbar puncture is resorted to, such an apparatus should be used as Koenig suggested, in which the pressure is recorded while the fluid is being withdrawn. With this precautionary measure the danger of lumbar puncture would be reduced to a minimum. Fürbinger who is very much opposed to this practice attributes the deaths to pressure exerted upon the bulb by the arrest of cerebrospinal fluid from the ventricles at the foramen of Magendie.

CONTINUOUS OR INTERMEDIATE DISCHARGE OF CEREBROSPINAL FLUID.

The advisability of affording means for the escape of cerebrospinal fluid as a palliative measure might well be considered in connection with puncture of the lateral ventricle or lumbar puncture. There are cases on record in which, subsequent to operation, the flap has been punctured repeatedly for the purpose of relieving tension. After an exploratory operation, in which the tumor was not found, Terrier punctured the flap repeatedly and withdrew a considerable quantity of fluid, but the patient died in the third week after this form of treatment was adopted. Jaboulay noticed the beneficial effect attending the escape of cerebrospinal fluid through a fistula in the cicatrix and recommends the establishment of such a fistula in cases in which the improvement after operation was only

transitory or in which there was no improvement. Theoretically at least such a treatment should afford some relief from the effects of intracranial pressure and might be justifiable in inoperable cases, but one must bear in mind the constant danger of infection that must needs attend the presence of a communicative tract between the surface and the underlying structures.

EXPOSURE OF THE CEREBELLOPONTILE ANGLE.

To return to the question of exploration from which we digressed to consider the propriety of puncture of the lateral ventricles: To enable one to expose a tumor situated in the cerebellopontile angle two methods were proposed, tapping of the lateral ventricles, and removal of a large portion of the cerebellar hemisphere. The former method we disapprove of on the grounds that it is so fatal in its tendencies. The alternative on the other hand is attended with very different results. The impunity with which large sections of cerebellar tissue may be cut away not only without endangering life but without disturbance of function is an observation which was made by physiologists long ago. That the deduction naturally to be drawn from this bit of laboratory information has not been made use of by surgeons more generally is a matter of some surprise. The danger of exerting undue pressure or traction upon the pons or medulla in attempting to expose or remove the tumor is more to be dreaded than any other stage of the operation. It was only recently that Woolsey (*Annals of Surgery*, September, 1904) reported a case of neurofibroma of the acoustic nerve; the tumor was removed but the patient died three hours after the operation, and death was believed to be due to hæmorrhage within the pons. Woolsey was convinced that this was due to the traumatism indispensable to the frequent introduction and withdrawal of the fingers engaged in the removal of the tumor. Here is a case in which had a considerable portion of the hemisphere been removed prior to the attempts to extract the tumor it is more than likely that the unfortunate accident would not have occurred. My experience with this procedure has been limited to two cases which will be referred to again. In one of these (Case 2) a considerable portion—from one third to one half—of the hemisphere was removed deliberately in searching for the tumor, without any appreciable effect upon the patient's general condition. In another case (Case 4) the same practice was adopted with equally negative results in so far as the patient's respiratory or circulatory functions were concerned. In neither of these cases was the tumor found at the first operation, but the amelioration that followed was striking. At a second operation upon one of these (Case 2) the tumor presented

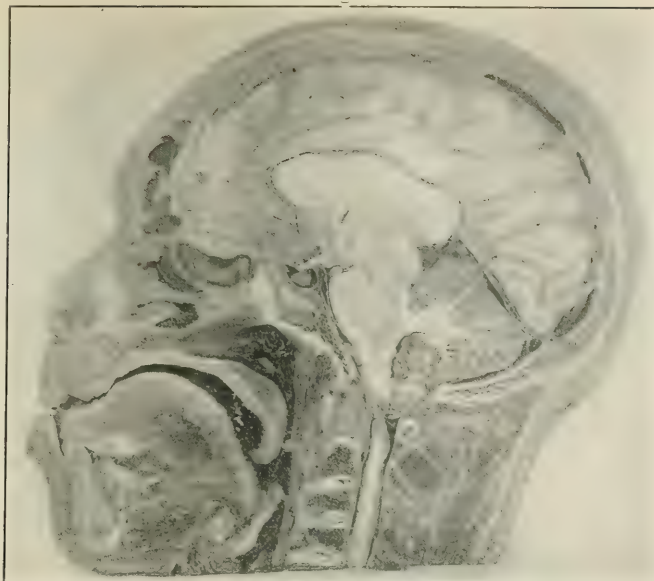


FIG. 1.—Vertical section of head, showing the comparatively small cavity in which the cerebellum is contained and its inaccessibility. Note the distance between the cerebellum and the cutaneous surface; note also the angle of the tentorium and the position of the lateral sinus.

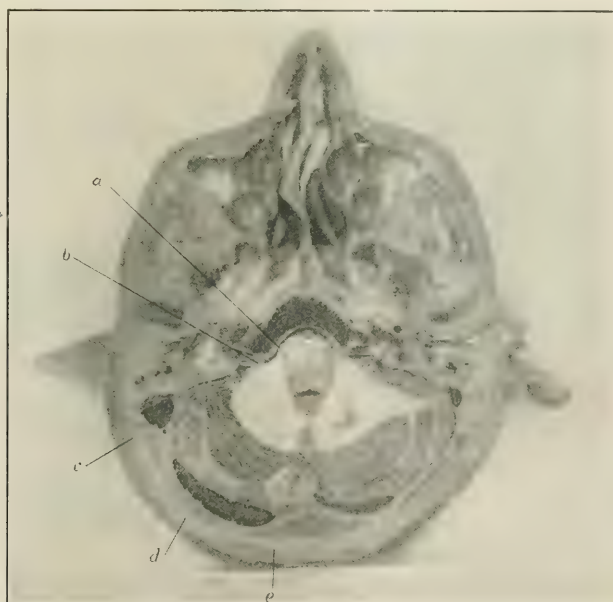


FIG. 3.—Photograph of a horizontal section of the head cut on a level with the external auditory meatus; *a*, representing a point at the cerebellopontile angle; *b*, the auditory nerve entering the internal auditory meatus; *c*, *d*, *e*, three points on the skull. Note the distance between point *a* and the points *c*, *d*, and *e* as illustrating the shortest route to the cerebellopontile angle respectively. The shortest distance from the skull to the angle is measured along a line drawn between *a* and *c*. The farther away from *c* or the nearer to *e* the greater will be this distance.

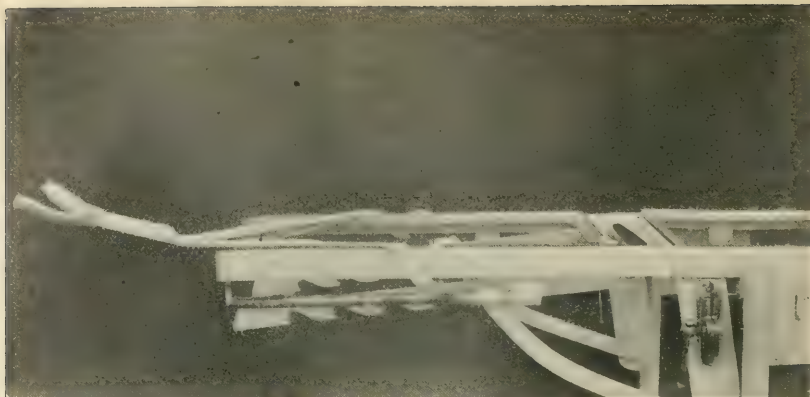


FIG. 2.—“A head rest” that may be used to advantage in operations upon the head. The device is a very simple one and does not require a screw or bolt to secure it in place.

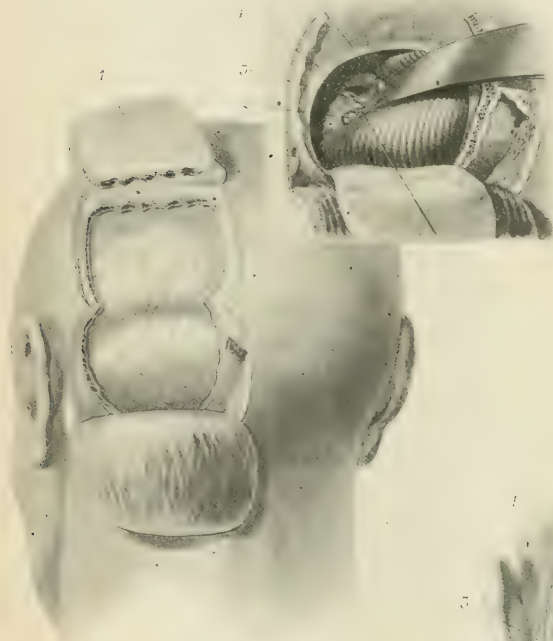


FIG. 4.—The larger figure to the left illustrates the operation for the combined exposure of one cerebellar hemisphere and the occipital lobe of the cerebrum. The smaller figure, above and to the right, illustrates the structures in relation to the anterior aspect of the cerebellum and the petrous portion of the temporal bone. Attention is called especially to the position of the 5th, 7th, and 8th cranial nerves. This drawing was made by viewing the structures from the lateral aspect, such an exposure as would be made in exploring for tumors of the cerebellopontile angle. 1. Osteoplastic flap reflected in an operation for the combined exposure of occipital lobe and cerebellum. 2. Ninth, tenth, and eleventh cranial nerves. 3. Auditory nerve drawn to one side by refractor in order to expose. 4. The facial nerve which lies directly beneath it. 5. The root of the trigeminus as it enters the groove at the apex of the petrous portion of the temporal bone.

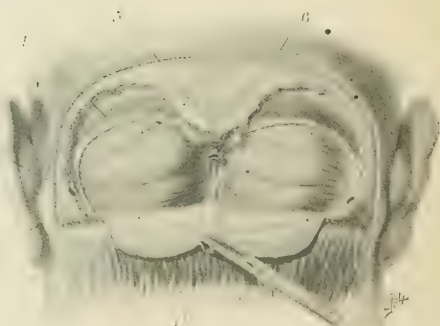


FIG. 5.—Operation for the simultaneous exposure of both cerebellar hemispheres, necessitating ligation of the occipital sinus. 1. The occipital sinus, which has been ligated previously and reflected with the dura. 2. Mastoid process. 3. A large tributary of the lateral sinus, invariably opened in cerebellar craniectomies and of varying dimensions; said to be sometimes as large as the lateral sinus. 4. Lateral sinus. 5. Occipital protuberance. 6. Occipital sinus.

itself upon the surface of the remainder of the cerebellar tissue and was removed without any difficulty. This experience at once suggested to my mind what would seem to be additional argument in favor of the deliberate removal of a large portion of the hemisphere; on the one hand serving as a means of affording adequate exposure with the minimum degree of traumatism to pons and medulla, on the other serving as a means of relieving intracranial tension temporarily, and at the same time, by removing a certain amount of resistance, of facilitating the growth of the tumor toward the surface of a point where it can be more easily seen and removed. Last year Hudson (*American Journal of the Medical Sciences*, September, 1903) reported two operations for cerebellar tumors, in one of which at least a large portion of the hemisphere was removed in searching for the tumor. The patient reacted promptly and although the tumor was not found, began at once to improve. On a subsequent occasion the wound was reopened and a large cyst found and evacuated. I feel convinced that this procedure, if more universally adopted, will do much toward increasing the percentage not only of tumors found, but of tumors removed, and will at the same time reduce the mortality.

SHORTEST ROUTE TO THE CEREBELLOPONTILE ANGLE.

Before concluding our remarks upon the means of exposing tumors in the cerebellopontile angle a word should be said concerning the best method of approach. One has but to turn to a cross section of the cerebellum to see that the shortest distance from the surface of the skull to this snug corner is along a line parallel with the petrous portion of the temporal bone (see Fig. 3). Krause, in describing an operation for the division of the eighth nerve (*Beiträge zur klinische chirurgie*, Bd. XXXVII, Heft. 3), and others have made this anatomical observation. The distance along this line being the shortest it goes without saying that the cerebellopontile angle should be approached from the lateral rather than superior or inferior aspects of the cerebellum. The bony opening should extend as near to the mastoid process as possible. This is not only the shortest but the safest route in that the manipulations are carried on at a point farthest distant from such vital structures as the pons and medulla.

OPERATIONS UPON THE FIFTH AND EIGHTH NERVES IN THE CEREBELLAR FOSSA.

In an exploration of the anterior aspects of the cerebellum in the cerebellopontile angle for tumors, one exposes the posterior plane of the petrous portion of the temporal bone, and with it the fifth, seventh, and eighth nerves (see Fig. 4). The seventh and eighth nerves will be seen passing from

the cerebellum to enter the internal auditory meatus. The eighth nerve is the larger of the two and overlies the seventh nerve in such a way that it almost entirely conceals it from view. Farther along, at the apex of the petrous portion of the temporal bone, will be seen the sensory root of the trigeminal as it passes into the groove in which it traverses the petrous bone to enter the Gasserian ganglion. These three nerves, together with the ninth, tenth, and eleventh, may be said to be accessible, so that it is quite possible, if the indications arise, to divide any of them. It is not likely that, in operations for the relief of trifacial neuralgia, one would be called upon to divide the sensory root in the cerebellar fossa because the root and ganglion are more easily approached by the temporal route. In one of the cases of our series we seriously discussed the possibility of dividing the root in the cerebellar fossa and fully intended to do so under certain conditions. The case was one in which there were certain symptoms of cerebellar tumor and in addition intense trifacial neuralgia. If the tumor could not be found it was thought best to afford the patient relief at least from the neuralgia by dividing the sensory root. However, a cyst was found and evacuated and no further intervention seemed advisable. The patient was relieved entirely and has remained free from pain now more than a year since operation. There is no conceivable indication for any operative attack upon the seventh nerve within the fossa, but in the case of the eighth nerve Krause has recommended and practised its division for the relief of persistent tinnitus aurium. As recommended for tumors of the cerebellopontile angle, so here the nerve should be approached from the lateral rather than posterior aspect as from this point is measured the shortest distance from the skull to the nerve. The only difficulty, if there is any in the operation, will be met with in separating the eighth from the seventh nerve. The latter as has been said lies directly behind as one views the field from the side and the precaution must be taken to separate one from the other before attempting a nerve section. This is readily done with the aid of a small blunt hook (see Fig. 4).

SIMULTANEOUS EXPOSURE OF BOTH HEMISPHERES; BILATERAL CRANIECTOMY.

The difficulty in localizing cerebellar tumors is known to all clinicians. In an analysis of the 116 cases which we have collected we find that in 55 per cent. the operation was a failure because the tumor was not found. The diagnosis of cerebellar tumor is in many cases not so difficult, but in many of these it will be almost impossible to determine beforehand whether the tumor is in the right or left lobe.

Therefore in the course of an exploratory operation, when one has failed after a thorough search to find the tumor on the side which was opened first one must decide whether to proceed at once to explore the opposite side. In most instances further exploration should be postponed until the patient has reacted from the effects of the injury already inflicted. In one of our cases already referred to (Case 4) a section of the cerebellar hemisphere was removed to relieve tension temporarily and with most gratifying results. But whether this procedure is justifiable in the light of the probable existence of a tumor on the other side, might with propriety be questioned. In order to enable one to examine both hemispheres at one sitting the authors discussed the feasibility of performing a craniectomy on both sides and removing the intervening bone. This operation was performed upon the cadaver from which the illustration in Fig. 5 was drawn. The operation may be carried out as follows: An opening is made on either side in a manner similar to that when the operator is confined to one side. The dura and with it the superior longitudinal sinus are separated so that they may escape injury when the overlying bone is divided; a pair of forceps or preferably a Gigli saw may be used to section the intervening bridge of bone. The Gigli saw is to be preferred because it is less likely to comminute the bone, which must be divided very near the foramen magnum. The falx cerebelli is punctured in either side of the occipital sinus and the sinus divided between two ligatures (see Fig. 5). This will enable one to reflect a flap of the dura covering both hemispheres and afterwards to displace the cerebellum with greater freedom than would be possible if an unyielding bridge of bone remained between the two openings. In the preparation of this paper we found upon perusal of the literature that this procedure has been recommended by Kocher, Nothnagel (*Path. u. Ther.*, Vol. IX), and Krause (*Beiträge zur klin. Chir.*, Bd. XXXVII). The latter performed this operation in a case in which there was much uncertainty as to the position of the tumor; in order to relieve tension still further, he punctured one lateral ventricle. The results were reported to be satisfactory in so far as the freedom with which the various aspects of the cerebellum could be exposed. The patient died one week later and the autopsy revealed an internal hydrocephalus, but no tumor. We are not prepared to endorse this operation as a routine procedure but believe it should be restricted to those cases in which the tumor is believed to occupy a position near the mesial surface. Under any circumstances it should be practiced at two sittings; the additional trauma and hæmorrhage which must accompany such an extensive incision and the removal of such

an extensive section of bone would we believe add materially to the gravity of what under any circumstances is an extraordinarily serious operation.

LIGATURE OF THE LATERAL SINUS.

A discussion of the operative procedures in the region of the cerebellum would be incomplete did we not include some reference to ligation of the lateral sinus. In an attempt to expose tumors particularly of the anterior surface of the cerebellum the operator is hampered by the tentorium cerebelli, and the suggestion has been made by Kocher, Krause, and others that the tentorium cerebelli be divided down to the petrous portion of the temporal bone after the lateral sinus has been ligated. It is stated by Krause that one of the sinuses can be ligated without much risk, and in at least one occasion the idea was put into effect. The advantage to be gained by this modification of the technique I do not believe compensates for the additional risk that must be entailed. If the mortality following operations upon the cerebellum is to be reduced, the technique must be as simple as possible, the least degree of traumatism must be inflicted, the smallest possible insult offered to the tissues; therefore we should discard the more complicated procedures and those which interfere to a greater degree with the circulation and functional activity of the structures concerned.

SIMULTANEOUS EXPOSURE OF THE OCCIPITAL LOBE AND CEREBELLAR HEMISPHERE.

Included on the list of doubtful diagnoses are those in which there is a reasonable doubt as to whether the tumor is situated in the cerebellum or the occipital lobe. In such cases one could at one sitting explore first the cerebellum by a craniectomy and the occipital lobe by a craniotomy (see Fig. 4).

(To be concluded.)

Charitable Bequests to Philadelphia Institutions.—By the will of William S. Bunting \$500 was bequeathed to the Episcopal Hospital toward the establishment of a free bed. Five hundred dollars was also bequeathed to the Home for Incurables toward the endowment of a free bed in memory of the deceased's mother.

By the will of Henry Norris \$5,000 was bequeathed to the Pennsylvania Hospital, \$5,000 to the University Hospital, \$5,000 to the Children's Hospital, and \$5,000 to Haverford College. Mr. Norris died in December at his home, 1903 Walnut Street, aged 94 years.

By the will of Charlotte S. Bolt \$500 was bequeathed to St. Mark's Home for Aged and Infirm Women.

By the will of James Heckman, of Doylestown, Pa., \$1,000 was bequeathed to the Methodist Hospital of Philadelphia.

THE PATHOLOGY OF CEREBELLAR TUMORS.*

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It is not the purpose of this paper to consider minutely the histology of cerebellar growths, as this information can be obtained in any textbook on neurology. The pathological aspects of the various conditions which give the symptoms of cerebellar tumor will be considered, especially in a surgical sense.

It is difficult to make a satisfactory classification of such a subject, but the following plan will be adopted:

1. The ordinary tumors in their order of frequency, as glioma, tuberculoma, cysts, and so forth, of the cerebellum itself.
2. Growths of the surrounding regions giving cerebellar symptoms, as of the fourth ventricle, medulla oblongata, pons, and corpora quadrigemina.
3. Growths in parts besides those mentioned, giving cerebellar symptoms.
4. Abscess of the cerebellum.
5. Internal hydrocephalus, with symptoms of cerebellar tumor.
6. Cerebellar symptoms without any lesions.
7. Lesions of the cerebellum without any symptoms.

Excellent statistical studies of the frequency of the cerebellar and other cranial growths have been made, and without the desire to add to the already voluminous literature on the subject, it has been thought advisable to give a brief report of the brain tumors now in the neuropathological laboratory of the University of Pennsylvania, which is under the direction of Professor William G. Spiller. This collection has largely been accumulated in the last three or four years, and is from the services of Dr. Mills and Dr. Spiller, although in a number of instances specimens have been obtained from other sources.

Tumors of the cerebral cortex and subcortex.....	27
Cerebellar tumors.....	9
Tumors of the brain stem.....	9
Tumors implicating both brain and cord.....	4
Tumors of the cerebral cortex and subcortex:	
Sarcoma.....	13
Fibrosarcoma.....	2
Endothelioma.....	4
Glioma.....	3
Gumma.....	2
Carcinoma.....	1
Adenoma.....	1
Tuberculoma.....	1
Cerebellar tumors:	
Glioma.....	5
Sarcoma.....	1
Fibroma (in the cerebellopontile angle).....	3

Tumors of the brain stem:	
Pons: Tuberculoma.....	2
Glioma.....	1
On the pons and medulla oblongata: Sarcoma.....	1
On the medulla oblongata: Chondrosarcoma.....	1
Within the fourth ventricle: Sarcoma.....	2
On the corpora quadrigemina: Fibroma.....	1
Within the corpora quadrigemina: Glioma.....	1
Tumors of the brain and cord: General sarcomatosis, with large tumors, especially in the cerebellopontile angle.....	4

Sections of at least seven other brain tumors were not considered, because definite knowledge of the location of the growths was lacking.

According to statistics tumors of the cerebellum are less frequent than of the cerebrum. Schuster, in a statistical table of some thousand cases of brain tumor, found 21.6 per cent. to be cerebellar. When the relative size of the cerebellum and the cerebrum is considered, it is probable that new growths are more frequent in the former.

Tuberculous growths are more common in persons below the age of twenty years, while glioma, sarcoma, and cysts of various kinds are more frequent in the adult. The frequency of fibroma, especially of the acoustic nerve, is becoming better recognized. Syphilitic tumors of the cerebellum are rare. Of the other forms of new growths, as carcinoma, lipoma, angioma, psammoma, and dermoid cysts, there are very few instances in the literature.

The lateral lobes of the cerebellum possibly because of their greater size, seem to be more frequently the seat of tumors than the middle lobe, although writers differ upon this point. Tumors within the middle cerebellar peduncle are rarely found, although a tumor within this peduncle is present in one of the specimens in the laboratory. Growths in the anterior and posterior cerebellar peduncles are also uncommon. The angle formed by the cerebellum, medulla oblongata, and pons is a favorite seat for new growths, these tumors growing either from within or upon the acoustic, facial, or trigeminal nerves, and frequently are fibromata.

Tuberculoma.—In 152 tuberculous brain tumors collected by Allen Starr, occurring in childhood, 47 were in the cerebellum. In the adult they are found with equal frequency in this region and in the pons and the cerebral cortex. They are nearly always multiple, and secondary to a tuberculous process elsewhere in the body. A tendency to symmetrical arrangement is also observed (Oppenheim). Their size varies from a small nodule to a large fist. Macroscopically, it is hard to distinguish a tuberculoma from a syphiloma. Both have poor blood supply and a tendency to caseate, the tuberculous growth to pus formation. Again, both have a tendency to grow

* From the Neuropathological Laboratory of the University of Pennsylvania.

from the meninges, although the tuberculous growths are found in the substance of the brain, and may have granulation areas and miliary tubercles about their border. It must be recalled, however, that syphilitic tumors of the cerebellum are rare.

The growth of a tubercle may be either rapid or slow. Tuberculous tumors may give no clinical symptoms. This has been explained by the slowness of the growth, the cerebellum gradually accommodating itself to increased pressure. Very recently, however, Raubitschek was able to demonstrate the persistence of the axis cylinders in tuberculous growths by Bielschowsky's method. This, as in multiple sclerosis, explains the persistence of function. Surgically, it is not advisable to operate upon these growths, as they are multiple and cannot be removed.

Glioma.—The cerebellum is a favorite seat for glioma. Five of our cerebellar growths were of such nature. Gliomata are almost always primary and single, although metastasis has been noted. The tumor may be as small as a cherry or as large as a hen's egg; it always grows from the brain substance itself, and is of slow growth. It is not sharply defined, but infiltrates into the brain substance, and it is difficult to tell it from normal brain tissue, although sometimes there is an increased consistence to pressure and there may be a slight swelling. The border zone of the tumor may present an increased number of blood vessels and there may be islets of new tissue.

Gliomata may be hard or soft, depending upon the excess of cells or fibrils, and have a yellowish white or reddish appearance. Cystic formation is very common, some authors believing that the whole tumor mass may disappear, leaving nothing but a cyst wall, and that it is necessary to examine microscopically the capsule to determine the gliomatous origin. Cysts form in the neighborhood of these tumors, and the surgeon may tap one of these cystic formations, believing it to be the only lesion present. It is wise, as Oppenheim has pointed out, to remove always a part of the cyst wall for microscopic examination. The fluid inside of these cysts may be whitish or bloody in character. Fatty, hæmorrhagic, and myxomatous changes occur in gliomatous tumors.

Microscopically, it is difficult to distinguish a glioma from a sarcoma unless a differential stain has been employed. There is some doubt as to the simultaneous occurrence of glioma and sarcoma, the so called gliosarcoma, some authors believing this to be impossible, as the former is of

ectodermal and the latter of mesodermal origin. Others believe that by metaplastic processes a sarcomatous structure may develop from neuroglial tissue. According to certain pathologists, a gliosarcoma should only be diagnosed where a sarcomatous, perivascular cellular mass is found within a glioma.

It can readily be understood from the slow growth and from its infiltrating character why clinical symptoms of brain tumor do not always appear, or not until late in the disease. Surgically, it is difficult or even impossible to remove completely such a tumor. Sections made from the specimens removed at the operation in Cases I and II of Dr. Mills and Dr. Frazier showed a glioma in each instance.

Sarcoma.—This form of brain tumor is about as common as the glioma, although in our experience sarcomata have been more frequently found. The growth may be small, flat, or nodular, or may be of large size. It is primary and usually solitary. Sarcoma always grows from the meninges, periosteum, or cranial bones, or from the pial covering of the blood vessels. It never grows from the brain substance, and therefore, unlike the glioma, it often compresses the brain tissue and may be distinct from it, although not infrequently it infiltrates the latter. Even when growing within the brain a distinct margin sometimes may be found, due to the softened area surrounding it. It is usually harder in consistency than a glioma, and is slow in its growth.

The tumor may soften or caseate. Myxomatous, hæmorrhagic, and cystic changes are not uncommon. Cystic changes are especially common in the cerebellum, not only in sarcomata, but also in gliomata. In one of Dr. Spiller's cases small sarcomatous masses were found in the walls of a cyst. If the fibrous tissue is very marked we have a fibrosarcoma.

Sarcoma may manifest itself as a diffuse multiple sarcomatosis. In an excellent article Spiller recorded two such cases and called attention

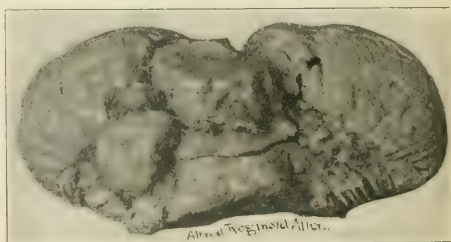


FIG. 1.—Sarcoma in left cerebellopontile angle. Small tumor in right cerebellopontile angle does not show in photograph.

to the rarity of this disease. He quotes Schlesinger, who subdivided the tumors under the head of multiple sarcomatosis into

(a) Diseases of the nervous substance and meninges,

(b) Multiple sarcomatosis of the membranes without sarcoma of the brain or cord, when it is (1) in the form of multiple small tumors, or (2) a diffuse sarcomatous infiltration of the membranes.

Of twenty cases recorded by Schlesinger, fourteen implicated the brain and cord or their membranes. "In nine of these fourteen cases cerebellar tumor was found, and in three the medulla oblongata was affected. It appears, therefore, that when the brain or its membranes are implicated in sarcomatosis, usually the structures of the posterior cranial fossa are affected, and that in about two thirds of the cases a tumor of the cerebellum is found."

In Spiller's first case a large sarcoma was found in the left cerebellar lobe, and in his second case a tumor was found in each cerebello-pontile angle, the larger one being on the left side, as shown in Fig. 1. Tumors were also found in this case in the Gasserian ganglia, pituitary body, floor of the fourth ventricle, right internal auditory meatus, and right jugular foramen, and numerous small tumors were found in the pia of the spinal cord.

(To be concluded.)

The Irritable Bladder.—Hirsch, in *Fortschritte der Medizin*, for October 1, 1904, states that the clinical foundation for this condition is the morbidly increased sensitiveness of the bladder in the region of the trigonum and the internal sphincter. The condition is determined by certain symptom complexes, very similar to but not depending upon, hyperæsthesia, and includes neuralgia, cystospasm, and the ordinary urinary trouble from mechanical causes. No pathological elements in this condition have as yet been found, with the exception of simple hyperæmia. There is sufficient trouble, however, from the continually recurring desire to empty the bladder, the generally increased reflex excitability, neurasthenia, and hysteria. The cause of this condition may reside in the bladder alone, or it may be found in a general hyperæmic condition of the genital organs, the rectum and the pelvic vessels. The diagnosis may be made by exclusion, all other troubles in the urogenital apparatus having been eliminated. This condition leads to a great many other morbid conditions and may finally become irremediable. In any event, it is extremely obstinate and involves constant annoyance from the desire to urinate or from hyperæmia. The treatment, so far as ordinary methods are concerned, has little that is valuable to recommend it.

THE DIAGNOSIS OF CEREBELLAR TUMORS.

By JOSEPH FRAENKEL,
NEW YORK.

The variety of lesions found in the posterior fossa of the skull is not met by an adequate exactness of diagnosis. A large number of cases of this kind are still catalogued clinically under the general heading of cerebellar disease.

It is true that to a great extent the diagnostic refinement has in this instance small importance for practical therapeutics. Theoretically it would appear that the posterior fossa of the skull could be reached by the surgeon. The difficulties are still considerable indeed, and there is ample room for improvement of technique.

Few instances of successful removal of growths from this locality are on record. It is obvious that definite knowledge of the nature, size, and location of the lesion will in some cases materially aid prognostication and therapeutic considerations.

Pathological conditions of different nature and character may arise in any of the tissues or structures of the posterior fossa; their nature, size, and duration will considerably complicate the clinical picture. Frequently an exact diagnosis will be impossible; particularly when the disease has lasted a considerable time, and the history does not reveal a clear picture of the early symptoms and sequence of events.

Primary lesions of the bone, meninges, basal nerves, cerebellum, pons, or medulla have been reported; aneurysms of the basilar and vertebral arteries and their branches, and other vascular lesions occur; localized syphilitic or tuberculous meningitis¹ is not common.

As a curiosity we may mention our observation of a case of compression of the medulla by an osteoma of the processus odontoides atlantis, and of a case of abscess of the pons, in consequence of chronic purulent middle ear disease.

From the clinical standpoint, these pathological conditions are easily separable into 3 groups:

1. Lesions originating outside the medullary structures of the posterior fossa, extracerebral lesions as it were; fractures, hæmorrhages, aneurysms, disease of the bone or meninges, remaining either outside of the medullary structures or invading them by contiguity.

2. Lesions originating within the medullary structures of the posterior fossa (pons, medulla, cerebellum)—intracerebral lesions: vascular lesions, tumors, abscesses; either strictly localized within, or invading the surrounding tissues by contiguity.

¹ Fraenkel *Journal of Nervous and Mental Diseases*, 1899, p. 427.

3. Lesions originating primarily in the basal nerves of the posterior fossa and invading the surrounding structures later.

Careful consideration of the intensity of the general symptoms and of the time of their appearance, will frequently give diagnostic aid. That headache, vomiting, and optic neuritis are early and obstinate symptoms in cases of cerebral lesions, is common experience. The opposite is true of pontine and medullary lesions.

The situation of the headache is of little diagnostic value; occipital headache is the rule. Superficial tenderness of the skull will occasionally indicate the side. It is frequently observed that the headache and vomiting, accompanying lesions of the posterior fossa, are most distressing in the morning after rising, or after a change of posture.

In syphilitic meningitis the headache is often liable to be nocturnal. The dizziness frequently observed in cases of disease of the posterior fossa, is clinically not unequivocal. It is difficult to decide whether it is more correct to interpret it in a given case, in the light of a focal cerebellar symptom, or to view it as a general symptom of increased intracranial pressure, or, finally, as denoting meningeal irritation.

In extracerebral lesions, that is in primary lesions of the bone and meninges or basal nerves, the headache will be less definite in character and location, and frequently absent for a long time. Vomiting and optic neuritis develop at a much later stage of the disease.

Seizures of various kinds are enumerated in the symptomatology of disease of the posterior fossa. General motor convulsions are rare, and when present are of little diagnostic value. Nothnagel's belief in the existence of an epileptogenous centre in the pons is not borne out by clinical experience.

Attacks of amyasthenia and general vertigo are frequent and express cerebellar embarrassment. Attacks of the Adams-Stokes's syndrome (disturbances of respiration and circulation with or without loss of consciousness) are not common. When occurring early in the disease they are more probably due to direct and, when late, to indirect interference with the functions of the medulla.

Trophic and visceral symptoms mostly accompany pontine lesions; sometimes bulbar, and very rarely cerebellar affections. To definitely ascertain the first symptoms is often quite difficult in cases of long duration. The importance of doing this can be hardly overestimated. As a rule the early symptoms, if unequivocally established, will greatly facilitate the localization.

Early symptoms of irritation of cranial nerves, particularly of the fifth or eighth nerve, are mani-

fested of great diagnostic significance, in suggesting extracerebral origin of the disease.

Deafness, general locomotor incoordination, disturbances of circulation and respiration, hemiparesis, or paralysis of conjugated ocular movements, introducing the disease, favor a diagnosis of the intracerebral origin.

Of the extracerebral lesions of the posterior fossa, those originating in the basal nerves deserve distinction for various reasons. Excepting rare metastatic or primary lesions of the bone, and the less rare localized meningitis, the solid lesions of the pontomedullocerebellar angle are due to primary tumors of the fifth or eighth nerve.

These tumors are most frequently neurofibromata, arising from the endoneurium or perineurium. The mentioned two nerves seem to have a particular predisposition, and the reasons therefore were discussed in a paper by Dr. Hunt and myself.²

This condition is apparently not very rare. In the course of four years we have observed eight cases of this character. The symptomatology is easily construed from the statements already made. The diagnostic characteristics are briefly as follows: Symptoms of irritation followed by symptoms of paralysis of the fifth or eighth nerve, to which later are added the symptoms of pressure of the surrounding structures of the posterior fossa.

Obstinate trigeminal neuralgia, tinnitus aurium, aural vertigo, Ménière's syndrome, later anaesthesia of the face or neural deafness, and finally generalized headache, vomiting, optic neuritis, cerebellar gait, hemiataxia, hemiparesis. Attacks of amyasthenia or of Adams-Stokes's syndrome are the most frequent symptoms.

Considering the fact that the neurofibroma is a slowly growing neoplasm, and that on account of its histological structure and frequent origin within the nerve, it slowly destroys the nerve fibres, it will be understood why the early symptoms are frequently vague, and why occasionally a considerable period of time elapses between the early symptoms and the development of the later ones.

In one of our cases there seems to have been an interval of 30 years from the time of the development of the growth in the acoustic nerves (bilateral acoustic fibroma) up to the time of the appearance of symptoms of brain tumor.

46 EAST SEVENTY-FIFTH STREET.

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The Adair County, Mo., Medical Association was organized on January 20th with the following officers: President, Dr. James Hanks; vice-president, Dr. E. C. Callison; secretary, Dr. E. C. Grim; treasurer, Dr. E. S. Quinn.

² Dr. Fraenkel and Dr. Hunt. Tumors of the Pontomedullocerebellar Space. Acoustic Neuromata. (Central Neurofibromatosis.) *Med. Record*, December 26, 1903, and *Annals of Surgery*, September, 1904.

THE OCULAR SYMPTOMS OF CEREBELLAR TUMOR.

By G. E. DE SCHWEINITZ, M. D.,
PHILADELPHIA.

The ocular signs of cerebellar growth are chiefly concerned with changes in the fundus oculi, particularly the nerve head, and with anomalies of the external ocular muscles and the movements of the eyeballs.

I. PAPILLITIS, OR CHOKED DISC.

(a) *Frequency*.—In order to ascertain the percentage of choked disc or papillitis in cases of suspected intracranial tumor, Dr. John Weeks¹ has collected the reports of 677 brain tumors, and finds that those which involve the corpora quadrigemina give the highest percentage, namely, 100; next come tumors of the parietooccipital region, with a percentage of 87.8, while new growths of the cerebellum furnish a percentage of 87.2. In his list are the records of 164 cases of cerebellar tumor, and only 21 times was optic neuritis absent. In an analysis of intracranial tumors with respect to the existence of optic neuritis published by Edmunds and Lawford,² 23 cases of neoplasm of the cerebellum are reported, and in 20 of them optic neuritis was present, being absent only three times. It is not necessary to elaborate these statistics, because the fact would not materially be altered that with the exception of growths of the corpora quadrigemina, and possibly those of the parietooccipital region, cerebellar tumors yield the highest percentage of papillitis, or so called choked disc.

(b) *Character of the Neuritis and Nerve Head Changes*.—It is a matter of common observation that optic neuritis develops with rapidity in cerebellar tumors, indeed, with greater rapidity than when they are elsewhere situated. In the words of Mr. Gunn, intense double optic neuritis, with great engorgement of the papillæ and with surrounding retinal change coming on quickly, suggests a cerebellar growth. In addition to a papillitis of an intense type, that is, one having the characteristics to which the term choked disc is applied, a cerebellar growth may also originate a more moderate swelling of the nerve head, somewhat condensed in appearance and comparatively free from undue capillarity.

It is not possible to state exactly how much time must be consumed before the optic neuritis of cerebellar neoplasms is evident. As already stated, the development is usually a rapid one, and the neuritis may appear within a few weeks, or even a few days, after other signs of involvement of this

region are evident, for example, intense headache, vomiting, and vertigo. Sometimes longer periods of time are required before optic neuritis is discovered. In one of my cases with other well marked signs of cerebellar growth there was no neuritis; six months later there was well marked neuritis in one eye and intense papillitis in the other.

It not infrequently happens that patients come to ophthalmoscopic examination after the papillitis has already subsided and a postneuritic atrophy is present, or at a period when the swelling of the disc is rapidly disappearing and atrophy beginning. Optic nerve atrophy, without signs of preexisting neuritis, and blindness, unassociated with ophthalmoscopic lesions, have been reported.

It is well known that the papillitis of intracranial tumor is sometimes unilateral and that when there is a one sided optic neuritis, or a marked difference between the two sides, it is suggestive of the fact that the cerebrum is the seat of the growth, and, on the whole, in favor of the tumor being on the same side as the excess of neuritis. Less frequently unilateral neuritis occurs in cerebellar tumor. It was noted four times in 164 cases of the Weeks collection. Referring to this point Mr. Gunn³ writes as follows: "Taking the important analysis of 601 cases of tumor made by Dr. J. M. Martin, and paying attention to the relation between position, occurrence of optic neuritis, and difference of neuritis on the two sides, I find that there was unilateral neuritis (or excess) in 10 cases of frontal tumor, and in 8 of these it occurred on the same side as the tumor. In four cases of neuritis difference, in cases of temperosphenoidal growths, the one sided excess was always on the same side. Putting these together, we have the unilateral excess of neuritis on the same side as the tumor in 12 out of 14. The unilateral character of the neuritis was noted in 10 cases of tumor of the parietooccipital lobes and in the cerebellum. In 5 of these it was on the same side as the tumor and in 5 on the opposite side."

He further points out that a one sided difference of neuritis is more common in tumors of the cerebral lobes than in tumors of the cerebellum. In the collection before referred to it occurred in 20 per cent. of all of the cases of neuritis with tumors of the cerebrum, and in only about 3 per cent. of those associated with tumor of the cerebellum. I have not seen unilateral neuritis in cerebellar growth, although, as in the present collection, I have noted an excess of neuritis on one side as compared with the other.

(c) *Retinal Changes*.—It has been known since the observations of von Graefe, Schmidt, and

¹ Transactions of the Section on Ophthalmology of the American Medical Association, 1899.

² Transactions of the Ophthalmological Society of the United Kingdom, IV, 1884, p. 82.

³ Brain, XXI, 1898, p. 335.

Wegner, more than thirty years ago, that appearances exactly simulating those seen in retinitis albuminurica, particularly the so called macular figure, may be found in brain tumor. This stellate macular figure, in addition to the swelling of the nerve head, has been noticed with particular frequency in cerebellar tumors and has been the subject of comment especially by Dr. James Taylor and Mr. Marcus Gunn.⁴ While it is more common to find this stellate figure in cerebellar growths than in others elsewhere situated, it is not peculiar to them, and Mr. Gunn himself remarks that he has seen it in frontal tumors. One of the best marked examples in my own observation occurred in a growth which was certainly in the cerebrum, although its location was not proved by autopsy, and another excellent example appeared in a subcortical growth of the midregion of the brain which had pressed upon the optic tracts and produced hemianopsia, and which was removed by Dr. Hearn and Dr. Da Costa in the Philadelphia Hospital. I have also seen it in perfect degree in several cerebellar tumors, one particularly in the Orthopædic Hospital and another under the care of Dr. Mills and Dr. Frazier in the University Hospital, a full eye examination of which is recorded in the present paper.

Other retinal changes not significant of cerebellar tumor may also appear, for example, postneuritic atrophy, perivasculitis, areas of atrophy marking the position of former hæmorrhages, exudations and sclerotic alterations in the retinal vessels, if the patient has also been the subject of general arteriosclerosis.

(d) *Visual Acuity*.—It is well known that optic neuritis caused by intracranial growth is perfectly compatible with good visual acuity, but if the growth is situated in the cerebellum there is apt to be early great disturbance of vision, rapidly proceeding to blindness. Edmunds and Lawford referring to the frequency of blindness under these circumstances, compare it with the optic neuritis which occurs in tumors of the basal ganglia, which in their table yield next to cerebellar growths the highest percentage of optic neuritis, but in only five of the twenty cases was blindness present, as against nine which progressed to blindness in twenty-three cases of cerebellar tumor. Moreover, of the twenty cases with optic neuritis, seven were blind on admission to the hospital and two others became blind before death. They suggest that as cerebellar tumors are not so rapidly fatal as basal tumors, time is allowed for the neuritis to pass on to atrophy and to blindness.

Dercum⁵ in 1893 tentatively advanced the following explanation of early blindness in cerebellar growths: "The proximity of the quadrigeminal bodies naturally suggests itself as in some way explaining this blindness. A consideration of anatomy will show that if a growth be situated in the veriform process, especially anteriorly, and that if this growth continues to enlarge, it will sooner or later press upon the superior cerebellar peduncles; and very probably upon the quadrigeminal bodies themselves. Now if we recall the relation which the fibres of the optic tracts bear to the primary optic centres one can readily understand how, if pressure or irritation occurs at this point, a neuritis would be the consequence. Further, the irritation being direct, one can, perhaps, understand why the neuritis should be of a high grade; and finally, also, why this neuritis should be associated, sooner or later, with total blindness." Recognizing, however, that this hypothesis, especially in so far as it refers to the development of the neuritis, is unsatisfactory, Dercum has abandoned it.

Oppenheim⁶ thinks that upon the hydrocephalus which almost always accompanies in considerable degree tumors of the cerebellum, depends the decided choked disc and its prompt arrival, as well as the early amblyopia, to be followed later by amaurosis. According to him, the rapid, sometimes sudden, appearance of amaurosis is due to a compression which injures the chiasm and which is caused by a bulging forward of the floor of the third ventricle. A similar explanation is applicable to those cases of amblyopia and blindness without eyeground changes which have been observed by Curschmann, Gerhardt, and others. The optic nerve atrophy, which is sometimes noted in cerebellar disease without evidence of much preexisting neuritis, Oppenheim also attributes to pressure upon the chiasm.

It would seem, therefore, that the blindness may be explained in part by direct pressure from hydrocephalus, and in part by the compression of the optic nerve fibres and their subsequent atrophy owing to the high grade of engorgement edema, or to an actual neuritis. The relation which the destruction of the ganglion cells of the retina bears to this blindness requires further study, and it may be that their disintegration will account for some of the cases of early and even sudden blindness in cerebellar tumor associated with papillitis of marked degree.

(e) *Effect of Operation on Papillitis*.—In so far as the pathological examinations of cerebellar optic neuritis are concerned, they do not differ from those

⁴ *Transactions of the Eighth International Medical Congress*, Edinburgh, 1894.

⁵ *Journal of Nervous and Mental Disease*, 18, 1893, p. 683.

⁶ *Die Geschickliste des Gehirns*, by Prof. Dr. H. Oppenheim, Wien, 1896, p. 144.

which have been made in the optic neuritis of other intracranial growths, and it is not germane to the present topic to discuss this subject concerning which there is still much difference of opinion. In general terms, microscopical examination would seem to indicate that in a certain number of cases of papillitis, be they of cerebral or cerebellar origin, there is a true *engorgement edema*, and that the evidence of inflammation, in any decided degree at least, is lacking, while in other cases the inflammatory signs are marked. When the engorgement edema is the marked feature, the ophthalmoscope reveals the typical picture of choked disc. When, on the other hand, the inflammatory condition predominates, the elevation of the disc may be less marked and the process may extend to the surrounding retina. In other words, there is an *inflammatory optic neuritis*. Now, if one sees the case during the period of engorgement edema, before inflammatory exudates are present, naturally it is desirable to reduce the swelling of the nerve head. Horsley, Bruns, Erb, James Taylor, and many others have called attention to the fact that there may be a subsidence of the optic neuritis after operation undertaken with a view to the removal of an intracranial tumor, even when the tumor was not removed, and Taylor has recorded a number of examples of this character. Certainly, as Horsley points out, removal of pressure is one of the factors in the reduction of optic neuritis in intracranial tumors, and as Hill Griffith has said, should there be recovery after blindness with optic neuritis by trephining, the indications are that the optic nerve condition was produced by pressure.

Saenger⁷ reports prompt subsidence of double sided choked disc after palliative trephining for cerebellar growth and advises this operative procedure in tumors which cannot be removed in order to relieve pressure symptoms and especially to avoid impending blindness. In seven cases of double choked disc he has noted a disappearance of this condition after such trephining. In two of the patients described by Dr. Mills in the present paper and trephined by Dr. Frazier, with removal of the growth, there was decided and comparatively prompt subsidence of the choked disc. In one of these blindness occurred, but the patient was practically blind when she was trephined. In the other the visual acuity before the operation, which was good, that is, two thirds of normal, has been maintained until the present time and the neuritis has partly subsided.⁸

If it be true, as Merz declares, that increased

intracranial tension alone is sufficient to produce choked disc, provided this tension shall be maintained uninterruptedly for a certain time, and if further it is true, as would seem from reported cases, that there is reduction of such tension by trephining, even where the tumor is not removed, then certainly Saenger's advice that such palliative trephining should be performed early, especially in the choked disc of cerebellar tumor, which is almost sure to produce blindness, is sound and should be followed.

II.—ANOMALIES OF THE OCULAR MUSCLES AND OF THE MOVEMENTS OF THE EYEBALLS.

Owing to the anatomical relations of the cerebellum, tumor formation in this region may bring about involvement of certain of the cranial nerves, particularly the facial and the auditory. In so far as the eye muscle nerves are concerned, the abducens is by far the most frequently affected, and convergent paralytic strabismus with involvement of one or both abducens nerves is not an unusual symptom in cerebellar growth. In a case reported by Saenger with gliosarcoma of the left cerebellar hemisphere, there was double abducens paralysis with marked thinning of the nerves, and in a similar growth recorded by Sander the abducens paralysis was explained by finding a lesion in its nucleus. Wernicke states that sixth nerve paralysis is most apt to be present as a distant symptom when the tumor is situated in the cerebellum. In this respect the sixth differs from the third nerve, which, as Swanzy has well shown, is more likely to give distinct symptoms with a lesion of the cerebral hemisphere.

In one case recorded by Dr. Mills in the present paper where the cerebellum and the pons oblongata were exposed and a cyst was discharged, there was paralysis of the branch supplying the left levator palpebræ and the left inferior rectus. According to Oppenheim ptosis and reflex immobility of the pupil without loss of sight and paresis of accommodation have been observed, and he quotes Mackenzie, Bruns, and other authors as having observed a more or less complete ophthalmoplegia.⁹ A rare ocular muscle palsy is one that affects the superior oblique, that is to say, the trochlearis is involved. Referring to the aetiology of these conditions, Oppenheim remarks that the paralyses must depend upon a lesion of the nerve trunks themselves, or upon pressure exerted on the region of their nuclei. When ophthalmoplegia is evident, it may be explained by an involvement of the corpora quadrigemina.

Bruns,¹⁰ referring to the difficulty of telling on

⁷ *Munch. med. Wochenschr.*, XLVIII, 1901, p. 2.

⁸ Since this sentence was written the patient has been seen, and the vision has begun to fail and a partial ophthalmoplegia has developed; evidently there has been recurrence.

⁹ In one case at present under my observation there is paralysis of all external ocular muscles except the inferior recti, which are beginning to be involved, and the superior obliques.

¹⁰ *Neurologisches Centralbl.*, 18, 1899, p. 519.

which side of the cerebellum a tumor has its situation, speaks of the help obtained in this respect when certain nerves are paralyzed, for example, the trifacial, the facial, and the auditory, and refers as a frequent symptom to the presence of associated paralyzes of ocular movements which then appear toward the side of the tumor. So frequent are these paralyzes that in large tumors of the cerebellum Bruns considers them to be constant.

Oppenheim, discussing the same subject, remarks that this symptom, that is, a paralysis of associated parallel movements of the eyes toward the side of the tumor with deviation of the eyes toward the opposite side, depends upon a one sided compression of the pons. It is, therefore, the rule that the eyes of these patients cannot be moved toward the side of the tumor. He warns, however, that the symptom cannot be absolutely trusted, inasmuch as in two cases under his own observation there was paralysis of associated parallel movements toward one side when the vermiform process was the part involved in the tumor formation.

According to Gowers, an unsymmetrical position of the eyes, one directed upward and inward and the other one downward and outward, has been observed as a rare symptom of tumor of the middle peduncle of the cerebellum.

Nystagmus is almost always present in cerebellar tumors. It may be rotary or vertical, but is most frequently lateral. Sometimes it is not observable when the gaze is directed forward but develops at once in right or left l  voversion.

It would seem also that in a certain number of cases the nystagmus is evident only when the eyes are turned toward the side on which the tumor is situated, and, indeed, that such nystagmus may be the sole ocular sign of the cerebellar growth. For example, Pineles¹¹ observed in a patient with normal eyegrounds nystagmus only when the eyes were directed to the left. Post mortem examination revealed a walnut sized tubercle in the left cerebellar hemisphere, the middle of the lobus quadrangularis being also involved. This development of nystagmus when the eyes are rotated toward the side of the tumor has been commented upon by a number of observers. It has been noticed by Mills, Spiller, and by myself in several cases which we have examined together. In place of a true nystagmus, a nystagmoid movement is often observable when the eyes are turned from side to side, particularly if there is an associated paralysis of the external rectus. There is no doubt that nystagmus may be regarded as a direct cerebellar symptom. It has also been referred, according to Arnheim who

quotes Russell in this respect, to a paralysis of the ocular muscles.

That double optic neuritis, internal strabismus, and nystagmoid movements on looking both to the right and to the left, must not, however, be regarded as characteristic or pathognomonic of cerebellar tumor, is evident from a case recorded by Bramwell,¹² in which these symptoms were present and the lesion consisted of a dilatation of the ventricles, especially of the fourth ventricle, the result of a previous meningitis and an obliteration of the foramen of Magendie. The oscillation of the globes in blindness from cerebellar tumor must not be confused with true nystagmus.

There is nothing characteristic in the *pupil reactions* in disease of this region. If there is blindness and loss of light perception, there is naturally loss of the light reflex, while, if light perception remains, this reflex is preserved.

So, also, the field of vision furnishes no characteristic changes. It may be perfectly intact or concentrically or irregularly contracted, according to the degree of atrophy existing in the optic nerves. In some cases there seems to have been hemianopsia, but probably only a contraction of the visual field resembling this phenomenon due to atrophy in the optic nerve, or alteration in the ganglionic cells of the retina. It is of course conceivable that hemianopsia could occur as an associated symptom if with the cerebellar growth there were other lesions which pressed upon some portion of the optic pathway.

Lectures by the Phipps Institute Staff.—The Phipps Institute for the Study, Prevention and Treatment of Tuberculosis has outlined a course of popular lectures on Tuberculosis to be delivered by members of the staff before such professional and lay societies as shall request them. Many lantern slides have been prepared for the illustration of these lectures. Recently Dr. A. P. Francine lectured before the Pittsburgh Nurses' Association on The Care and Treatment of Consumptive Patients. Dr. D. J. McCarthy delivered a lecture on the same topic at the Deaconesses' Home, and Dr. Horace L. Carncross spoke before the Glassblowers' Union of New Jersey at Woodbury. In the near future Dr. Ward Brinton will lecture to the textile workers in Kensington, and Dr. McCarthy will speak at Oil City. At the meeting of the Associated Health Authorities and Sanitarions of Pennsylvania in Harrisburgh in the second week of February the Phipps Institute staff will give a course of lectures and an exhibition of the work of the institute. At the same time similar exhibitions will be made by the Pennsylvania Society for the Prevention of Tuberculosis and by the Free Hospital for Poor Consumptives at White Haven.

¹¹ *Arbeiten aus Obersteiner's Laboratorium*, Heft 4, 1899.

¹² *Brain*, XXII, 1899, p. 68.

THE FUNCTIONS OF THE CEREBELLUM.

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Probably there is no part of the nervous system that differs more in size and functional importance, in closely allied species, than the cerebellum. Its development depends to a great extent upon the means of orientation of the animal. Reptiles possess a cerebellum functionally less active than swimmers, and in these it is less developed than in birds. Indeed in this animal which is capable of going through the most complicated movements of all animals the cerebellum is relatively enormous. However, the size is not always proportionate to the variety of movements. In the frog, which is capable of complex coordination, the cerebellum is relatively small. It is an unexplained anatomical fact that in birds the lateral lobes are absent, whereas in apes and man they are quite large.

Possibly no one has given so much impetus to the study of this part of the nervous system as Flourens (1). Practically all his experiments were performed upon pigeons, animals which show marked effects following the removal of parts of the cerebellum. Many of the phenomena here observed can be of but comparative interest to the student of human physiology. For this reason the work of Luciani has done much to further our knowledge of the function of the human cerebellum. He experimented upon dogs and monkeys, animals in which the cerebellum is more closely allied to the human cerebellum than that of pigeons.

So early as 1809 Rolando (2) removed portions of the dog's cerebellum, and several other physiologists studied the mammalia previous to Luciani's time, but none was able to surmount the tremendous technical difficulties necessary, for instance, to remove the whole cerebellum and keep the animal alive for a considerable period after the operation.

Luciani (3) showed the immediate symptoms differed very much from those which subsequently developed. If the narcosis is not too deep, and the loss of blood inconsiderable, the more important symptoms which immediately follow removal of the cerebellar cortex, are extreme restlessness; pleurosthenos, the concavity being toward the operated side; tonic stretching of the fore extremity on the homonymous side; clonic contractions of the other three extremities; and spiral twisting of the neck with the head turned toward the well side. Nystagmus and strabismus are present, the eye of the side operated upon being drawn down and inward, that of the well side up and out. If the animal at-

tempts to stand, he falls to the side of the lesion and rolls in the same direction.

When the whole cerebellum is removed there is marked restlessness and irritability of the animal; the head is drawn back, and the animal tends constantly to move or fall backwards. There is convergence of the eyeballs. If the wound remains aseptic these symptoms last from eight to ten days when they generally ameliorate, the tonic spasms become clonic or oscillatory, the animal is able to walk with less difficulty, and the tendency to roll from side to side or fall backward is less marked. Long before the animal learns to walk he is able to swim. This fact, first described by Luciani, has great physiological importance. The last symptom to disappear is opisthotonos.

The symptoms which occur with constancy after removal of the cerebellum give us but little information as to the exact rôle this part of the nervous system plays in the intact cerebrospinal axis. Wundt states that "the functions of the cerebellum belong to the darkest part of the central nervous system." The truth of this statement becomes more apparent when the multitudinous connections of the cerebellum with other portions of the brain and spinal cord are considered.

The old idea that the cerebellum has distinct functions independent of its connection with the rest of the cerebrospinal axis is rapidly disappearing.

The centre for coordination has been located in the cerebellum by Flourens, and the symptoms which follow ablation of a part, or the whole of the cerebellum seem to substantiate this assertion. However, cases have been recorded in which a large portion was congenitally absent associated with normal ability to execute coordinate movements.

Total ablation in animals is always followed by an amelioration of the symptoms after varying intervals of time, and eventually incoordination entirely disappears.

When the cerebellum is inactive it appears that cells in other parts of the nervous system are capable of performing the functions normally assigned to the cerebellar cells. The experiments of Ewald (4) and Luciani confirm this statement. They demonstrated that if compensation was completely established after partial cerebellar destruction, a return of symptoms would appear if certain cerebral motor areas were destroyed. The symptoms never reappear after the second operation.

A close functional relation has been found to exist between the semicircular canals and the cerebellum. Total destruction of the canals is followed by symptoms identical with cerebellar ablation. Stefani (5) found degeneration of Perkinje's cerebellar cells

after removal of the semicircular canals. From this the inference may be drawn that the canals are the peripheral organs and the cerebellum is the centre. Lange, a student of Ewald, found when the semicircular canals were removed from a decerebellarized animal, in which full compensation had been established, that the characteristic symptoms appeared such as are observed in a normal animal following destruction of the canals. Stefani concludes that the semicircular canals functionate not only through the cerebellum, but also through other parts of the nervous system. Luciani thinks these, and other experiments, disprove the belief of Magendie (6) that the cerebellum is the centre of static and dynamic equilibrium. He believes it does play an important rôle in the maintenance of equilibrium, and agrees with Galio (7) that we move in space by the aid of impulses coming from the special senses.

The results obtained from excitation of the cerebellar surfaces have added to some extent to our knowledge of the influence of the cerebellum upon nervous activity. It is a mooted question whether ablation produces symptoms the result of stimulation consequent to the trauma of the operation, or paralysis due to destruction of the cells. Ferrier (8) showed that unilateral burning of the cerebellum produced symptoms on the opposite side of the body to those following ablation. But this method is unscientific, for it is impossible to determine whether symptoms are due to stimulation or depression.

Electrical stimulation properly applied eliminates depression as a factor. A recent work by Lewandowsky (9) has shown that the electrical current produces results differing from those following ablation. When weak currents were applied to the cerebellum the following symptoms were noted: Restlessness; evidences of vertigo; lateral movements of the head; or the animal assumed a recumbent position and placed the head between the front paws. Strong currents caused curvature of the spinal column, when the left side was stimulated the concavity was toward the right side, the dog always fell toward the right. Occasionally nystagmus was observed. When the current was broken the movements occurred on the other side, but were decidedly weaker. It will be noticed, as Lewandowsky states, that the symptoms following stimulation are on the opposition side of the body to that produced by ablation.

Sherrington (10) reports a very interesting phenomenon following stimulation of the cerebellum. He discovered in decerebrate rigidity, a condition of long maintained muscular contraction following removal of the cerebral hemispheres, that inhibition

can be produced by excitation of the anterior (cerebral) surface of the cerebellum. He demonstrated that faradaization caused a relaxation of the muscles of the neck, head, and lower limbs, especially on the same side. He concludes that stimulation of the cerebellum "cannot only excite contraction of the muscles, but can inhibit contraction." However, the exhaustive studies in cerebellar ablation and stimulation have not given us very satisfactory knowledge of how this organ normally functionates, although many errors have been corrected and new facts added.

The teaching of the Gall school that the cerebellum has a sexual function has been disproved by Bouillaud, Luciani, and others. These investigators demonstrated that impregnation and birth of offspring would occur in an animal from which the whole cerebellum was removed.

Flourens was the first to locate in the cerebellum the centre for coordinated movements.

Luciani demonstrated that coordinated movements returned in animals from which the cerebellum had been removed.

The teaching of Rolando that the cerebellum was essentially motor has been modified by Dalton (11), Luys (12), Mitchell (13), and Luciani. These authors consider it an organ in which motor impulses are strengthened. Removal of the organ causes muscular weakness, which was described by Luciani as due to three factors: Asthenia (weakening of muscular energy), atonia (lessening of muscular tone), and astasia (uncertain and unsteady movements).

That asthenia is present is shown by the fact that animals with unilateral ablation swim toward the crossed side, but walk toward the same side. Astasia is represented by the intention tremor which develops at varying lengths of time after removal of either part or whole of the cerebellum. Atonia can be readily detected by the feebleness of the muscles which becomes manifest after the disappearance of the primary spasm.

Many physiologists have defended the theory of Lussana (14) that the centre for muscle sense is located in the cerebellum. The vertigo frequently present suggests a sensory function. But human beings with atrophy of the cerebellum still possessed a normal amount of muscle sense. Luciani's careful work has gone far to disprove the existence of such a centre in the cerebellum. A critical study of the theories advanced to explain the normal functions seem too inadequate to account for all the phenomena. It appears conclusive that the cerebellar cells are continually exerting an influence upon other nerve centres, but with reference to the

true nature of this action nothing is known with certainty.

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REPORT OF A CASE OF CYST OF THE CEREBELLUM.

By JOHN M. SWAN, M. D.,

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PATHOLOGIST TO ST. MARY'S HOSPITAL.

A girl, aged 18 years (No. 1735), was admitted to St. Mary's Hospital in the service of Dr. M. H. Fussell on December 5, 1904, complaining of severe headache. The family history obtainable was not very satisfactory. The patient's father was living, apparently in good health; her mother was living but was addicted to the use of alcohol. One brother and one sister were living and apparently well.

Previous History.—Aside from the memory of an attack of chickenpox in childhood, the patient was sure she had never been sick in bed. She was quite positive that she had never had a cough or night sweats. She had noticed some morning expectoration. Menstruation had begun one year before and had been normal.

The present trouble began nine weeks before with severe frontal headache and weakness, for which she had to go to bed. Even a week before, she had had headache all the time. Since going to bed she had vomited from once to three times a day and on one occasion she vomited blood. Her bowels had been constipated; there was severe pain in the back and in the left leg. When first taken sick the patient had several chills.

On admission the patient complained of constant headache; it was discovered that she was blind in the right eye. She was a rather anæmic white girl, with short, blond hair. The face was the site of an eruption appearing like acne and there were many acne pimples on the chest and back. The pupils were dilated, the right more than the left, and re-

acted to light and accommodation. Nystagmus was present. There was paresis of the right external rectus muscle and the patient could not count fingers correctly with the right eye. The tongue was coated and protruded to the left. The teeth were covered with sordes. There was no enlargement of the lymphnodes. There was no paresis of the muscles of the face. There was some stiffness in the muscles of the neck and of the back and some stiffness in the muscles of the extremities. There was no difference in the grip of the two sides of the body. The plantar reflexes and the knee jerks were absent; there was no clonus; and no evidence of the presence of Babinski's sign; but Kernig's sign was present on both sides of the body. The temperature was 99°, the pulse 88 and the respirations 20 per minute on admission. Examination of the lungs gave no abnormal signs, except a slightly higher pitched percussion note at the right apex than at the left. The apex beat of the heart was neither visible nor palpable. The area of cardiac dulness was bounded by the third interspace, the left edge of the sternum, the mid-clavicular line, and the fifth interspace. There were no adventitious sounds but both diastolic sounds at the base of the heart were accentuated. The liver and the spleen were normal. There were no areas of abdominal tenderness.

Urine Examination.—Color, amber; specific gravity, 1026; reaction, acid; sediment, flocculent. Microscopically, leucocytes and amorphous urates were present; no casts were found. Chemically, albumin and sugar were absent.

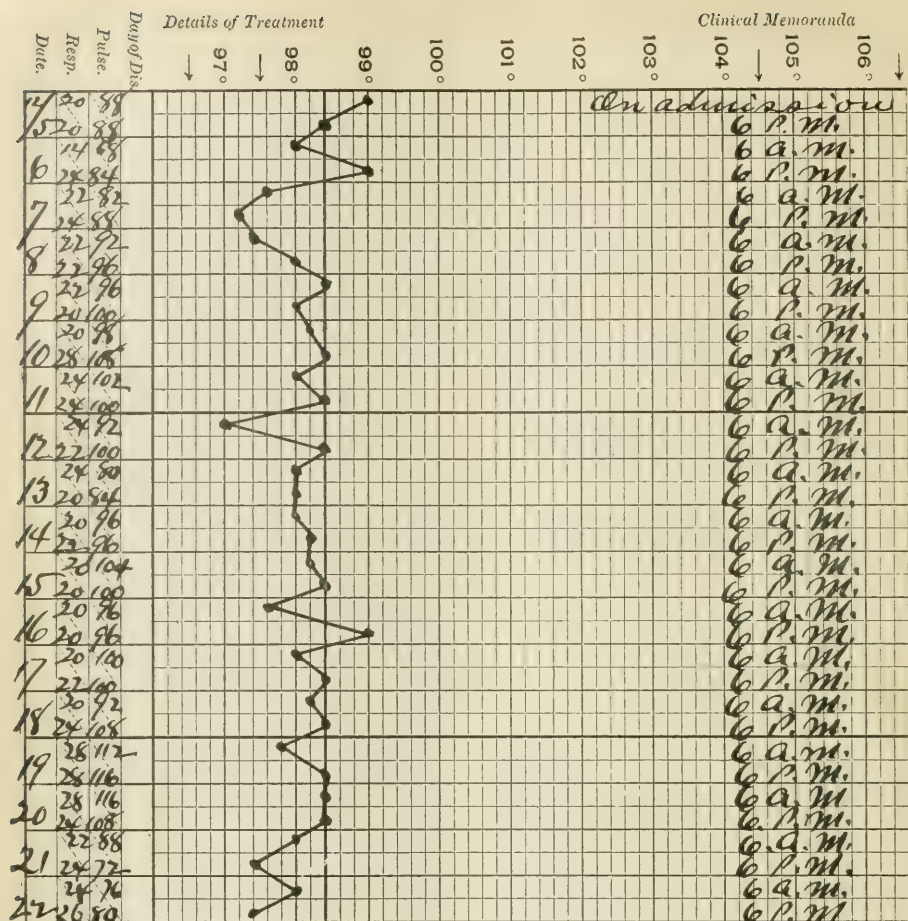
Blood Count.—Erythrocytes, 5,980,000; leucocytes, 12,640; hæmoglobin, 70 per cent. No differential count was made.

The patient had no convulsions. During her stay in the hospital she complained constantly of headache and pain in the back of her neck. She did not sleep well. She died suddenly on December 23, 1904, between 4 and 5 a. m.

The following examination of the ocular condition was made by Dr. William Zentmayer, ophthalmologist to the hospital. Right eye: Pupil 6 mm., does not respond to direct light stimulus but does respond in consensual action. Slight limitation of outward excursion of right eye; but during rest there is marked convergent squint of the right eye. The ophthalmoscopic examination disclosed intense choked disc with hæmorrhages. The disc could be located only by the convergence of the vessels; its summit being seen with about + 8 D. There were numerous hæmorrhages and spots of fatty degeneration of the retina below the fovea. The right eye was blind. Left eye: Pupil 5 mm. Choked disc but not so prominent as in the right eye. Vision $\frac{1}{60}$. Candle field good.

Autopsy Record.—The autopsy was made December 24, 1904, 33 hours after death. Clinical diagnosis, tuberculous meningitis. Pathological diagnosis, cyst of cerebellum, tumor of cerebellum, congestion of the cerebral and spinal meninges. Histological diagnosis, degenerative cyst of the cerebellum, papillitis, congestion of the chorioid coat of the eye, acute retinitis, degeneration of the optic nerve. Cause of death, undetermined.

Permission was obtained for an examination of



the brain and the spinal cord only. The body was that of a well nourished white female, apparent age 18 years. Post mortem lividity unusually well marked. Post mortem rigidity moderate. *Spinal cord*: the dura was somewhat congested. On opening the dura the vessels of the pia were seen to be somewhat injected. There were no tubercles. In other respects the cord appeared to be normal. *Brain*: on opening the skull the internal table was seen to be eroded and finely granular in appearance. The dura was congested. On cutting the tentorium cerebelli on the right side a large quantity of clear, pale serum containing flocculi escaped. On delivering the brain the right hemisphere of the cerebellum was seen to be the seat of a large cyst which had almost entirely replaced the cerebellar substance on its ventral surface. The wall of the cyst was smooth and apparently composed of white matter. Projecting on the surface of the hemisphere there was a round tumor which was gelatinous at its peripheral portion, but more firm at its attached base.

The brain was not dissected but appeared to be normal on the surface.

The histological examination was made in the McManes Laboratory of Pathology of the University of Pennsylvania (No. 359). Sections were made (1) from the free portion of the tumor; (2) from the base of the tumor; and (3) from the posterior pole of the right eye. The tissues were embedded in paraffin and stained with hæmatoxylin and eosin.

The free portion of the tumor was composed principally of a fragmented, friable matrix which stained fairly well with eosin, but which was poorly stained in many places. It was more granular than fibrillar in appearance and in places entirely structureless and hyaline. Embedded in this matrix were relatively few cells. Some of these cells were round with multiple nuclei; others were spindle shaped and very deeply stained; and still others were somewhat stellate in outline and showed more than one nucleus. There were some deep blue staining

masses, which were sometimes lobulated and which resembled corpora amylacea somewhat. They showed no concentric lines, however, and, on account of their deep staining, suggested calcareous degeneration. The blood vessels were surrounded by large, perivascular lymph spaces and their walls were the seat of an inflammatory process which in some instances obliterated them.

Section from the base of the tumor mass showed a tissue on the side next to the free surface of the tumor which had much the same appearance as that already described. It was not so fragmented, however, but it showed the same absence of fibrillæ and the same granular appearance. The blood vessels in this portion of the tumor were shrunken, the perivascular lymph spaces were relatively much increased in size, the walls of the vessels were thickened and their lumina distorted. The cells were less clearly stained and appeared to be in process of degeneration. Many degenerating nuclei were seen. In the molecular layer of the cortex the same change was to be seen and the friability of the tissues was very marked. The cells presented the same characters as those already described. The cells of Purkinje were fewer than normal, and those that persisted were poorly stained. The cells in the granular layer of the cortex were numerous but showed degenerative changes and the intercellular substance was also granular as already described. The blood vessels showed the same changes.

Section of posterior pole of right eye showed endarterial changes in the sclera, marked congestion of the chorioid vessels, and marked fibrosis of the retina. The inner surface of the retina was covered over with loose fibrous layer, thickest close to the optic papilla, and diminishing toward the equator of the eye. This tissue was rich in new blood vessels and contained numerous fibroblasts. The looseness suggested separation by hydropic infiltration. The optic papilla was prominent. The optic nerve was completely degenerated, no fibres having been found after fairly careful search. It was the seat of marked fibroid changes. The subarachnoid space was distended and occupied by young, loose, fibrillar tissue and a granular, eosin staining substance which was probably fibrin.

Interpretation.—The tumor was probably a portion of the cerebellar substance which had not yet undergone complete degeneration. The cyst was probably due to a hydropic degeneration of the cerebellar substance due to an obliterating endarteritis. There were no characteristic appearances of syphilis in this process, unless the vascular changes be so regarded.

Therapeutical Notes.

Menthyl Valerianate.—Menthyl valerianate has been found to be an excellent prophylactic against seasickness. K. Köpke, in a treatise on seasickness, recommends this preparation on the grounds that, though not absolutely infallible, it yet rarely fails to act. In the early stages of the sickness it is best taken in 10 to 15 drops on a lump of sugar. If this dose should not have the desired effect, it may be repeated after half an hour, with observation of the strictest diet.

The Treatment of Syphilis at Aix-la-Chapelle.—Anton Levien, in a communication on this subject to the *Practitioner*, for July, 1904, writes: The details of the "cure" are as follows: After rising in the morning between 7 and 8 o'clock, the patient takes two or three glasses of sulphur water, each of 200 grammes, with the addition of salts, which are prepared in the factory of the Aix-la-Chapelle natural spring products. Patients who are fairly strong then immediately take their bath, while weaker patients and more especially those suffering from affections of the central nervous system take a light breakfast and wait for their bath until two hours later. The temperature of the bath averages 95° to 98° F.; but those with nervous diseases or alterations of the arteries are not allowed to take baths warmer than 92° to 94° F. The duration of the bath varies from 5 to 20 minutes, according to the strength of the patient. In suitable cases which can endure a hardening process, cooling douches or irrigations are used in addition to the baths. After the bath the patient rests for 20 or 30 minutes, care being taken that he does not perspire too freely in the interim. Then, after the patient has had his breakfast (I am referring now to the more robust cases) he is inuncted. The process is carried out as follows: With the naked hand an experienced masseur rubs the requisite quantity of 33 per cent. blue ointment evenly on to the skin for a period of 20 minutes (hairy patients are previously shaved to avoid folliculitis). The following parts of the body are subjected in turns to inunction: On the first day the legs are rubbed; on the second, both thighs; on the third, the back; on the fourth, the abdomen and flanks; and on the fifth day the arms. These inunctions are repeated again and again in that order until the requisite number has been attained. Of course the inunctions may be so intensified that a greater extent of the surface of the body is daily smeared with a somewhat larger quantity of the ointment.

The ointment thus rubbed in is not removed with the towel after the bath on the following day, and thus every part of the body is at once exposed to the action of the unguentum cinereum until each section is again prepared for a fresh inunction. This preparation is effected by means of scrubbing with soap and water at a high temperature. The ordinary temperature of the water has no effect upon the ointment, which liquefies only at 113° F.

In the rubbing, we are careful to avoid the axilla and the region between the scrotum and the thigh, because eczema might easily be set up in these situations. It is also essential to avoid pressure on superficial bones, such as the shins and ribs. I generally order a glass of the thermal water to be taken both before the mid-day meal and before supper, as I find this has a stimulating effect on the appetite. During the cure, the teeth must be cleansed of morsels of food after each meal by means of a soft tooth brush, with a tooth paste of salol and chlorate of potassium. The mouth, also, must be rinsed with a solution of aluminum acetotartricum every half hour.

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NEW YORK, SATURDAY, FEBRUARY 11, 1905.

OUR "SYMPOSIUM" ON TUMORS OF THE CEREBELLUM.

In this issue we present the greater portion of a notable collection of original communications dealing with various aspects of the subject of tumors of the cerebellum. The authors are such well known men as Dr. Charles K. Mills, Dr. Charles H. Frazier, Dr. T. H. Weisenburg, Dr. G. E. de Schweinitz, Dr. Edward Lodholz, and Dr. John M. Swan, of Philadelphia, and Dr. Charles L. Dana and Dr. Joseph Fraenkel, of New York. Our readers will observe that the clinical element figures largely in these articles, but the contributions to the casuistics of the subject are not dissociated from that systematic consideration which one would expect from such thoughtful writers.

Necessarily a "symposium" of this character takes up a great deal of space, but we are sure that our readers in general will appreciate the grouping of so many authoritative utterances on a theme of such interest, and we are confident that those of our contributors whose articles are unavoidably kept back for a short time in order that we may produce the cerebellar tumor papers in an appropriate aggregation will readily concede that it is for no light reason that we countenance the delay. To mass a number of essays on a single topic, dealing with it from various

points of view, is to exemplify in literature that correlation which, as applied to college teaching, we commended in our issue for January 28th. And it is this feature that constitutes the strong point of a "symposium," putting it, as regards directness of interest, quite on a par with the report of an oral discussion, to which indeed it is superior in the item of more mature elaboration than can be looked for in extemporaneous speech, however carefully the fundamental points of the latter may have been worked up in advance. We are persuaded that an occasional "symposium" of the kind which we are now presenting is a peculiarly valuable feature of the periodical literature of medicine.

We believe that we shall be able to conclude this "symposium" in our issue of February 18th by publishing the interesting case reports of Dr. Mills, Dr. Frazier, and Dr. Weisenburg, together with two illustrations belonging to the last communication. We regret that the space at our disposal does not allow the publication of the papers in a single issue, but we feel that our readers will forgive the extension of this valuable contribution to modern surgery to a second number.

THE STARVATION TREATMENT OF OBESITY.

An interesting report on the treatment of obesity by reducing certain elements of the diet was presented at the Seventh French Medical Congress by Dr. Maurel, professor of experimental pathology in the University of Toulouse. Extracts from the report are published by Dr. Maurel in *Médecine moderne* for November 2d. The author seems to have had a large and satisfactory experience in the treatment of obesity, and his success is doubtless owing in great measure to his avoidance of the fault of pushing a pet treatment to extremes. The report deals with many aspects of the reduced diet treatment, and much scientific detail as to the rationale is brought out, but it is with a few practical points that we must here content ourselves.

One of these points relates to the wisdom of intermitting the treatment on occasions. Watchfulness, says M. Maurel, must always be exercised in the management of dietetic reduction; the patient must not be left to follow the course blindly, even when an energetic initial lowering of the amount of cer-

tain articles of food has accomplished a definite and gratifying result. At least as often as once in two weeks, whether there are complications or not, the condition of all the organs should be ascertained. If any of them are found at fault, it is often well to advise such relaxation of the rigid dietary as to enable the organism, so to speak, to adjust itself to new conditions, simply holding fast for a time to that which has been gained, without trying to push the cure.

Flaccidity of the skin is one of the chief occurrences that should call for a pause. In persons past middle life the retractile power of the skin is no longer such as to enable it to follow the reduced volume of the underlying tissues. An unpleasant flabbiness is the result, especially noticeable in the face, though to a considerable extent it shows also in the limbs and in the abdominal wall. When this state of things is observed, it is well to curb the rigor of the treatment until the skin has had time to retract upon the subjacent parts. Moreover, it is not always wise to push the treatment to the point of reducing the flesh to a theoretical normal; it is better to aim at a moderate reduction.

DR. BEVERLEY ROBINSON ON PNEUMONIA.

Pneumonia in all its forms is a disease so prevalent and of such a serious character that contributions to our knowledge of its management are always of value, particularly when they come from so conservative an observer as Dr. Beverley Robinson. Dr. Robinson has recently issued a pamphlet containing revised reprints of three articles written by him during the last ten years, and we feel sure that study of it will strengthen many a practitioner in his efforts to prevent the disease or to guide his patients toward recovery.

As regards the infectious nature of pneumonia, it is interesting to note that the short space of a little more than three years which elapsed between the original publication of his first article and that of the third was sufficient to make him a far more pronounced adherent of the infection theory. At the beginning of this period he was inclined to regard the disease as infectious only in certain instances and under certain circumstances, but at its close he says: "Pneumonia, or lung fever, should be classed among the infectious diseases. It is dis-

seminated by contact. It is taken by the attendants who nurse the patient and who breathe more or less constantly the contaminated air of the sick room filled with his expired breath, which is frequently the great carrier of the infection."

Considerable attention is given by Dr. Robinson to the prevention of the disease. Remarking that the *Micrococcus lanceolatus* is one of the least tenacious of life among the pathogenic microorganisms, and that it does not thrive in an acid medium, he recommends the frequent use of acid mouth washes in times when the disease is prevailing, though he is careful to add that, in view of the deleterious action of acids on the teeth, he does not approve of their employment at other times. Of almost equal importance with prophylaxis is prompt treatment at the outset of the disease, and among the most efficient measures for that purpose, he thinks, is the inhalation of the vapor of creosote. We infer that he regards this method of employing creosote as sufficient, so far as that particular drug is concerned, throughout the course of the illness. Used in this way it does not derange the digestion, and he does not find its odor objectionable. It is to be added to the water that should be constantly converted into steam in the patient's room.

As regards the advisability of removing a patient to a hospital, Dr. Robinson, while realizing the advantages of hospital treatment, judiciously balances them against the dangers that may be incurred in individual cases by the exposure, nervous shock, etc., incident to the transfer. If the patient is still in a condition to understand the advantage of his being in a hospital, if the hospital is not too far away, and if the means of transportation are satisfactory, it will be well to make the change; otherwise it had better not be made. Naturally a private room or at least a small ward is to be preferred to a large ward.

In addition to what we have here had space to mention, Dr. Robinson treats in a most judicious manner of the use of opium, coca, strychnine, and alcohol in the treatment of pneumonia. Particularly worthy of commendation, it seems to us, is his insistence on the employment of spirits and wines of the best quality when alcoholics are to be given. He administers a well deserved rebuke to those hospital authorities who are governed by parsimony in obtaining supplies.

CHLOROFORM VAPOR AND THE FLAME OF ILLUMINATING GAS.

Although it has been observed on various occasions that it is not safe to administer chloroform in the neighborhood of a gas flame, yet this fact does not seem to prevent the recurrence of accidents, many of which are serious and some of which are fatal. The danger is not on account of the chance of an explosion, as in the case of ether, but because the vapor of chloroform is decomposed, with the production of irritating and very poisonous compounds which, being gases, are inhaled by the patient and by all persons in the room. It was formerly supposed that the bad effects were due to the liberation of chlorine and hydrochloric acid, which are very irritating to the mucous membrane of the respiratory passages, but not particularly poisonous in any quantity in which they are likely to be inhaled. It has also been held that the poisonous effects must be due to inhalation of carbonic oxide, either from leakage of illuminating gas or from its imperfect combustion. It has been proved, however, that in the presence of the flame of illuminating gas the vapor of chloroform is broken up, not only into chlorine and hydrochloric acid, but also into an oxychloride of carbon, or phosgene (CO Cl_2), which is a violent poison, producing a sense of suffocation and inducing serious changes in the composition of the blood, with subsequent degeneration of various vital organs.

The last fatal occurrence attributable to the decomposition of chloroform by gas is reported from the clinic of Professor D'Urso, of the University of Messina. This led to experiments on animals by his assistant, Dr. G. Betagh, who has carefully investigated the whole question and reported the accident and the results of his experiments. It appears that, as the operating room was large and chilly, a gas stove had been installed to give the desired warmth, and been placed over nine feet away from the operating table. Two operations were performed. One was a laparotomy, and lasted no unusual time. The second was an operation for the radical cure of hernia. The first patient suffered after the operation with uncontrollable vomiting, headache, fainting attacks, and convulsions, and the urine was highly albuminous. She finally recovered, but at the time of the report still had a chronic nephritis.

The second patient died within twelve hours of the operation, with symptoms of internal hæmorrhage, and at the autopsy it was found that there was a great deal of free blood and clots in the abdominal cavity and in the layers of the wound, although there had been no slipping of ligatures; in fact no vessels of any magnitude had been severed, while the ligation of even the minute arteries had been careful and thorough.

The assistants, and especially the anæsthetizer, had suffered from headache, nausea, and vomiting. The chloroform was tested and found to be pure and in good condition. It was also shown that in the absence of chloroform vapor no ill effects were produced by the use of the stove. Experiments were made with a considerable number of rabbits and dogs, in which chloroform was administered while a small gas flame was placed near the head of the animal, and in all cases very serious symptoms developed, and if the narcosis lasted more than half an hour the animal died. On examination it was found that the proportion of hæmoglobin fell rapidly after the operation from 95 to 60 or in some cases as low as 40. There was suppression of urine, with convulsions and dyspnœa. After death sanguineous extravasations were found in the lungs and in the spleen. The kidneys were engorged, with hæmorrhagic extravasations. The canaliculi were often filled with red corpuscles and were in a condition varying from cloudy swelling to a loss of epithelium or even necrosis of their elements. In other experiments the gas flame was placed at a distance from the animal and the products of combustion were led by a tube under the chloroform mask, so that the animal received any carbonic oxide which might be formed, but the chloroform vapor was not in contact with the flame. These animals did not die or suffer any deleterious effects from this method of anæsthesia.

Among the cases recorded in literature, besides several where catarrhal pneumonia was observed, the most remarkable was that of Lorentz, who describes an operation for gunshot wound of the abdomen where chloroform was used in the presence of gas light. After the operation, which was a long one, two surgeons and four Sisters of Charity, who had assisted, were taken with symptoms of collapse, with cough and oppression, and one of

the Sisters died after twenty-eight hours. The patient died six hours after the operation, and the abdominal cavity was found to contain a large amount of blood. It is thus sufficiently proved that the utmost care must be used in administering chloroform in the presence of a gas flame, which in these days of gas stoves is a matter of the greatest importance. What the effect of other forms of flame may be does not appear from the literature, as all the cases of accident reported have been due to the use of chloroform in the presence of the flame of illuminating gas. Since, however, the injury is not caused by the products of the combustion of the gas, and since one flame is like another, it would appear that equal caution ought to be observed in using chloroform in the presence of any open fire, such as that of coal, for the flame of a coal fire is nothing but the flame of illuminating gas escaping from the hot coal.

Where accessory or occasional means of heating operating rooms are employed, the heater should be outside the operating room, and this can easily be arranged by means of some of the devices for heating water by means of gas, and thus transferring the heat to a radiator, which can be placed wherever desired. For artificial light electricity should always be preferred where it is obtainable, and if gas must be used it should be high above the field of operation, and if possible separated by some sort of skylight from the air of the operating room. Sterilizers which depend on gas flames should be kept in an adjoining apartment. Of course the use of ether, as is customary in many parts of this country, removes the dangers to which I have alluded, but with this agent there is always a danger of explosion in the presence of a flame, so that in any case anæsthetics and fire are to be kept as far as possible from each other. ERNEST W. CUSHING.

"ATROCIOUS ADULTERATION."

In the centenary number of the *Edinburgh Medical Journal*, which has been recently issued, the editors review its history in an article of considerable historical interest. From this we learn that adulteration of drugs was extensively practised in the first half of the nineteenth century. Sir Robert Christison, of *Dispensatory* fame, was one of the twelve past editors of the journal, and in a report which he made to the Royal College of Physicians, of Edinburgh, he stated that few medicines in gen-

eral use escaped occasional sophistication, the impurities being frequently so great as to render them therapeutically inefficacious. His attention was first called to the subject by failing in an experiment before his class to obtain the reaction for mercuric chloride with potassium iodide. On proceeding to inquire into the cause, he discovered that the iodide consisted of 80 per cent. of potassium carbonate, 10 per cent. of water, and only 10 per cent. of potassium iodide. "This atrocious adulteration," comment the editors, "was knowingly sold by a Glasgow firm all over Great Britain and accounted for the failures, often complained of at that time, in the use of the salt as a remedy in medical practice." Dr. Christison's report attracted widespread attention, and was responsible in no small degree for an improvement in the purity of drugs, which soon took place through legislative enactment and other means.

PREVENTIVE MEDICINE IN THE FIELD.

The military authorities of Japan have permitted but little information to reach the outside world concerning the details of the operations of their armies but such scant news as has been made public shows that she has gone further in the application of preventive medicine in the field than has any other power in the history of the world. We learn that sanitary authorities who accompanied or preceded the first line of advance examined the waters of the various wells, creeks, and rivers and labeled such waters as "potable," "non-potable," or "potable only after boiling" for the information of the troops who were to follow. This, coupled with a similar foresight in other directions, has reduced the sick list to a degree which seems almost incredible to those who are familiar with the history of our civil war and the Cuban campaign. We wonder if our own government will profit by this example? We hope for better things than our past experience would lead us to look for.

FOREIGN SUBSTANCES IN THE SUBWAY.

One effect of the recent sleety weather with its disagreeable consequences underfoot can hardly have been foreseen by those who anticipated an invariably clean and aseptic subway station. The adhesive compound of partially melted snow, tobacco quids, manure, cigar ashes, etc., deposited on the steps of the stations by the feet of passengers, form a feature scarcely less objectionable than the advertisements and slot machines which disfigure the subway not only in foul weather, but at all times. Would it not be feasible to have something resembling the old fashioned iron shoe scraper at the head of each subway staircase to remove at least the heavier particles of septic matter?

News Items.

Society Meetings for the Coming Week:

MONDAY, February 13th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private; anniversary); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Corning, N. Y., Medical Association; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, February 14th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Society; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, February 15th.—Woman's Medical Association (New York Academy of Medicine); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases; Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, February 16th.—New York Academy of Medicine; Brooklyn, N. Y., Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, February 17th.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 4, 1905:

	February 4.		January 28.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	185	8	174	7
Diphtheria and croup	311	49	272	40
Scarlet fever	233	15	248	13
Smallpox	1	1	8	..
Chickenpox	135	..	174	..
Tuberculosis	343	180	389	167
Typhoid fever	32	10	41	14
Cerebrospinal meningitis	33	33	..	28
	1,240	296	1,306	269

Sanitary Superintendent in Brooklyn.—Dr. Darlington has appointed Dr. Thomas Louis Fogarty to fill this office.

Reported Gift to Parisian Hospital.—It is stated that a wealthy citizen of New York has given \$200,000 to Professor Gauthier, of Paris, to add to one of the hospitals there a wing in which a radiant light bath may be established for the benefit of the poor who require treatment by such means.

Society of Sanitary and Moral Prophylaxis.—A meeting at the New York Academy of Medicine was held on Thursday, February 9th, at 8.30 p. m.,

for the purpose of discussing the advisability of forming in this city a Society of Sanitary and Moral Prophylaxis. A paper setting forth the object and aims of the proposed society was read by Dr. Prince A. Morrow. A discussion by Dr. Felix Adler, Professor E. R. Seligman, E. T. Devine, William A. Purrington, Dr. Stephen Smith, Dr. Keyes, Dr. Bangs, and others followed.

Accident to a New York Physician.—Dr. Jacob Glass, of 67 Second Avenue, and his driver, Bernard Simmons, were painfully cut and bruised on February 5th when a trolley car struck their buggy in front of the doctor's office. The carriage was overturned; Simmons falling on top of the doctor.

Diphtheria in Staten Island.—Dr. John T. Sprague, assistant sanitary superintendent of the Health Department in Richmond, ordered the closing of Public School No. 21, in Elm Park, on January 31st, because of the prevalence of diphtheria among the children. In the previous two weeks, forty-four cases of the disease had been reported to the Health Department. One third of the patients are pupils at the public school, which has an attendance of about six hundred and fifty children. So far no case has had a fatal termination. The school building has been thoroughly disinfected.

Eastern Medical Society.—The section on pædiatrics will meet on Thursday, February 16th, at 8.15 p. m., at Clinton Hall, 151 Clinton Street. Programme: Case of Aphemia Gradually Acquired One Year After an Attack of Cerebrospinal Meningitis, by M. Gertler, M. D.; Fusiform Bacilli (Vincent) and Spirilla from a Case of Ulceromembranous Angina, by Charles Herrman, M. D.; A Case of Hypertrophic Stenosis of the Pylorus, by F. L. Wachenheim, M. D.; Report of a Case of Tuberculous Meningitis Treated with Diphtheritic Antitoxine, by Cesare Mondini, M. D.; paper, Treatment of Eczema and Impetigo in Children, by Charles Warren Allen, M. D. Discussion opened by Boleslaw Lapowski, M. D., and Ludwig Weiss, M. D. Jacob Sobel, M. D., chairman; E. M. Sill, M. D., secretary, 222 West Fifty-ninth Street.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held at the New York Academy of Medicine on Wednesday, February 15, 1905, at 8.30 p. m. Attention is called to the change of the night of meeting the present month from Monday to Wednesday. The postponement was rendered necessary by the fact that Monday, February 13th, the regular date for the meeting, is this year a legal holiday. The meeting will be held in Du Bois Hall, on the second floor of the academy building. Order of exercises: Asepsis and Antiseptics in Obstetrics; Sterile Gauze and Sterile Water, by J. Milton Mabbott, M. D.; Perinæum, Perineorrhaphy, and Prolapse, by Arnold Sturm Dorf, M. D.; The Gynecologist and the General Surgeon—Their Respective Fields, by Brooks H. Wells, M. D. Discussion by Dr. Charles Jewett, Dr. C. A. Von Ramdohr, Dr.

Egbert H. Grandin, Dr. Robert L. Dickinson, Dr. H. J. Boldt, Dr. L. Grant Baldwin, Dr. S. Marx, Dr. E. E. Tull, Dr. George L. Brodhead, and Dr. H. N. Vineberg. Collation. J. Lee Morrill, M. D., treasurer; P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street.

New York County Medico-Pharmaceutical League.—At a stated meeting of the New York County Medico-Pharmaceutical League, held at the Hotel Astor on January 24th, the following resolutions were offered:

Whereas, In the demise of our late ex-president, Thomas H. Manley, M. D., the medical profession has lost an honored and a worthy member, who for many years contributed to medical science and surgical skill, and

Whereas, We realize that he might have given to this society the benefit of many years of valuable advice and unselfish personal service, it is with profound regret that we bow to the inscrutable will of Divine Providence; and therefore be it

Resolved, That in the loss of Thomas H. Manley, M. D., there has been taken from us a courteous gentleman, a benevolent and most useful citizen; and be it further

Resolved, That these resolutions be spread on the records of this society, and that they be published in the medical press, and a copy thereof be transmitted to the family of the deceased.

L. W. Zwisohn, M. D.,
Hermann J. Boldt, M. D.,
Samuel F. Brothers, M. D.,
Committee.

PHILADELPHIA.

Scientific Society Meetings for the Week Ending February 18, 1905.—Monday, February 13th, Section on General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, February 14th, Philadelphia Paediatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, February 15th, Section on Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, February 16th, Section in Gynaecology, College of Physicians. Friday, February 17th University of Pennsylvania Medical Society; American Philosophical Society.

Appointments at the Jewish Hospital.—William B. Hackenburg, president of the Jewish Hospital Association, has made announcement of the following appointments on the hospital staff: Dr. Charles P. Noble, consulting surgeon; Dr. Lawrence F. Flick, consulting physician; Dr. William H. Randle, obstetrician; Dr. J. B. Potsdamer, paediatrist; and Dr. Sidney L. Feldstein, radiologist. Miss Margaret Pridham, who has been chief nurse and superintendent of the Medico-Chirurgical Hospital, and formerly of the Massachusetts General Hospital, of Boston, and of the Denver General Hospital, has been elected chief nurse and superintendent of the Nurses' Training School of the Jewish Hospital. She will assume her new duties on February 1st.

Ophthalmological Society Organized in Philadelphia.—Realizing the importance of a society in which clinical workers in ophthalmology may be able to report their interesting daily cases and enjoy full and free individual discussion upon the same, and present theoretical and statistical papers upon ophthalmic subjects, Dr. Oliver, of Philadelphia, has recently organized the Association of Clinical Assistants of Wills's Hospital. Membership by ballot is open to all those who have been or are connected with one or more of the clinical services in Wills's Hospital for a period of not less than three months' time. Meetings are held at the hospital at 8.30 p. m. on the first and third Wednesdays of each month. All who are eligible are invited to attend and join.

Statistics of Bureau of Health.—During December the Division of Medical Inspection of the Department of Public Health and Charities made 8,353 inspections of houses and business places and ordered 889 fumigations. Sixty-two cases were referred for special diagnosis. There were 5,030 visits to schools and 1,253 children were excluded from school. Two hundred and eighty-five cultures were taken; 86 injections of antitoxine made; and 2,370 vaccinations done. In the Division of Milk Inspection 163,977 quarts of milk were inspected; 1,981 quarts were condemned; 127 specimens were examined chemically, and 950 microscopically. In the Bacteriological Laboratory 1,340 examinations were made for diphtheria; 299 Widal examinations; 819 milk examinations; 102 examinations of sputum; and 1,990 bottles of antitoxine were supplied. In the chemical laboratory 210 analyses were made.

Meeting of the Trustees of the Presbyterian Hospital.—At a meeting of the trustees of the Presbyterian Hospital in Philadelphia, held January 17th, the following officers were elected:

President, the Reverend Dr. Charles A. Dickey; vice-president, Charles H. Matthews; treasurer, Frank K. Hippie; secretary, John H. Converse; trustees, the Reverend J. Hervey Beale, the Reverend Dr. Henry C. McCook, the Reverend Louis Benson, John H. Watt, the Reverend Charles Wadsworth, Jr., Henry B. Paul, Jr., John F. Craig, Dr. George W. Bailey, John B. Gest, and H. E. Prentiss Nichols.

The expenditures for the year exceeded the income by \$20,000. A movement to obtain \$50,000 more endowment has been started by the Ladies' Aid Society.

The Officers of the Pennsylvania Society to Protect Children from Cruelty for the ensuing year were elected on January 17th:

President, Charles C. Harrison; vice-presidents, Dr. Charles P. Turner, Thomas L. Gillespie, J. Percy Keating, Henry M. Dechert, G. Heide Norris, Mrs. E. H. Ogden, Mrs. George W. Ellis; treasurer, Joseph P. Mumford; board of managers (for three years), Dr. Charles P. Turner, Edward Coles, Henry M. Dechert, H. O. Hildebrand, Mrs. G. M. S. P. Jones, Mrs. H. W. Wilson, Mrs. George W. Ellis, Mrs. J. Willis Martin, Miss Caroline Mason, Edward B. Smith.

President Harrison's report showed that 314 of the 773 families referred to the society in the last seven months were placed under supervision. In addition 859 children were committed to the society's care in this period. The treasurer's re-

port shows a deficit of \$8,666 for the year in maintenance fund.

The Health of the City.—During the week ending January 28, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	82	11
Scarlet fever.....	65	2
Chickenpox.....	118	0
Diphtheria.....	62	10
Cerebrospinal meningitis.....	1	0
Measles.....	6	0
Whooping cough.....	16	0
Tuberculosis of the lungs.....	51	49
Pneumonia.....	63	67
Erysipelas.....	11	0
Puerperal fever.....	3	3
Anthrax.....	1	0

The total death rate for the week was 499, in an estimated population of 1,438,318, corresponding to an annual death rate of 18.04 per 1,000 population. The total infant mortality was 96; under one year, 78; between one and two years, 18. There were 33 still births; 17 males and 16 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 10; diarrhoea and enteritis, under two years, 14. During the week there were two snowstorms, lasting together nearly 48 hours. The temperatures fell steadily until the 26th, when a minimum of 6° was reached. The snowstorm of the 25th was accompanied by a high wind, which at one time recorded 40 miles per hour. The deaths from pneumonia and other respiratory diseases made a total of 101, or 20.24 per cent. of the total deaths.

The West Philadelphia Medical Association.—A new medical organization has been formed by physicians of West Philadelphia, and is known as the West Philadelphia Medical Association. Organized but a few months, it has already a membership of seventy-five. Its objects are to federate all reputable regular physicians in West Philadelphia, to encourage unity, promote harmony, to encourage a spirit of emulation in medical work and discussions, and to promote an active interest towards the members' material welfare. To the purely professional work which will be decidedly advantageous to medical men interested in the advancement of science, the organization has added social features which will ever keep alive the interest held in the association. At all meetings an hour is devoted to song, story, and music, and here also is given the opportunity of cementing and continuing friendship thus formed. The last meeting was held in Rittenhouse Hall, Fifty-third and Haverford Streets, at 9 p. m., on Friday, February 1st. The subject was Typhoid Fever, Its Pathology, Diagnosis, Complications, and Treatment. Discussion was opened on Pathology by Dr. F. Mortimer Cleveland, Diagnosis by Dr. J. E. Talley, Complications by Dr. J. H. McConnell, and Treatment by Dr. J. M. Eckfeldt. The present officers are:

President, Dr. A. F. Targette; vice-president, Dr. George C. Shammo; recording secretary, Dr. William D. Bacon; financial secretary, Dr. A. P. Good; treasurer, Dr. J. D. Brittingham; board of directors, Dr. J. W. McConnell, chairman; Dr. F. Mortimer Cleveland, secretary; Dr. E. L. Graf, Dr. Frank Kirby, Dr. S. F. Gilpin, Dr. F. R. Starkey, Dr. H. B. Smith, Dr. A. P. Good, Dr. Charles E. Price, Dr. B. F. Wentz, and Dr. J. D. Brittingham.

Members of the profession are cordially invited to any or all meetings, and will be royally welcomed.

GENERAL.

Cincinnati District Physician.—Dr. G. C. Alte-meier is to be appointed district physician in the twenty-second ward of Cincinnati, to succeed the late Dr. A. J. Hofling.

Scarlet Fever in Syracuse, N. Y.—It is stated that the health authorities of Syracuse are alarmed at the spread of scarlet fever in that town, 74 cases having been reported with 3 deaths.

Minnesota State Board of Medical Examiners.—At the request, it is said, of the Woman's Medical Club, of Minneapolis, Dr. Margaret Koch has been appointed a member of this body to succeed Dr. Adele Hutchinson.

The Quarter Century Medical Club, of Detroit, elected the following officers at its meeting on January 27th: President, Dr. Herman Kiefer; vice-president, Dr. J. E. Emerson; secretary, Dr. W. C. Stevens; treasurer, Dr. Eugene Smith.

Schenectady County Medical Society.—At a meeting of this society, held on January 10th, the following officers were elected: President, Dr. W. L. Fodder; vice-president, Dr. Louis Faust; secretary, Dr. F. C. Reed; treasurer, Dr. G. B. Johnson.

The Tioga County, N. Y., Medical Society has elected the following officers: President, Dr. H. I. Dunbar, of Candor; vice-president, Dr. A. W. Stiles, of Apalachin; secretary, Dr. Leon Detowski, of Waverly; treasurer, Dr. J. M. Barrett, of Owego.

Dr. Anita Newcomb McGee has been made a member of the United Spanish War Veterans, and is the only woman holding membership in that organization. Dr. McGee during the war with Spain was commissioned acting assistant surgeon.

The Milwaukee Medical Society has elected the following officers: President, Dr. H. B. Hitz; vice-presidents, Dr. William Thorndike and Dr. Oscar Chryslor; secretary, Dr. H. E. Dearholt; treasurer, Dr. R. C. Brown; librarian, Dr. A. W. Myers; curator, Dr. O. F. Fieter.

Albany Board of Health.—A competitive civil service examination for the position of sanitary inspector in the Albany board of health will be held in the common council chamber on Tuesday, February 21st, at 2 p. m. Applications must be filed with the secretary of the commission on or before Wednesday, February 15th, at 3 p. m.

Dr. E. C. W. O'Brien, surgeon of the Buffalo fire department, is critically ill at his home, No. 1195 Main Street. Dr. O'Brien suffered a severe attack of gripe about ten days ago and complications now have set in which make his physicians fear for his ultimate recovery. Dr. O'Brien has been the official surgeon of the fire department for many years. Dr. William G. Ring, of 364 Niagara Street, has been designated as physician to the fire department during the illness of Dr. E. C. W. O'Brien.

Ramsey County, Minn., Medical Society.—Dr. A. W. Dunning was elected president of the Ramsey County Medical Society, in annual session, on January 28th. Dr. Burnside Foster was elected vice-president; Dr. E. F. Geer, secretary; Dr. F. W. Leavitt, treasurer; and Dr. A. F. Whitman, necrologist.

Smallpox in Virginia.—Greensville County, Va., reports twenty-one cases of variola among colored people for January. The disease so far has proved very mild, barring three cases which may terminate fatally. The contagion was brought from Haverstraw, N. Y. L. Lafon, M. D., health officer.

Chenango County Medical Society.—At the hundredth annual meeting of this society, held on January 10th, the following officers were elected: President, Dr. L. C. Palmiter, of Mount Upton; vice-president, Dr. B. A. Harris, of Norwich; secretary, Dr. F. O. Spooner, of Sherburne; treasurer, Dr. S. M. Hand, of New Berlin.

Opening of a New Hospital in Pittsburgh.—The new municipal hospital building in the thirtieth ward, Pittsburgh, was thrown open on January 31st for the reception of patients by order of Director of Public Safety Harry Moore. It is intended for persons suffering from any contagious disease.

The Macomb County, Mich., Medical Association, at its meeting on January 26th, elected the following officers for the ensuing year: President, Dr. P. A. Knight, of Mt. Clemens; vice-president, Dr. Robert Greenshields, of Romeo; president and treasurer, Dr. A. J. Warren, of Mt. Clemens.

Memorial Tablet for the Kingston, N. Y., Hospital.—The members of the Board of Managers and the Medical Staff of the City of Kingston Hospital have procured a beautiful bronze tablet which is to be placed upon the wall of the front hall of the hospital in memory of Dr. Jacob Chambers, who was one of the original organizers of the institution and served both as manager and attending physician and surgeon for many years.

Medical Society of the State of New York.—The ninety-ninth annual meeting of the Medical Society of the State of New York was brought to a close on February 2nd with the election of the following officers, who will serve for the ensuing year: President, Dr. Joseph D. Bryant, of New York; vice-president, Dr. Herman R. Ainsworth, of Addison, N. Y.; secretary, Dr. Frederick C. Curtis, of Albany; treasurer, Dr. O. D. Ball, of Albany. Dr. Charles G. Stockton, of Buffalo, who was a candidate for president, withdrew in favor of Dr. Bryant; and the election of officers was unanimous.

Dr. Henry E. Woodbury, a well known Washington practitioner, died on January 15th. He was a graduate of Dartmouth College and Georgetown University Medical School. After serving as an acting assistant surgeon during the civil war, Dr. Woodbury located in Washington and practised there for 25 years, when an accident compelled him to relinquish his professional du-

ties. He was a contributor to many medical journals during his career. The doctor was a direct descendant of Captain Woodbury, who commanded a company in Colonel Stark's regiment at the battle of Bunker Hill.

International Society of Tuberculosis.—A new scientific society has just been founded in Paris, under the name of the *Société Internationale de la Tuberculose*. Its office is in Paris. Meetings are held monthly, on notice from the general secretary. The scope of this association is the study of all questions concerning tuberculosis and the centralization of means of defence. Its work will be published. The society is composed of medical men or savants holding diplomas from French or foreign universities and colleges. Admission may be obtained by application to the president, which application must be accepted by a committee elected at a general meeting. The annual subscription is 10 francs (\$2.50). For further particulars and for application forms, address M. le docteur Georges Petit, General Secretary, 51 rue du Rocher, Paris, France.

Emergency Hospital, Denver.—The stockholders and board of directors of the Denver Emergency Hospital held their annual meeting on January 25th, and, together with eleven of the most prominent physicians and surgeons of the city, merged themselves into the Emergency and General Hospital Association, with \$10,000 capitalization. Its ultimate purpose is the enlargement and improvement of the present institution and in the course of time the erection of a handsome new building. The officers of the association are: President, Dr. John D. Crisp; first vice-president, Dr. C. B. Richmond; second vice-president, Dr. D. R. Lucy; third vice-president, Dr. Bernard Oettinger; secretary, Dr. J. W. Austin; treasurer, Dr. S. Simons. Mrs. M. M. Day will remain matron and Miss Daisy Blackburn head nurse.

Memorial Gift to the Chicago Medical Society.—The memorial bust of Dr. Christian Fenger will be formally presented to the Chicago Medical Society soon by members of the organization. The bust is to be placed in the Cook County Hospital, where Dr. Fenger operated for twenty years. Dr. Ludwig Hektoen is chairman of the committee on arrangements. He states that there will be enough money left after paying the \$3,000 for the bust to establish a Christian Fenger membership in one of the local medical colleges. It has not been decided which school is to be the recipient, as Dr. Fenger served on the faculty of three. Dr. Fenger was born in Copenhagen, Denmark, and held the chair of pathology in the Danish University of that city. Since coming to Chicago he had at different times held the chair of surgery in the Physicians and Surgeons College, the Northwestern Medical College, and Rush College. He was pathologist on the staff of the Cook County Hospital for fifteen years. At the time of his death he was president of the Chicago Medical Society.

Statement of Mortality in Chicago for the Week Ending February 4, 1905, compared with

the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905, and of 1,932,315 for 1904:

	Feb. 4, 1905.	Jan. 28, 1905.	Feb. 6, 1904
Total deaths, all causes.....	530	558	596
Annual death rate per 1,000...13.88		14.61	16.11
By sexes—			
Males.....	297	312	338
Females.....	233	246	258
By ages—			
Under 1 year.....	114	118	116
Between 1 and 5 years.....	58	45	46
Over 10 years.....	104	115	120
Important causes of death—			
Acute intestinal diseases.....	23	16	13
Apoplexy.....	16	12	14
Bright's disease.....	30	44	48
Rheumatism.....	28	15	31
Consumption.....	67	60	50
Cancer.....	20	16	26
Convulsions.....	11	12	18
Diphtheria.....	13	10	12
Heart disease.....	3	3	45
Influenza.....	6	9	12
Measles.....	5	5	5
Nervous diseases.....	23	35	45
Pneumonia.....	115	96	151
Scarlet fever.....	1	0	2
Smallpox.....	6	1	0
Suicide.....	5	6	9
Typhoid fever.....	3	3	2
Violence (other than suicide).....	31	32	4
Whooping cough.....	7	9	0
All other causes.....	85	141	101

Medical Society of the Missouri Valley.—The seventeenth semiannual meeting of this association will be held in Kansas City, March 23rd and 24th. An excellent programme is being arranged for the occasion, and the local medical profession, which is noted for its hospitality, will keep open house for the visitors upon this occasion. Dr. S. Grover Burnett, of Kansas City, is president of the society, and Dr. C. Lester Hall, chairman of the arrangement committee. Following is a list of the papers which have already been given a place upon the programme:

Paper, by George W. Cale, M. D., of Springfield, Mo.; Surgical vs. X Ray Treatment in Cases of Rodent Ulcer and Epitheliomata of the Face, with Demonstration of Cases Operated Upon, by C. O. Thienhaus, M. D., of Milwaukee, Wis.; Transverse Ribbon Shaped Corneal Opacity, by J. M. Sherer, M. D., of Kansas City, Mo.; Rest in the Treatment of Select Cases of Mental Disease, by F. E. Norbury, M. D., of Jacksonville, Ill.; paper, by E. N. Wright, M. D., of Olney, I. T.; Surgery of the Spine, by C. E. Black, M. D., of Jacksonville, Ill.; Synchronous Extra and Intrauterine Pregnancy, with Report of Case, by D. C. Brockman, M. D., of Ottumwa, Ia.; Remarks on the Surgery of Umbilical, Femoral, and Inguinal Hernia, with Reported Cases, by J. Young Brown, M. D., of St. Louis; Case of Chorioiditis, Probably Due to Necrosing Eithmoiditis, by W. W. Bulette, M. D., of Pueblo, Colo.; Pelvic Inflammation, or Peri and Parametritis, by H. C. Crowell, M. D., of Kansas City, Mo.; Renal Affections Simulating Abdominal and Pelvic Diseases, by J. Block, M. D., of Kansas City, Mo.; The Newly Born Infant; Its Care and Management, by A. D. Wilkinson, M. D., of Lincoln, Neb.; Anesthetics, by Dora Greene-Wilson, M. D., of Kansas City, Mo.; Some Observations Upon the Treatment of Inguinal Hernia, by Prince E. Sawyer, M. D., of Sioux City, Ia.; Functional Diagnosis of Kidney Diseases, by A. C. Stokes, M. D., of Omaha, Neb.; Hypertrophy of the Thyroid Gland, by T. E. Potter, M. D., of St. Joseph, Mo. A feature of the programme will be a "symposium" on Puerperal Fever, opened by Robert T. Sloan, M. D., of Kansas City. A cordial invitation is extended to the medical profession and special rates will be granted by the railroads. Further information and copy of the complete programme, which will be issued March 10th, may be obtained by addressing the secretary, Charles Wood Fassett, M. D., of St. Joseph, Mo.

Health in Michigan During January, 1905.—Reports to the State Board of Health, by repre-

sentative physicians in active general practice, in different parts of the State, show the diseases which caused the most sickness in Michigan during the month of January (four weeks ending January 28th), 1905, to be as follows:

	Number of reports received for this month.....	279
	Per cent. of reports stating presence of disease.	
	Average for	
	January, 10 years, all months,	
	1904, 1895-1904, 1895-1904.	
Diseases arranged in order of greatest prevalence in this month.	1905.	
Rheumatism.....	63	62
Influenza.....	55	49
Bronchitis.....	54	56
Nervous.....	53	56
Amalgamitis.....	52	51
Gonorrhea.....	50	55
Syphilis.....	33	*
Diarrhea.....	23	21
Consumption, pulmonary.....	23	23
Cancer.....	18	19
Pleuritis.....	17	12
Inflammation of kidney.....	16	20
Smallpox.....	12	11
Typhoid fever—Enteric.....	10	12
Typhomalarial.....	2	3
Scarlet fever.....	11	12
Measles.....	8	8
Pneumonia.....	10	10
Inflammation of bowels.....	7	9
Intermittent fever.....	6	11
Erysipelas.....	5	5
Diphtheria.....	4	6
Cholera morbus.....	3	1
Inflammation of brain.....	2	2
Whooping cough.....	1	6
Puerperal fever.....	1	2
Remittent fever.....	1	2
Dysentery.....	1	4
Cholera infantum.....	1	0.7
Meningitis.....	0.7	0.7
Membranous croup.....	0.7	0.4

At the State Capitol for the month of January, 1905, compared with the average for January in the ten years, 1895-1904, bi-daily observations show the prevailing direction of the wind to have been the same (southwest), the velocity .2 of a mile an hour less, the average temperature 4.43 degrees lower, the average daily range of temperature .51 of a degree less, the average daily range of atmospheric pressure .059 of an inch less, the precipitation .17 of an inch less, the absolute humidity less, the relative humidity more, the day and night ozone much less, and the depth of water in the observation well 6 inches less. For the month of January, 1905, compared with the average for January in the ten years 1895-1904, smallpox, measles, and cholera morbus were more than usually prevalent; and scarlet fever, pneumonia, intermittent fever, erysipelas, diphtheria, whooping cough, puerperal fever, remittent fever, and dysentery were less than usually prevalent.

THE MOST DANGEROUS COMMUNICABLE DISEASES.

Including reports by regular observers and others, whooping cough was reported present in Michigan during the month of January, 1905, at 10 places; meningitis, at 15 places; measles, at 63 places; diphtheria, at 83 places; scarlet fever, at 109 places; pneumonia, at 101 places; smallpox, at 104 places; typhoid fever, at 108 places; and consumption, at 267 places. Reports from all sources show whooping cough reported present at 9 places less; meningitis, at 10 places more; measles, at 12 places more; diphtheria, at 8 places less; scarlet fever, at 17 places less; pneumonia, at 19 places more; smallpox, at 3 places more; typhoid fever, at 3 places more; and consumption, at 26 places more, in the month of January, 1905, than in the preceding month. Henry B. Baker, secretary.

Pith of Current Literature

PRESSE MEDICALE.

December 31, 1904.

1. Clinical Examination of the Back of a Child,
By R. DESFOSSES.
2. The French Mediterranean Climate from a Clinical
Point of View. Climatic Diagnosis and Prognosis.
Climatic Test, By GASTON SARDOU.
3. The Œsophagolacrimal Reflex, By H. DELAUNAY.

1. **Examination of the Back of a Child.**—Desfosses describes the various forms of disease of the vertebræ met with in children, and supplements his description by twenty-two very serviceable illustrations.

2. **The Climate of the French Mediterranean.**—Sardou declares the action of this climate to be tonic, excitant, or sedative according to the distance from the water and other topographical circumstances on the one hand and the nature of the disease, or of certain of its forms, from which the patient is suffering.

3. **The Œsophagolacrimal Reflex.**—Delaunay does not agree with Carnot that it is difficult to discern any useful physiological purpose for this reflex. He presents what he holds to be an explanation, but it is not clear and does not seem to demonstrate what useful purpose is subserved thereby.

January 4, 1905.

1. Galloping Typhoid Fever,
By H. ROGER and M. SALOMON.
2. Pathogenesis and Treatment of Chronic Articular Rheumatism,
By C. PARHON and J. PAPINIAN.

1. **Galloping Typhoid Fever.**—Roger and Salomon give a detailed history of a case of typhoid fever which terminated fatally on the eighth day.

2. **Chronic Articular Rheumatism.**—Parhon and Papinian are inclined to ascribe this disease to modifications of the functions of certain internal glands, particularly the ovary and the thyroid body.

January 7, 1905.

Neurofibrillæ According to the Method of S. Ramon y Cajal,
By L. AZOULAY.

Neurofibrillæ.—Azoulay presents a well illustrated article on the presence of nerve fibrils in the neurones of invertebrates.

LYON MEDICAL.

December 25, 1904.

1. Two New Instruments: a, Hemostatic Scissors for Cutting Tissues. b, Angiotribe for Reducing the Pedicle,
By M. R. CONDAMIN.
2. Cæsarean Operation Performed Before Labor. Great Deformity of the Foetal Head, By M. PLANCHU.

1. **New Instruments.**—Condamin presents a scissors which compresses the tissues on each side of the incision, thus preventing hæmorrhage; also an angiotribe intended to be used when it is de-

sired to maintain pressure for some time without using the hand.

2. **Cæsarean Operation.**—Planchu operated prior to the onset of labor on a rachitic patient and removed a child which presented very marked deformities of the head.

January 8, 1905.

1. New Apparatus for Exploratory Puncture Adapted to Potain's Aspirator, By M. V. THEVENET.
2. Two Cases of Painful Accommodation,
By M. G. CORONAT.

1. **Apparatus for Exploratory Puncture.**—Thevenet employs a glass syringe body with the needle attached to one end, while the other is connected with the aspirator by means of a flexible tube.

2. **Painful Accommodation.**—Coronat describes two cases of accommodative asthenopia in moderately young people who had only .25 and .50 of a dioptrie of hypermetropia each.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

December 4, 1904.

(The following abstract was misplaced through an oversight; it should have been published in our issue of February 4th.)

1. The Pyloric "Bosse," By STEFANO MIRCOLL.
2. A Case of Acromegaly Studied from the Viewpoint of the Blood, By CARLO CAVALIERI DUCATI.
3. Action of Antimony on the Blood,
By S. MONTENAGNO.
4. The Therapeutic Uses of Veronal, By A. CAVAZZANI.
5. Critical Notes on Fiorani's Method in the Treatment of Angeliomas,
By FERRUCCIO BINDI.
6. Contribution to Scclavo's Antianthrax Treatment,
By FORTUNATO CORSINI.

1. **The Pyloric Bosse.**—Mircoli contends that the four distinct portions of the gastric apparatus of the ruminants are represented in man by four parts of the stomach, namely, the fundus, the body of the stomach, the antrum, and the pylorus. The pyloric antrum in man, he thinks, has retained some of the characters of an independent organ. Thus, comparative physiology teaches that the antrum is rather a motor organ than a digestive one, and that the body of the stomach is more prominently the seat of the digestive functions. While the secretion of the body of the stomach is acid, that of the antrum is alkaline. During the process of digestion, the antrum, by its systole and diastole, pumps the chyme from the body of the stomach into the pyloric orifice. It is therefore the power of the antrum to regulate the passage of the chyme from the stomach. The alkaline elements in its secretion neutralize the acid chyme, and thus enable the pyloric orifice to open. The closure of the pyloric valve, as we know, is effected through what is known as Meiring's reflex, that is, in virtue of the acidity of the gastric contents the fibres of the pyloric valve contract, thus preventing a too rapid influx of acid into the intestine. When this acidity is partly neutralized the stimulus is weakened, and the

valve opens. Inasmuch as alkalies tend to open the valve, their importance in diseases of gastric motility will be readily understood. In a variety of affections of the stomach this differentiation into different parts is marked by the appearance of "bosses," on the stomach walls, which show the antrum, etc. A prominence may exist in the epigastrium corresponding to the antrum of the pylorus, and at times this is accompanied by dilatation of the stomach as a whole. In partial gastrectasias the most prominent manifestation may be a pyloric boss which is probably produced by contractions of the sphincteric fibres in front and behind the pylorus, together with atony of the latter. The chief symptoms in such cases are of a neurosthenic character. The treatment consists of appropriate diet, of the use of an abdominal bandage, the administration of sodium sulphate, and of small doses of *nux vomica*.

2. Action of Antimony on the Blood.—Montenagno found that antimony is an excellent hæmatinic. It increases the number of red blood cells, and the percentage of hæmoglobin, and also enhances the resistance of the red cells, just like arsenic. The improvement in the blood which is produced after taking antimony persists from some time after the drug has been discontinued. Large doses of antimony, however, produce hæmolytic.

5. Criticism of Fiorani's Method of Removing Nævi.—Bindi finds that Fiorani's method of removing nævi has certain inconveniences and disadvantages, but on the whole it is easily applied and very efficient. The chief objection to it is that when, as often happens, the nævus is close to the eye, an intense congestion of the conjunctiva, with photophobia, lacrymation, œdema of the lids, etc., is apt to occur. The method in question consists in the application of corrosive sublimate dissolved in collodion (flexible). Several applications may be required. The corrosive sublimate acts as a caustic. A 13 per cent. solution is recommended. Dressings are unnecessary and the nævus may be allowed to atrophy undisturbed after the desired caustic action has been produced.

RIFORMA MEDICA.

December 21, 1904.

1. On the Syndrome Known as Polyglobulia with Tumor of the Spleen and Cyanosis, By MAURIZIO ASCOLI.
2. Sugar in the Treatment of Pulmonary Phthisis, By R. MASSALONGO and G. DANIO.
3. Contribution to Our Knowledge of the Physiopathology of the Pancreatic Cell (*Concluded*), By ETORE SAVAGNONE.
4. Contribution to the Anatomical and Experimental Study of Free Bodies in the Large Serous Cavities (*Concluded*), By LUIGI TOMELLINI.

1. Polyglobulia.—Ascoli writes on the syndrome described for the first time by Vaquez a few years ago, known as polyglobulia with swelling of the spleen and cyanosis. Since then a number of cases of this type have been reported in various countries, aggregating at present thirty clinical histories. The central symptom of these cases was a very marked increase in the red blood

corpuscles which reached, in one case reported by Cabot, the number of twelve millions to the cubic millimetre. Even with the naked eye the abnormal density of the blood could be detected. The morphology of the red cells, their relative number as compared with the white cells, the amount of hæmoglobin, and the specific gravity of the blood were also altered in these cases. The blood showed occasional nucleated red cells, and poikilocytes, but the average size of the red blood cells remained normal. There was often a polymorphonuclear leucocytosis, also not infrequently mastcells and eosinophiles in increased numbers. The hæmoglobin was usually greater than normal, but there are some exceptions on record. The specific gravity was increased up to 1.080. The spleen was enlarged and reached at times the crest of the ilium. It was hard and smooth on palpation. The third leading symptom was a cyanosis accompanied sometimes by the appearance of pigmented plaques and bronze discolorations. There are other minor symptoms of a vasomotor character, the patients look plethoric, and suffer from thirst; they have slight albuminurias, headaches, vertigo, etc., but in some cases all subjective symptoms are absent. The disease is a chronic one and lasts for years. In some cases that came to an autopsy tuberculosis of the spleen (primary) was found. The disease is assumed to be due to an abnormally increased function of the bone marrow. The author reports a case of this kind, leading features of which corresponded with the description just given. The treatment is symptomatic. The patients obtain transient relief from small bloodlettings. The diet should be deficient in iron. Arsenic has been given with some success and the Röntgen rays have been used with results analogous to those obtained in leucemia. In severe cases, especially where tuberculosis of the spleen is probably present, splenectomy may be thought of.

2. Sugar in Tuberculosis.—Massalongo and Danio, of Verona, discuss the subject of overfeeding in tuberculosis, as practised in hospitals. A method which has given results far beyond expectation, is the overfeeding of patients with sugar. Ordinary sugar is not only a promoter of heat, but also a dynamogenous food which is well adapted to the requirements of the cachectic consumptive. The authors recommend large doses, from 100 to 500 grammes of sugar daily; in other words, from 5 to 12 grammes of sugar per kilo of body weight. The patients gain weight rapidly, in some cases faster than the actual weight of the sugar ingested would warrant. They never suffer from fermentation or other gastric complications. Sugar gives the best results in the febrile cases. It may be diluted with milk or disguised with coffee or bitter tinctures. Sugar diet is well borne by those tuberculous patients who are otherwise difficult to feed, and even by those who cannot take cod liver oil.

4. Free Bodies in the Serous Cavities.—Tomellini's conclusions from a detailed study of the portions of tissue which may become free and float in the serous cavities are as follows: Free

bodies may develop in the pericardium, as the result of the detachment of a fatty lobulated mass from the serous membrane. Larger bodies may float free in the peritonæum, as the result of the detachment of an epiploic appendage. Repeated torsions of these appendages may finally result in their detachment from the intestine. A free body of this kind may be produced experimentally by tying off one of the epiploic processes at its junction with the serous membrane. Influences which produce slow irritation in the free bodies in question may give rise to an increase in connective tissue within them, and thus effectually oppose their more or less rapid absorption.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 4, 1905.

1. Conservative Perineal Prostatectomy. A Report of Fifty Cases, By HUGH H. YOUNG.
2. The Operative Treatment of Chronic Suppuration of the Frontal Sinus, with Special Reference to the Method of Killian, By A. LOGAN TURNER.
3. Dementia Præcox, By F. X. DERCUM.
4. The Nature of Traumatic Sclerosis, By ARTHUR CONKLIN BRUSH.
5. Prevalence and Prophylaxis of Pneumonia, By EDWARD F. WELLS.
6. The Relation of Internal Secretion to Epilepsy, Puerperal Eclampsia, and Kindred Disorders, By CHARLES E. DE M. SAJOURS.
7. The Axis of Astigmatism, By J. HERBERT CLAIBORNE.
8. The Relation of Corneal Curvatures to the Refraction of the Eye, By MELVILLE BLACK.
9. The Mechanical Treatment of Hip Disease, By ADOLPH LORENZ.
10. The Management of Prison Tuberculosis, with the Aid of Tuberculin as a Diagnostic Agent, By JEWETT B. REED.
11. Amygdalectomy, Thorough, Painless, and Safe, By E. FLETCHER INGALS.
12. Immunity. Chapter II.—Infectious Ætiology.

1. **Perineal Prostatectomy.**—Young, in a paper published one year ago, described a new method of performing perineal prostatectomy. A number of special instruments are required for operating by the method then advocated. The object of the present paper is to outline the results obtained in fifty cases by this new operation. The prostate by means of a tractor is brought well into the perineal wound, its capsule opened on either side of the median line, and the gland enucleated. It is possible to save from injury, in the majority of cases, the urethra and the ejaculatory ducts. The author thinks highly of this plan of treatment.

3. **Dementia Præcox.**—See this *Journal*, Vol. LXXX, page 89.

4. **Traumatic Sclerosis.**—See this *Journal*, Vol. LXXX, page 89.

9. **Hip Disease.**—Lorenz discusses his method of treating tuberculous hip disease which has not reached the suppurative stage. He is opposed to the ordinary treatment in vogue in America which consists of confinement to bed with extension to the diseased leg. His method is an ambulatory one. During the first months the

hip and thigh are put up in plaster. When the pain demands it a steel brace is added to the plaster dressing. During the whole course of treatment the patient is allowed to use the diseased leg. The author claims better end results by this plan of treatment than can be obtained by any of the methods based on placing the leg on the diseased side at absolute rest.

11. **Amygdalectomy.**—Ingals advocates the use of the cold wire snare in performing amygdalectomy. He describes and illustrates a number of instruments which he has devised in order to facilitate the mechanical difficulties of the operation.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 2, 1905.

1. The Relation of the Epileptic to the Community, By WILLIAM N. BULLARD.
 2. The State's Relation to the Epileptic, By OWEN COPP.
 3. The Tuberculosis Problem, and Some Suggestions in Dealing with It, By EDWARD O. OTIS.
 4. The Treatment of Hæmorrhoids by the General Practitioner, By T. CHITTENDEN HILL.
 5. Consumption and Its Borderland. Public and Professional Concern, By PAUL PAQUIN.
2. **Epilepsy.**—Copp asserts that there are about 120,000 epileptics in the United States. It should be the duty of the State to provide for these unfortunates: (1) Because, generally speaking, they are a menace to the peace of the State. (2) Because they have the same rights as other citizens, and should be provided with proper education and protection. (3) Because it is probably cheaper in the end to provide for the mentally deficient than to meet the indirect loss due to their crimes and misbehavior. (4) Because the families to which they belong are not capable of taking proper care of them. The author indicates, in a very general way, how the State should provide for its epileptics.

3. **Tuberculosis.**—Otis summarizes his ideas concerning the tuberculosis problem thus: "We must continually insist upon the danger of tuberculous sputum, and hence the positive danger, always present, of promiscuous spitting; and, secondly, insist upon the importance of wholesome living—fresh air, good food, rest, and cleanliness. We shall never stamp out consumption by directing our efforts solely against the source of infection. We must also labor to promote conditions of wholesome living; teach the people the elements of personal and house hygiene; teach them what is and how to obtain this wholesome living. On these two lines of effort must we depend in our exertions to stamp out the disease."

4. **Hæmorrhoids.**—Hill divides piles into external and internal. The external are of two kinds: (a) the thrombotic, which are best treated by incision and packing, and (b) the connective tissue hæmorrhoids, which should be excised with curved scissors. The wound if necessary may be stitched with catgut. Internal piles are best treated by ligation. This is easy with the protruding variety. The injection method is useful at times. All these operations may be done

painlessly under local anæsthesia. The author gives quite minute directions concerning the technics he recommends, so that his advice may be easily followed.

MEDICAL NEWS.

February 4, 1905.

1. Presidential Address, By CHARLES L. DANA.
2. Partially Afebrile *Æstivoautumnal* Malarial Infection Having Its Origin in New York City, By J. L. POMEROY.
3. Summer Infant Mortality, By LOUIS C. AGER.
4. Serum Diagnosis of Typhoid Fever by Means of Ficker's Typhus-Diagnosticum, By JOHANNES H. M. A. VON TILING.
5. Inflammatory Stricture of the Rectum, By J. M. FRANKENBURGER.
6. A Case of So Called Traumatic Asphyxia, By RANDOLPH WINSLOW.

2. *Æstivoautumnal* Malaria.—Pomeroy reports a case of *æstivoautumnal* malaria that was treated at the Charity Hospital. The points of interest in this case are: (1) An *æstivoautumnal* infection having its origin in New York city. (2) Chills and sweats without temperature—the latter appearing only when quinine had been administered, and then not rising above 100.2° F.

3. Summer Infant Mortality.—Ager's paper is necessarily statistical. He shows that infant mortality in New York city steadily declined between 1881 and 1898. Since 1898 the improvement has been slight if any. The paper emphasizes one fact chiefly: It is that the infant mortality in Brooklyn is considerably higher than in Manhattan. The author is of opinion that this is due to the better education of the profession and of the public in Manhattan. Across the river modified milk is the exception and condensed milk the rule in infant feeding.

4. Serum Diagnosis in Typhoid.—Von Tiling calls attention to the utility of the method of making a serum diagnosis of typhoid fever by means of bouillon cultures of typhoid bacilli in which the bacilli have been killed. Such cultures are now on the market. As is well known the Widal reaction consists in the clumping of live bacilli by the serum of a typhoid patient. In Ficker's reaction dead bacilli are clumped. Method: Three small test tubes are filled with a fixed quantity of bouillon culture. To the first nothing is added; to the second a certain quantity of diluted blood serum; to the third dilute blood serum one half the strength of that used in tube two. If cloudiness appears in tubes two and three and precipitation takes place the reaction is positive. Tube one is the control tube. Graduated tubes and full directions are furnished with the serum. The cost of each test is about two dollars.

6. Traumatic Asphyxia.—Winslow reports one case of so called traumatic asphyxia. The condition is rare. It is characterized by a blue discoloration of the face and part of the neck following, usually, compression of the chest. The phenomenon is due, not to hæmorrhage, but to an overdistention of the capillaries.

MEDICAL RECORD.

February 4, 1905.

1. Sanitary Conditions as Encountered in Cuba and Panama, and What is Being Done to Render the Canal Zone Healthy, By WILLIAM C. GORGAS.
2. Intramuscular Hæmorrhage from Muscular Action, By ANDREW H. SMITH.
3. A Review of Some Recent Papers on the Surgical Treatment of Prostatic Hypertrophy, By E. G. BALLENGER.
4. The Diagnosis of Renal and Ureteral Calculi, By H. A. FOWLER.
5. Growth of Bone in the Tonsil, By WILLIAM WESLEY CARTER.
6. Report of Three Cases of Intestinal Anastomosis by the Connell Suture, By H. H. SINCLAIR.

1. **Cuba and Panama.**—Gorgas first details the various measures which finally proved successful in bettering the sanitary condition of Cuba. In the effort that is being made to improve the conditions of the canal zone, the experience gained in Cuba will be invaluable. The problem at Panama is, however, an exceedingly difficult one. Yellow fever can without much doubt be easily controlled. The disease to be dreaded most is malaria. This, the notorious Chagres fever, is the *æstivoautumnal* type of the disease. There are along the canal zone some twelve thousand natives, most of whom harbor the parasite. Mosquitoes are more than abundant. The general sanitary plan contemplates first the extermination of the mosquito and second the extermination of the malarial parasite in the blood of the natives by means of quinine.

2. **Intramuscular Hæmorrhage.**—Smith asserts that a sharp distinction must be made between those cases in which hæmorrhage occurs within an unruptured muscular sheath and those cases in which the sheath is torn and the blood can escape into the surrounding tissues. When the sheath is not ruptured pain and disability will be extreme and complete cure may not occur for months. In the second type of cases recovery will usually take place in a few weeks.

3. **Prostatic Hypertrophy.**—Ballenger concludes: (1) Literature on prostatic surgery has been very confusing, owing to the large number of methods of operation advocated by prominent surgeons. (2) Suprapubic drainage of the bladder is advised in those cases too weak to withstand an operation; if improvement follows this procedure, then a radical operation is indicated. (3) There are three radical methods that are without doubt the most valuable; suprapubic prostatectomy, perineal prostatectomy, and the Bottini operation, and each of these has a definite place in prostatic surgery. (4) The relative advantages and dangers of each method should be well known, as the pathology and conditions are so varied that no routine treatment for all cases can be advisable. (5) All patients should be operated on before the breakdown in catheter life, and the earlier the operation the fewer will be the complications encountered. (6) The suprapubic route is indicated when there is a

large intravesicular, mobile, adenomatous growth, with general health and bladder and kidneys in a satisfactory condition. (7) The perineal operation is more desirable for small, dense, fibrous prostates firmly attached, and those where the growth is largely along the urethra or back toward the rectum. (8) The Botini is indicated in those cases where prostatectomy is refused and in selected cases, where the general health and kidneys contraindicate more radical measures. Of course, it is never to be used for a large, rapidly growing hypertrophy. (9) In the suprapubic operations avoid hæmorrhage by keeping carefully between the capsule and the sheath. In the perineal operations carefully cut the central tendon of the perinæum close to the rectum, but with the finger in it to prevent injury. Avoid laceration of membranous urethra, as incontinence of urine will follow. (10) Marked improvement results in the large majority of cases where the operation has been properly selected and carefully performed.

4. **Calculi.**—Fowler asserts that the diagnosis of renal and ureteral calculi should be based on the following methods of investigations: (1) History of the case; (2) physical examination; (3) examination of the urine; (4) cystoscopy; (5) catheterization of the ureters; (6) radiography, and finally (7) exploratory incision. Each one of these points is discussed. An early diagnosis is important for the following reasons: (1) By early surgical interference, we can save the kidney and give the patient relief from a disease which, "though swift and fatal in anuria, torturing in colic, and slowly, grimly progressive in suppuration, also presents possible vistas of years of comparative health and comfort, a delusive prospect with which the timorous sufferer would fain brace his refusal of the knife." (2) The operation of nephrolithotomy offers a perfect cure. No operation in surgery is attended with more brilliant success. The mortality of this operation is about the same as that of lithotripsy, while the dangers of nephrotomy and nephrectomy are many times greater. (3) By an early diagnosis and operation, we avoid alarming and distressing complications and a final resort to these more serious operations.

AMERICAN MEDICINE.

February 4, 1905.

1. The History and Development of Surgery During the Past Century (*To be continued*),
By FREDERIC S. DENNIS.
2. Some Further Experiments Upon Rectal Alimentation,
By DAVID L. EDSALL and CASPAR W. MILLER.
3. The Diagnosis of Tuberculous Cavities in the Lung,
By HERMAN B. ALLYN.
4. Diet After the Age of One Year,
By J. P. CROZER GRIFFITH.
5. Acute Postoperative Thyreoidism: Report of a Case Recovery,
By S. EDWARD SANDERSON.
6. Fibrolipomatous Tumor of the Pharynx and Larynx,
By E. FLETCHER INGALS.

2. **Nutrient Enemas.**—Edsall and Miller record a number of experiments upon dogs conducted for the purpose of shedding light on the

value of nutrient enemas. Apparently, at present, the chief functions served by such injections are: First and most important, to provide fluids and various inorganic salts for the tissues. 2. To provide perhaps a third to a sixth of the requisite amount of food. 3. To prevent the anxiety of friends and patient that would be produced by giving no food. The experiments conducted were along two lines: (1) The authors attempted to give fats in the form of soap and determine to what extent it was absorbed by the large bowel. (2) They attempted to produce a good emulsion of fat that would remain emulsified after its introduction into the bowel and determine the extent to which it was absorbed. Neither set of experiments gave very encouraging results.

3. **Tuberculous Cavities.**—Allyn reviews in detail the various signs and symptoms which justify a diagnosis of tuberculous cavity in a lung. To sum up, our most trustworthy signs of tuberculous cavity in the lung are to be found in deficient expansion and flattening of the chest wall over the cavity; in a percussion note which is often a high pitched tympany, especially if percussion is made with the mouth open, but which may be only a muffled sound, or a dull or flat sound; in pectoriloquy (so called), particularly whispering pectoriloquy; in breath sounds which are cavernous, tubulocavernous, tubuloamphoric, or amphoric; and in a multiplicity of râles, chiefly moist râles, which after coughing may have resonating quality.

4. **Children's Diet.**—Griffith gives diet lists showing what a child should and should not eat between one year and four years of age. His advice does not differ from that found in the standard text-books, except possibly in one particular. After the second year he thinks that a child may with advantage have meat twice a day, that is, at breakfast as well as at dinner.

5. **Thyreoidism.**—Sanderson reports a case of acute thyreoidism which occurred after an abdominal section. The patient survived. The author believes that the administration of *Cactus grandiflorus* favorably influenced the thyreoidism.

MEDICINE

January, 1905.

1. Remarks Upon a Case of Severe Appendicitis Ending in Recovery Without Operation,
By ALLYN.
2. Air, Food, and Exercise in the Prevention of Tuberculosis,
By YBARRA.
3. The Rationale of Intestinal Antisepsis,
By HOLLEN.
4. Skiagraph of an Old Ununited Fracture of the Scaphoid Bone, Illustrating the Value of the X Ray in the Diagnosis of Such Fractures,
By HAMMOND.
5. Report of Three Cases of Acute Hæmatemesis,
By CONNELL.
6. The Modern Treatment of Specific Urethritis,
By CHRISTIAN.
7. Lecture on Tropical Medicine,
By GRAFF.

2. **Air, Food, and Exercise in the Prevention of Tuberculosis.**—Ybarra quotes Koch, who insists upon the importance of the prevention of tuberculosis and of teaching the public how to avoid the disease. He affirms that pulmonary

tuberculosis is invariably a disease which is related to a disturbance of the digestive function. One who habitually lives under debilitating conditions as regards air, food, and bodily exercise is liable to be attacked at any period of his life by this disease, though there may not be in his constitution the slightest trace of hereditary tendency thereto. The two objects to be held constantly in view in the prevention of this disease are: 1. To cultivate invulnerability of the organism. 2. To destroy or suppress the bacillus. For the first of these there must be plenty of pure air, sunlight, nutritious food, physical exercise, proper clothing, hygienic surroundings, and a steady, methodical, moral life. For the second, there must be abundance of fresh, pure air, super-alimentation, gradually increased bodily exercise, recreation, and everything that makes life agreeable.

3. The Rationale of Intestinal Antisepsis.—Hollen observes that, in general, intestinal antiseptics are indicated whenever there are local fermentation and putrefaction. These may be manifested by discolored and fetid discharges, pain and tenderness in the abdominal region, diarrhoea, vomiting, foul breath, irregular heart action, fever, enlarged spleen, and other evidences of autointoxication. Such symptoms are present in typhoid fever, gastroenteritis, cholera infantum, acute and chronic diarrhoea, amœbic dysentery, Asiatic cholera, gastritis, typhilitis, and colitis. Asepsis of the alimentary canal is also desirable in chronic conditions in which fermentative processes are present. The substances which the author believes to be most efficient in combating the symptoms which have been mentioned are acetone, and sulphocarbonate of zinc. Other substances which have been used with varying degrees of success are arsenite of copper, quinine, salicylate or subgallate of bismuth, and crude petroleum.

AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

January, 1905.

1. A Conception of the Sphere of Gynæcology, By BOVÉE.
2. Further Results in the Use of a Modified Champetier de Ribes Balloon, By VOORHEES.
3. Accidental Perforation of the Uterus During Curettage. A Case with Bowel Injury and Resection of Four Feet of Small Intestine, By HESSERT.
4. A New Selfretaining Catheter and Vesical Irrigator, By WETHERILL.
5. Suture and Ligature Material, By CONGDON.
6. Removal of a Dermoid Cyst and a Decomposing Fœtus from the Uterus by Abdominal Section, By SUTCLIFFE.
7. Physometra, Pyometra, Hæmatometra, By MELLISH.
8. Pregnancy Complicating Fibroids, By BASHAM.
9. Albuminuria and Nephritis of Pregnancy and Labor, By STEWART.
10. Dermoid Cyst of the Ovary Complicating Labor, By THOMPSON.
11. The Early Diagnosis of Cancer of the Fundus with Report of Cases, By ROBB.
12. Cystadenoma of the Pancreas; Removed by Abdominal Section, By DUNNING.

2. Further Results in the Use of a Modified Champetier de Ribes Balloon.—Voorhees draws the following conclusions: 1. The modified Champetier de Ribes balloon is the best artificial hydrostatic dilator of the cervix. 2. The balloons are especially effective in dry labors to start pains. 3. Labor, if prolonged and protracted, from whatever cause, is hastened and in a large percentage of cases terminates spontaneously after their use. 4. The balloon is the best and most certain means of inducing labor for all indications. 5. In eclampsia and in placenta prævia the balloon has a field of usefulness which markedly diminishes maternal and fœtal mortality.

3. Accidental Perforation of the Uterus During Curettage.—Hessert concludes an interesting paper as follows: 1. Make an accurate diagnosis as to size, position, mobility, and consistency of the uterus. Determine the presence or absence of tumors of all kinds in connection with the pelvic organs. 2. Remember that the uterus is very friable, when curetting post abortum. Dilate the canal sufficiently, but first determine with accuracy the direction of the canal. A dilator with a single blade or rod is less likely to perforate the uterus than one with two or three blades. 3. Curette with the fingers if possible. A sharp curette is the most efficient when the operator is experienced. A volsella should never be used to withdraw material from the uterus. A placental forceps may withdraw omentum or gut. 4. Irrigation is seldom necessary, except for septic endometritis. Strong irrigating fluids should be avoided; boric acid is the safest if an irrigating fluid must be used. Caustic applications if indicated should be made with a swab. If the uterus has been penetrated with a probe and there is no visceral injury, it may be lightly packed, but not irrigated. If the perforation has been made with a curette, the intestine must be reduced and the wound sutured either by abdominal section or by vaginal section, according to the indications. If the conditions require it a vaginal hysterectomy should be performed. If the bowel has been badly injured it must be resected; both large and small bowel should be examined to determine the extent of the injuries.

LANCET.

January 21, 1905.

1. Some Thoughts on Convulsions During Infancy and Childhood, By H. ASHEY.
2. The Principles of the Treatment of Pneumonia, By W. EWART.
3. Some Clinical Uses of Iodic Acid and the Iodates, By W. MACKIE.
4. Experiences with Iodoform Bone Plugging, By VON M. MOORHOF and B. S. JONES.
5. A Case of Acute Leucæmia, with Remarks on Its Clinical Features and Diagnosis, By W. M. STEVENS.
6. A Case of Contraction and Ankylosis at the Knee Treated by Steel Bar Traction and HESSING'S Splint Case Appliance, By T. H. OFENSHAW.
7. Human Piropilasmiasis, By C. DONOVAN.
8. Suppurative Pericarditis, By R. W. MURRAY.
9. Congenital Multilocular Cyst of the Omentum, By W. McG. YOUNG.

10. Fracture of the Anterior Fossa of the Skull Dividing the Optic Nerve, By F. J. HATHAWAY.

11. The Army Medical Service of Greece, By F. HOWARD.

1. **Convulsions in Childhood.**—Ashby states that a disposition to convulsions may be either hereditary or acquired, or both factors may be present. Rickets undoubtedly predisposes to convulsions. The exciting causes may be divided into the following groups: (a) Reflex—from the intestinal or respiratory tracts, from the internal ear, or from the nose or mouth. (b) Toxic, as in measles or influenza. (c) Central, as in meningitis or syphilis of the brain. (d) Epileptiform, when no cause can be found, and associated with belated intelligence. Convulsions in the newly born are usually reflex and not due to any brain injury. They are most common in artificially fed children, and the best cure is a wet nurse. A slight hemiplegia may ensue, and disappear after a few days or weeks. In a few cases the convulsions are due to defective brain development. Later in the child's life dentition undoubtedly plays a part in the production of convulsions, but the author dissents from the view that such convulsions may go on to epilepsy and insanity. Convulsive spasm of the glottis (child crowing or laryngismus) is practically always associated with rickets. Convulsions may be of cerebral origin, and due to meningitis, thrombosis, hæmorrhage, tumors, or syphilis. The nature of the fits does not lend much assistance in the diagnosis. Convulsions distinctly of a Jacksonian character are usually due to a syphilitic softening of the cortex of the brain. Slight general convulsions, frequently recurring without apparent cause, and with delayed intelligence, are of bad omen. In the severer forms of convulsions, there is usually high fever, one seizure is followed by another, and deep coma lasting from a day to a week supervenes. Hemiplegia is an important complication: it may be temporary, or persist for life and the limbs become spastic. Blindness may result, but is rarely permanent: in other cases the patient may come out of the convulsions deaf or aphasic. As regards treatment, subcutaneous injection of morphine is the most powerful remedy for quickly allaying the irritability of the nerve centres and checking the convulsive movements. A sixth months old infant may be given a fortieth of a grain. Chloroform acts quickly, but is only temporary.

2. **Pneumonia.**—Ewart, after reviewing the present day views as to the treatment of pneumonia, and the course and clinical stages of the disease, states that the definite objects are: (1) To arrest the morbid process, by other abortive measures than the missing antitoxine. (2) To restrict the invading host, though we cannot stop it. (3) To destroy or to neutralize the poison by the vital energies. (4) To hasten its elimination by every possible help. Among the principles of action are the following: Prompt, early, and assiduous treatment is necessary, for the opportunity for cure is brief. The disease may be aborted in its early stages. One of the great dangers is the failure to resorb the fibrin; hence it is most necessary to prevent its formation in

the first place. The removal of all obstructions is of the greatest importance: derivation by the *primæ viæ*, temporary starvation during the early stages, and acceleration of the lymph circulation by cardiac stimulants. Oxygen should be given continuously from the first, to support the heart. Bleeding by means of leeches is a routine part of the author's treatment. Bleeding from a vein should not be resorted to, except in severe cases. Leeching almost invariably relieves the pain in the side. Medication should aim at diuresis, diaphoresis, antifibrinosis, and absorption. To accomplish these various ends the following mixture is used: Iodide of potassium, 5 grains; liquor of ammonium citrate, 2 drachms; spirits of nitrous ether, $\frac{1}{2}$ drachm; aromatic spirits of ammonia, 20 minims, and chloroform water to half an ounce. A tablespoonful is taken hourly for six doses, and afterward every three hours. The citric acid checks fibrin formation by precipitating the calcium, which is an essential to clotting. The iodide of potassium dissolves and absorbs the fibrinous deposits. The diet, at first, should consist of whey. Alcohol is indispensable from the first, in moderation, as a substitute for food, and as a stimulant.

5. **Acute Leucæmia.**—Stevens reports a case of acute leucæmia occurring in a boy aged 17 years, which proved fatal on the nineteenth day of the illness. On the thirteenth day of his illness the leucocytes numbered 920,000 per c.m., and the excess was due to the large lymphocytes. The mode of onset and general symptoms suggested typhoid fever, tuberculosis, endocarditis, or some septicæmic condition. But there was no Widal reaction, the fever was most irregular, and there was marked priapism. Splenic enlargement was not noted until the thirteenth day, at which time the axillary and inguinal glands could also be felt.

7. **Human Piroplasmosis.**—Donovan tells us that in human piroplasmosis the parasites are found in the peripheral circulation, the spleen, the liver, bonemarrow, and in ulcers of the skin and intestines. In the blood they are found in the red corpuscles and in the leucocytes, but they are never numerous. They are small, about 1μ in diameter, are oval, bacillary, or pear shaped, and are always placed at the circumference. They are very numerous in preparations from spleen puncture. The author excludes entirely the genus *trypanosoma* as having any relation to the disease, but admits that there may be a *trypanosomoid* stage in the life cycle of *piroplasma* infection.

BRITISH MEDICAL JOURNAL.

January 21, 1905.

1. Clinical Remarks on the Treatment of Inveterate Pruritus Ani, By SIR C. BALL.
2. Remarks on the Treatment of Appendicitis with and without Operation, By R. PARKER.
3. An Operation for Appendicectomy, By A. W. M. ROBSON.
4. Unusual Case of Suppurative Appendicitis, By G. A. CLARKSON.

5. Perforated Duodenal Ulcer: with a Report of Three Cases, By H. S. CLOGG.
6. The Operation of Gastroduodenostomy, Especially in Reference to Finney's Operation of Gastropyloduo-denostomy, By D. ARMOUR.
7. Clinical Observations on a Kidney Which Contained More Than Forty Thousand Iridescent Calculi, By J. BLAND-SUTTON.
8. Cancer of Gall Bladder Due to Irritation of Gallstones: Cholecystectomy and Partial Hepatectomy, By J. HUTCHINSON, JR.
9. Two Cases of Suppuration of Goitre, By T. EVANS.
10. Reasons for Abandoning the Uric Acid Theory of Gout, By C. WATSON.
11. A Note on Senile Symmetrical Atrophy of the Skull, By F. P. WEBER.
12. On the Significance of Scars of the Genital Region in the Retrospective Diagnosis of Syphilis, By A. COOPER.

1. **Pruritus Ani.**—Ball divides cases of pruritus ani into three groups: 1. Those due to parasites, either animal or mycotic. Here the treatment is simple and effective, once the nature of the parasitic cause has been determined. 2. Those resulting from dermatitis of the cutaneous portion of the anal canal and surrounding skin. Under this head are included the protean group of eczemas. In acute moist forms the best applications are those which are emollient and unirritating, while in the chronic dry cases, highly stimulating applications are indicated. An ammonia soap is a very useful remedy. 3. Those in which the disease is essentially in the nerves supplying the affected area with sensation. These cases are quite incurable by any form of external application or internal treatment. The surgical measures hitherto adopted are: (a) cauterization of the skin down to the papillary layer; and (b) the excision of the implicated skin. The author has treated such cases by the simple procedure of division of the terminations of the sensory nerves to the affected skin. So far the cases are too few to generalize from; but they prove (1) that the operation gives immediate relief, and (2) that superficial sensation may be restored without recurrence of the pruritus. Should recurrence take place he would, bearing in mind the removal of the Gasserian ganglion for trigeminal neuralgia, seriously consider the removal of the posterior roots of the third and fourth sacral nerves with their ganglia.

5. **Duodenal Ulcer.**—Clogg reports three cases of perforated duodenal ulcer, in all three of which recovery followed early operation. The symptoms of the condition are most uncertain: in half the cases reported there is an absence of all symptoms previous to perforation. Perforation probably occurs in about half the cases. About sixty-five per cent. of those operated on in the first twelve hours recover; about twelve per cent. of those between the twelfth and twenty-fourth hours. But taking all varieties into account the mortality, at present, is about seventy-five per cent. Duodenal ulcers run a chronic course, and cicatrization is very infrequent. When perforation occurs the severe tearing character of the

pain, the severe collapse, the true abdominal rigidity, the facial aspect, and the rapid pulse all point to a peritoneal lesion. The prognosis is not so good as in perforated gastric ulcer, due to the fact that in the latter the earlier symptoms are more severe, and signs of peritonitis appear earlier. The diseases likely to be confounded with the condition are appendicitis, inflammation of the gall bladder, and suppuration around the colon. The author lays stress upon the following points in diagnosis: 1. A history of previous trouble. 2. The situation of the early pain in the right epigastric or hypochondriac region, higher up than in appendicitis. 3. The absence of previous symptoms. 4. The early rigidity and tenderness over the upper half of the right side of the abdomen. 5. The early tenderness on deep pressure over the lower ribs posteriorly and laterally. 6. The marked increase of pain on deep inspiration in quite the early stages. 7. The frequently observed elevation of the right half of the diaphragm. 8. The abscesses often contain gas, which is very uncommon in abscesses of the gall bladder and in the early stages of appendicitis.

9. **Suppuration of Goitre.**—Evans reports two cases of suppuration of goitre, occurring in persons of middle age. Recovery from the suppuration was slow, and was followed by disappearance of the goitre on the affected side, and diminution of it on the opposite side. In one case the suppuration was apparently spontaneous, in the other it was secondary to influenza.

10. **Uric Acid and Gout.**—Watson concludes from his clinical and laboratory observations that uric acid is not an important etiological factor in the production of gout. He believes that there is an infective element in the disease and that the uric acid is the feature which gives the inflammation its specific character. The chief source of infection is the alimentary tract, and an injudicious dietary acts in virtue of its influence on the bacteria present there.

12. **Syphilitic Genital Scars.**—Cooper states that the diagnostic value of genital scars in the retrospective diagnosis of syphilis is by no means easy to determine. He gives the following rough summary of his conclusions: 1. Genital scars are more common and more marked in hospital than in private practice. 2. In many cases of nervous or late forms of internal syphilis the genital region is free from scars. 3. A single scar on the skin of the penis suggests syphilis. 4. A single scar on the mucous membrane also suggests syphilis as a rule—occasionally the local chancre. 5. Multiple scars on the mucous surface of the penis suggest only the local chancre. 6. Multiple scars on both mucous membrane and skin also suggest the local chancre. 7. Inguinal scars, together with scars on the penis, suggest the local chancre. 8. An inguinal scar without any penile scar (if venereal at all) suggests gonorrhoea. 9. Extensive scarring of penis or groin, or both, suggests phagedena. 10. Genital scars, with scars on other parts of the body, suggest an ulcerating syphilide.

GLASGOW MEDICAL JOURNAL.

January, 1905.

1. The Defensive Powers of the Body in Disease. By **MUIR**.
2. Extrauterine Pregnancy, By **KELLY**.
3. The Action of Poisoned Arrows Obtained from the Aros District of Nigeria, By **CHARTERIS**.

1. The Defensive Powers of the Body in Disease.—Muir observes that this subject may be considered in two parts, the first dealing with the histological changes visible with the microscope, the second with the subtle chemical substances in the cells and fluids of the body which aid in protecting the body and in curing disease. The chief cellular activities are included in the term phagocytosis. This includes the ingestion and digestion of bacteria within the cells. Not all bacteria which are ingested by the leucocytes are digested, they may even flourish and multiply within the cells. Bacteria which produce a local emigration of the neutrophil leucocytes will cause a neutrophil leucocytosis if the infection be sufficiently extensive; the converse of this statement is also true. With normally reacting tissues the leucocytosis increases with the extent of the infection. In infections in which leucocytosis is the rule the absence or diminution of such without improvement of the symptoms indicates severe toxæmia with interference with the supply of the defensive cells, or an inherent want of reactive power. With regard to the eosinophiles, whether the cells produced in excess act as direct phagocytes or indirectly produce some of the defensive substances, they evidently play an important part in the defense of the body. An abundant supply of leucocytes, free movement of the same, and a free flow of lymph favor local defense. The most important means of increasing phagocytic activity is supplied by active immunization or vaccination in the general sense. The defensive powers of the body, so far as the production of phagocytic cells is concerned, are sufficiently striking, but the antitoxic and bactericidal substances as ultimate weapons of defense, are more remarkable still. These and other antistances have this common property that they enter into chemical union with the substances on which they act, and show specific affinity in such combination.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending February 3, 1905:

Smallpox—United States.

Place.	Date.	Cases, Deaths.
Arkansas—Jacksonville	Jan. 21	Present.
Arkansas—Helena	Jan. 21	Present.
Arkansas—Little Rock	Jan. 21	Present.
Arkansas—Lonoke County	Jan. 21	Present.
Arkansas—McAlmont	Jan. 21	Present.
Arkansas—North Little Rock	Jan. 21	Present.
Arkansas—Pulaski County	Jan. 21	Present.
Arkansas—Sweet Home	Jan. 21	Present.
Arkansas—Ward	Jan. 21	Present.

Arkansas—Wrightsville	Jan. 21	Present.
Illinois—Chicago	Jan. 21-28	22 1
Illinois—Danville	Jan. 21-28	3
Kansas—Topeka	Jan. 21-28	1
Massachusetts—Boston	Jan. 21-28	2
Mississippi—Gulfport	Jan. 20	2
Missouri—St. Louis	Jan. 21-28	20 4
Ohio—Toledo	Jan. 14-28	6
South Carolina—Greenville	Jan. 7-14	5 2
Tennessee—Memphis	Jan. 21-28	12
Tennessee—Nashville	Jan. 21-28	5 Two imported.

Smallpox—Foreign.

Brazil—Bahia	Dec. 1-31	64
France—Paris	Jan. 7-14	21
Great Britain—Belfast	Jan. 7-14	1
Great Britain—Dundee	Jan. 7-14	1
Great Britain—Glasgow	Jan. 13-20	1
Great Britain—Hull	Jan. 7-14	6
Great Britain—Leeds	Jan. 7-14	21
Great Britain—London	Jan. 7-14	1
Great Britain—Manchester	Jan. 7-14	1
Gt. Britain—Newcastle-on-Tyne	Jan. 7-14	8
Great Britain—Nottingham	Jan. 7-14	1
Great Britain—South Shields	Jan. 7-14	6 1
Italy—Palermo	Dec. 24-Jan. 7	31 6
Norway—Christiania	Jan. 7-14	10
Russia—Odessa	Dec. 31-Jan. 7	2
Russia—St. Petersburg	Dec. 31-Jan. 7	7 2
Russia—Warsaw	Nov. 12-19	1 1
Spain—Cadiz	Dec. 1-31	3
Straits Settlements—Singapore	Dec. 24-31	1 30
West Indies—Island of Grenada	Dec. 29-Jan. 11	4

Yellow Fever.

Mexico—Merida	Jan. 15-21	1 1
Mexico—Tehuantepec	Jan. 15-21	1 1
Panama—Panama	Jan. 25	1

Cholera.

Russia—Erivan	Dec. 21-28	25 26
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Plague—Insular.

Philippine Islands—Manila	Dec. 3-10	1 1
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Plague—Foreign.

Argentina—Santa Fe	Dec. 27	1 1
Australia—Townsley	Dec. 9	1
British East Africa—Port Florence	Jan. 1	3
British South Africa—Durban	Nov. 27-Jan. 3	1 1
Egypt—Port Said	Dec. 24-31	1 4
Egypt—Suez	Dec. 24-31	1
Egypt—Tukh	Dec. 24-31	5 3
Russia—Ural Territory	Dec. 26-28	35 35

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 1, 1905:

- BROOKS, S. D.**, Surgeon. Placed on waiting orders effective January 27th. January 28, 1905.
- FROST, WADE H.**, Assistant Surgeon. Directed to proceed to Baltimore, Md., and report to the Medical Officer in Command for duty and assignment to quarters. January 30, 1905.
- GWYN, M. K.**, Passed Assistant Surgeon. Granted leave of absence for four months from January 19th. January 24, 1905.
- LAVINDER, C. H.**, Passed Assistant Surgeon. Detailed as inspector of unserviceable property at the Purveying Depot, New York, N. Y. January 28, 1905.
- LINLEY, W. J.**, Acting Assistant Surgeon. Department letter of January 3, 1905, granting Acting Assistant Surgeon Linley leave of absence for thirty days from January 16, 1905, revoked. January 28, 1905.
- LONG, J. D.**, Assistant Surgeon. Granted leave of absence for seven days from December 21, 1904, under paragraph 191 of the regulations.
- MAGRUDER, G. M.**, Surgeon. Granted extension of leave of absence for thirty days from January 22nd, on account of sickness. January 28, 1905.
- MONCURE, J. A.**, Acting Assistant Surgeon. Granted leave of absence for thirty days from February 1st. January 25, 1905.
- MULLAN, E. H.**, Assistant Surgeon. Directed to proceed to New York, N. Y. (Stapleton), and report to the Medical Officer in Command for duty and assignment to quarters. January 30, 1905.
- ROBERTSON, H. MCG.**, Assistant Surgeon. Granted leave of absence for six days from February 6th. February 1, 1905.

ROSENAU, M. J., Passed Assistant Surgeon. One day's leave of absence, January 28, 1905, under paragraph 189 of the regulations.

WICKES, H. W., Passed Assistant Surgeon. Granted leave of absence for one day, January 30th. January 28, 1905. To proceed to Philadelphia, Pa., and report to Surgeon Fairfax Irwin for special temporary duty. February 1, 1905.

Board Convened.

Board convened to meet at the marine hospital, San Francisco, February 1, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. G. STIMPSON, chairman. Passed Assistant Surgeon J. M. HOLT, recorder.

Appointments.

Dr. WADE H. FROST, of Virginia, commissioned as assistant surgeon in the Public Health and Marine Hospital Service. January 13, 1905.

Dr. EUGENE H. MULLEN, of Maryland, commissioned as assistant surgeon in the Public Health and Marine Hospital Service. January 13, 1905.

Resignation.

Acting Assistant Surgeon A. C. FRASER, resigned, to take effect January 31, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 4, 1905:

BRECHEMIN, LOUIS, JR., First Lieutenant and Assistant Surgeon. Reports as on temporary duty as examiner of recruits, San Francisco, Cal.

DAVIS, WILLIAM B., Lieutenant Colonel and Deputy Surgeon General. Promoted to the rank of lieutenant colonel, to date from January 19, 1905.

GIRARD, A. C., Colonel and Assistant Surgeon General. Granted thirty days' leave of absence, with permission to apply for a thirty days' extension.

HOFF, JOHN VAN R., Colonel and Assistant Surgeon General. Promoted to the rank of colonel, to date from January 19, 1905.

McCULLOCH, C. C., JR., Major and Surgeon. Promoted to the rank of major, to date from January 19, 1905.

OWEN, WILLIAM C., Major and Surgeon. Ordered to proceed from Fort Logan, Colo., to the United States Army General Hospital, Presidio of San Francisco, Cal., for treatment.

TORNEY, GEORGE H., Lieutenant Colonel and Deputy Surgeon General. Ordered, in addition to present duties, to take charge of the chief surgeon's office, Department of California, during leave of the latter.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 4, 1905:

ELMORE, B., Acting Assistant Surgeon. Appointed an acting assistant surgeon from January 24, 1905.

McDONNOLD, P. E., Passed Assistant Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to the Naval Dispensary, Washington, D. C.

MEANS, V. C. B., Surgeon. Detached from the Naval Hospital, Philadelphia, and ordered to duty at the Naval and Marine Recruiting Station, San Francisco, Cal.

MILLER, J. JR., Assistant Surgeon. Detached from duty with the Marines on the Isthmus of Panama, and ordered to the Boston.

ROSS, JOHN W., Medical Director, retired. Detached from duty under the Isthmian Canal Commission.

SMITH, R. K., Surgeon. Detached from the Naval Recruiting Station, San Francisco, Cal., and resignation accepted to take effect on February 28, 1905.

WEBB, U. R., Assistant Surgeon. Ordered to the Bureau of Medicine and Surgery, Navy Department.

Births, Marriages, and Deaths

Married.

BELL—BROCK.—In New York, on Monday, January 30th, Dr. Charles Thaddeus Bell and Miss Esther Hampton Brock.

CARMAN—BRODIE.—In Baltimore, Maryland, on Tuesday, January 24th, Dr. R. Perry Carman and Miss Roberta Brodie.

HATHAWAY—BAIRD.—In Woodstock, New Brunswick, on Wednesday, January 25th, Dr. Joseph H. Hathaway and Miss Ethel H. S. Baird.

MITCHELL—LUCAS.—In Eden Prairie, Minnesota, on Wednesday, January 25th, Dr. Ralph S. Mitchell and Miss Mabel H. Lucas.

MORGAN—BOOKER.—In Winchester, Virginia, on Thursday, January 26th, Dr. Daniel H. B. Morgan and Miss Isabelle Frances Booker.

Died.

ANTHONY.—In Syracuse, N. Y., on Thursday, February 2nd, Dr. Albert G. Anthony, in the forty-seventh year of his age.

BAGBY.—In Lane Village, Arkansas, on Sunday, January 29th, Dr. John Bagby.

BRENNEMAN.—In Norfolk, Virginia, on Saturday, January 28th, Dr. T. H. Brennenman, in the thirty-fifth year of his age.

BRIGGS.—In Petersburg, Virginia, on Monday, January 23rd, the wife of Dr. W. F. Briggs, in the thirtieth year of her age.

CONVERSE.—In Boston, Massachusetts, on Saturday, January 21st, Dr. Joseph H. Converse.

CUNNINGHAM.—In Newport, Rhode Island, on Sunday, January 29th, Dr. Edward Linzee Cunningham, in the ninety-sixth year of his age.

DOUGHTY.—In Matteawan, N. Y., on Saturday, January 28th, Dr. John H. Doughty, in the seventy-fifth year of his age.

ELLIS.—In Somerville, Massachusetts, on Saturday, January 28th, Dr. Charles C. Ellis, in the fifty-eighth year of his age.

ENOS.—In Jerseyville, Illinois, on Wednesday, January 18th, Dr. S. Cordelia Enos, in the sixtieth year of her age.

FREE.—In Baltimore, Maryland, on Friday, January 27th, Dr. Eli W. Free, in the eighty-first year of his age.

GREENE.—In Buffalo, N. Y., on Saturday, January 28th, Dr. Cordelia A. Greene, in the seventy-fifth year of her age.

HENRY.—In Denver, Colorado, on Monday, January 23rd, Dr. John A. Henry, in the forty-first year of his age.

HOFLING.—In Cincinnati, Ohio, on Sunday, January 22nd, Dr. A. J. Hofling, in the forty-eighth year of his age.

KOHLHASE.—In Panama, on Sunday, January 29th, Dr. Otto Kohlase, United States Navy, in the twenty-eighth year of his age.

McCONNELL.—In Somerville, Massachusetts, on Wednesday, January 25th, Dr. H. B. McConnell, in the thirty-fifth year of his age.

MCGRATH.—In New York, on Saturday, January 28th, Dr. Patrick J. McGrath, in the thirty-sixth year of his age.

O'HARA.—In Philadelphia, on Tuesday, January 31st, Dr. Michael O'Hara, Sr., in the seventy-third year of his age.

OLMSTED.—In Kansas City, Missouri, on Wednesday, January 25th, Dr. Charles C. Olmsted, in the sixty-sixth year of his age.

READ.—In Boston, Massachusetts, on Wednesday, February 1st, Dr. W. R. Read, in the seventy-first year of his age.

RICHARDSON.—In Ligao Allay, Philippine Islands, on Thursday, January 26th, Dr. Fred W. Richardson, of St. Paul, Minnesota, in the forty-sixth year of his age.

WALDO.—In Hulberton, N. Y., on Thursday, January 26th, Dr. Jesse Waldo, in the thirty-third year of his age.

WHITNEY.—In St. Augustine, Florida, on Sunday, January 22nd, Dr. William W. Whitney, in the seventy-seventh year of his age.

WOOD.—In Clearwater, Florida, on Monday, January 23rd, Dr. Samuel R. Wood, in the seventy-sixth year of his age.

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Original Communications.

LOCOMOTOR ATAXIA SUCCESSFULLY TREATED WITH ULTRAVIOLET RAYS.*

By J. MONROE LIEBERMANN, M. D.,
NEW YORK,

LATE ASSISTANT TO THE CHAIR OF SURGERY AT THE NEW
YORK POST GRADUATE SCHOOL AND HOSPITAL.

*Das Alte stirbt, es ändert sich die Zeit,
Und neues Leben blüht aus den Ruinen.*

SCHILLER (*Wilhelm Tell*).

There is a tendency among general practitioners to look upon patients suffering from locomotor ataxia as hopeless. They know of no certain relief for the distressing symptoms presented by the victims of this formidable disease. Nor can they be blamed for discouragement in the face of such apparently hopeless symptoms as the severe pains, incoordination, inability to walk, and failure of functional activity of bladder and rectum.

A gloomy prognosis is warranted in most cases, since locomotor ataxia is a disease which generally proves fatal and whose treatment demands our most intelligent effort, coupled with the strictest persistence and regimen, which must be maintained with mathematical precision. The diagnosis of a well advanced case of locomotor ataxia can be easily determined by even an intelligent layman. No disease presents such a sadly pathetic sight and is so characteristic in its leading symptoms. It is in the early stages of this disease, when the clinical picture is obscure, that most of us have erred in our diagnosis.

It is to the diagnosis of this so called preataxic stage that I wish to briefly direct your kind attention. Early diagnosis of any disease is of vast importance and this is especially true in the condition under consideration.

While our knowledge of the organic lesions underlying the symptoms which comprise the clinical picture of locomotor ataxia and which are,

* Read before the fourteenth annual convention of the American Electrotherapeutic Association, at St. Louis.

perhaps, as definite and well established as any associated with spinal pathology in the early stages of the disease, these changes are not clearly apparent, but revelations made by competent German and French observers and investigators seem to point to the fact that the rudimentary and primary destructive process occurs in the posterior columns with their roots and ganglia taking a longitudinal instead of a transverse direction.

To Duchenne belongs great credit for the clearness and precision with which he describes his remarkable investigation of progressive locomotor ataxia. He in fact supplied us the basis of our present pathological knowledge of the disease.

It is not incumbent on me to dwell upon the pathological anatomy of a disease with which you are by virtue of your special work so familiar, but in order to substantiate some statements that are to follow, I cannot entirely overlook this phase of the subject.

The portion of the spinal cord lying between the posterior nerve roots, as is well known, is altered in color, consistence, and dimensions. It becomes gray instead of white, hard instead of soft, and reduced in size. The grayish color predominates in the lumbar and lower dorsal regions. The posterior roots themselves are often atrophied and firmer in consistence and darker in color than in health. On making cross section of the cord it is found that the gray discoloration extends inward, involving the posterior columns.

Under the microscope we find the connecting elements of the cord are nearly destroyed and their place is usurped by a firm connective tissue made up of wavy bundles, enclosing here and there a few atrophied axis cylinders. The blood vessels participate in the morbid process; they become sclerotic, their lumen is contracted, while the adventitial sheath is hypertrophied and enveloped by a nucleated, fibrillar connective substance. It is evident that the increase of connective tissue in the posterior columns is the result of actual proliferation.

It is an established fact that the sclerosis of

areas of the spinal cord which are affected, is preceded by a stage of granular degeneration, itself due to morbid molecular disturbances of nutritional as well as functional morbid processes to which the spinal cord is subject. The nerve or its cells suffer all degrees of structural degeneration culminating in actual death, with an associated increase of connective tissue.

Morton, in discussing the pathological changes occurring in diseases of the spinal cord, pertinently states that in an extreme instance, after complete section of the nerve, the internodal nuclei increase in size, their protoplasm increases and becomes granular and compresses the myelin, ultimately separating into small fragments, which are soon absorbed, leaving only the mere sheath of the nerve. Atrophy of the cell or its axis cylinder and hypertrophy of the imbedding matrix are synchronous events. Nutrition, which is in abeyance in the former, is in a high degree of activity in the latter. There is evidently an interdependence of nutritional life between the two, for, the more rapid the loss of vitality of nerve elements, the more rapid the adventitious growth of the matrix.

You can readily judge from this short résumé of the pathology of locomotor ataxia, that the treatment must consist in restoring the destroyed nerve cells almost as it were from its ashes, stimulating its functional activity, and at the same time diminishing the nutritive activity of the connective tissue.

Electricity, in its diverse modalities, has long been looked upon as the only natural force that traverses the tissues to their innermost depths, and excites their irritability whether protoplasmic, as in the individual cell, or organic, as in the nerve structure.

The electric treatment in locomotor ataxia, should, therefore, always be central as well as peripheral.

Centrally, I use the ultraviolet ray. Peripheral treatment, as I exhibit it, consists of static electricity with the Morton wave current or the application of the wooden brush for ten or fifteen minutes daily.

After hearing Dr. Piffard's paper on radio-praxis, read at the Academy of Medicine, March, 1903, suggesting local cataphoric de-hæmatization before applying the ultraviolet ray, it appealed to me as a promising remedy in various diseases of the cord and I decided to try it. I have now treated 36 cases of locomotor ataxia with the following result:

Males, 34; females, 2. Ages range from 24 to 63 years. Four of these patients have been

restored to good health and are now able to resume their usual vocations. Twelve have been greatly benefited, the power of coordination has been restored, pain abolished, and the ability to use the upper and lower limbs without any assistance established. All are able to rise, dress, and undress themselves without any help and are sometimes able to perform such delicate operations as fixing the necktie or tying their shoes in a stooping position. In eighteen cases, the disease is apparently arrested with hope of further improvement and final restoration of different functions. Two died during treatment, one from lobar pneumonia, the other of erysipelas capitis.

These cases had for years received different forms of treatment, as the Matchkovsky modified Weir Mitchell suspension method, entire and partial body hot air treatment, hydrotherapeutical treatment, as well as the Franklin method. While some improvement had followed from these methods, none of them had made such gratifying progress as since submitting to the ultraviolet ray treatment.

For the purpose of de-hæmatizing I use the cataphoric electrode (with a round piece of lint) saturated with adrenalin chloride (1-1000). A pad (Fig. 1) with zinc plate is applied to the ab-



FIG. 1.—Pad used in de-hæmatizing the tissues. a. Made of unbleached muslin stuffed with cotton. b. Zinc electrode. c. Holder.

domen, leaving it on for 3-5-10 minutes. I use my static machine for exciting the ultraviolet lamp with the large Leyden jars as condensers. The lamp is connected by its conducting cords to the outer surface of the jars.

The question arises and I imagine I hear some of you asking how the ultraviolet ray cures these intractable and universally considered hopeless cases?

Perhaps we do not know, but a word as to its probable action will not be out of place. Little or almost nothing has been written on the phys-

biological effects of ultraviolet ray on living tissues and in all my research I failed to find a single article on the physiological effects of ultraviolet ray on the tissues underlying the skin. Probably the reason being that the ultraviolet rays are absorbed by the skin. But since dehæmatization permits the ultraviolet ray to traverse the skin, it opens a new field of study for this particular part of the spectrum, where its action was formerly especially investigated in superficial diseases of the skin. Freund, in his excellent and elaborate article on phototherapy, goes into the description of the physical properties of the ultraviolet ray, but says not a word on its physiological effect on the tissues.

We do know that the ultraviolet ray light is of a short wave length and of very high rate of vibration (more than 800 billion vibrations a second) and like other invisible forms of vibration, has its physiological effects on animal tissue, which can only be understood by clinical manifestations.

With this clinical experience of ultraviolet ray in 36 cases of locomotor ataxia, and about 20 other cases of nervous diseases, I still feel myself not competent enough to present to you a positive statement of the influence of ultraviolet ray on the protoplasmic cell. I can only suggest a theory of action, namely, that its powerful stimulating effect induces more activity in the natural healthy cell and diminishes the nutrition of connective tissue setting up a more active local metabolism.

Another hypothesis, resembling that advanced by Professor Sajous as to the rationale of the curative action of the Röntgen ray, is equally applicable to the ultraviolet ray, namely, that it induces a local accumulation of heat energy and a congestive process through which neutrophile leucocytes are caused to immigrate into the vicinity of the degenerated cellular elements into normal and healthy cells.

And in this connection I desire to record my conviction that to facilitate this result it is all important to maintain the normal alkalinity of the blood and secretions throughout the entire treatment.

While the dispute among chemists and physicists is still in vogue as to whether the ultraviolet ray traverses the dehæmatized tissue, the fact remains that when applied in a proper and cautious manner, it exercises a remarkable tonic effect upon all underlying tissues, and acts as a restorative to the different portions of the nerve structure as have been partly destroyed eventually restoring their function.

The application of the ultraviolet ray to dehæmatized tissues should be made with great care



FIG. 2.—X ray taken of left foot, proving faulty diagnosis of flat foot.

and judgment. In my opinion it is a very powerful remedy and should never be applied to more than two localities at each séance, and the area should be varied so that every day a different region of the cord is treated. I divide the spine into three regions, cervical, lumbar, and sacral, treating these alternately or in rotation.

One characteristic and almost invariable effect of the treatment with the ultraviolet ray in combination with the electric stimulation of the peripheral nerves and their end organs, is the improved general nutrition of the patient. They all make a rapid increase in weight and improve in general health.

Complications associated with these reported cases of locomotor ataxia: 8 had secondary and tertiary syphilis; 3 had pulmonary trouble; 29 were victims of marked anæmia; 7 had cardiac lesions; 2 had diabetes; and 34 showed excess of phosphates and uric acid. This excess amounted from 8 to 14½ grains to the ounce.

The first case treated by me with ultraviolet ray began in March, 1903.

The routine treatment to which I have adhered in locomotor ataxia consists of:

- (1) A warm half bath at night before going to bed, with light massage.
- (2) Ultraviolet rays in sittings of ten to thirty minutes, three times a week.
- (3) Static electricity by means of the Morton wave current or wooden brush daily, fifteen to twenty minutes.

CASE I.—Charles K., aged 56 years, merchant. I saw him first in 1900, in consultation with another physician and diagnosticated the case as locomotor ataxia, which diagnosis was ridiculed by another consultant later on. Did not see him again until the early part of 1902, when he was brought to the office by a guide. All his symptoms showed him to be a typical case of locomotor ataxia. Treated him until August, 1903, by x ray, also using hydrotherapeutics and massage. Improvement, if any, very slight.

August 12, 1903, first application of ultraviolet ray to lumbar region (where the most pain occurs at night). Pain diminished that night and could sleep four hours at a stretch. Raying continued 10 to 20 minutes daily.

September 16, 1903, he was able to use right hand to grasp objects. Right leg showed some responsive reflex. Felt better in general.

February 10, 1904, came to the office with a guide and using only one cane in the right hand. Reads better. Left hand and leg were improving. Received ultraviolet ray three times a week.

July 15, 1904, was able to go down to his place of business, but still unable to write a letter. Had been signing checks for the last four months. Coordination then perfect. Pains have entirely disappeared.

CASE II.—J. C., builder, June 21, 1902, 39 years of age, well proportioned. This is the most typical preataxic case I have ever seen; this opinion was corroborated by several of my colleagues who examined the patient.

Five years ago the patient was exposed for seven or eight hours to wet and cold, during a storm, and was unable to procure change of clothing for some hours. The next day was unable to get out of bed, owing to pain in the legs and back. Had chancroid twenty years ago, but no constitutional symptoms. Was treated for rheumatism until he applied to me.

Called June 21, 1902, with complaint of rheumatic pain in lumbar region. Examination disclosed lack of coordination, but this could be noticed only when having his eyes closed. He could lift either leg steadily into any position, or stretch out his arms and keep them out, or touch his nose with the forefinger of each hand in turn, while he was allowed to see what he is doing, but if his eyes were shut, his limbs at once became uncertain and unsteady in their movements, and comparatively powerless.

Complained of severe stabbing, boring, and lightning like pains in the lower lumbar region extending to the feet along the outer side of the metatarsal bones of the little toe.

Was treated with static electricity in connection with general medication, with no particular improvement until end of one month. After sixteen applications, this pain was much relieved, while coordination and the eyesight began to improve. Functional activity of bladder and bowels began to be noticed.

February 26, 1904, had had 186 applications of ultraviolet ray. He came to office with a guide, went down town to his business for a week and was able to attend to same. Coordination was improved; no pain; bowels and bladder controlled.

July 20, 1904, had received 258 applications. Walked along the street without either guide or support. Only by careful examination could I find some tenderness in any part of lumbar region. Other symptoms had almost entirely disappeared. Attended to his business daily for five to six hours. Appetite good. Had gained 19 pounds since February last. Case discharged and considered cured.

CASE III.—J. F., 28 years old, United States

cutter by occupation. Eight years ago after extreme exposure to wet and cold, was laid up for nineteen months. All this time he was treated for rheumatism. Had pain in the lumbar region, extending to the left leg and down to the heel. Was sent to an orthopaedic surgeon, who advised him to wear arch supporting plates.

The interesting feature in this case was the arthropathic condition of the ankles of both legs, more marked in the left, and accompanied by a bursa. Eight or nine years ago he was exposed to extreme wet and cold for six or eight hours and was unable to get out of bed next morning. Two days after was able to go down to his business. Being a cutter, was forced to stand much on his feet. After a few hours' work was brought home in a cab and was "laid up," as he said, for nineteen months, being all this time treated for rheumatism. He was sent to Mount Clemens, Mich., and to Hot Springs, but obtained no material relief. Was then advised to see an orthopaedic surgeon, who diagnosed the case as rheumatism in combination with flat foot, and advised arch supporting foot plates. He was from time to time under treatment by several competent physicians in this city, all agreeing in the diagnosis of rheumatism. One orthopaedic surgeon was quite frank in stating that he could not make a proper diagnosis, but if permitted to open the joint, he would be able to diagnosticate the case properly and to treat it accordingly. There was no specific history. The patient had had gonorrhoea several years before. One young surgeon was quite insistent as to the necessity of removing the bursa, and the patient was, therefore, recommended to me for this operation. On examination, I found an enlarged left ankle joint with synovial sac situated behind the tendo achillis. There was no pain on pressure, but the patient suffered severe boring, lightning like pain from the hip down to the heel, so severe that for the purpose of relief he had to lift the heel almost two inches from the ground while walking. Romberg's symptom was absent. Status on the right foot was better than on the left foot. Westphal's symptom (knee jerk) was entirely absent in the left, and diminished in the right knee. There was boring, lightning like pain in the left leg and slight pain in the right. Extreme numbness and drawing pain were present in the left leg, but very little in the right. If we added the Argyll Robertson symptom in combination with disturbances of micturition and peculiar numbness around the waist, the picture of locomotor ataxia was complete.

According to Virchow, atheromatous changes occurring in tabetic joints, due to a predisposition of the bones to faulty cellular metabolism, resulting from nervous disease of the cord, are not very rare. Charcot observed them in 107 cases; in the knees in 78; hip, 31; shoulder, 21; tarsus, 13; elbow, 10; ankle, 9 times.

This inflamed joint symptom misled some very competent practitioners in their efforts to make a correct diagnosis, and possibly led those who had made the right diagnosis to consider the case hopeless. Flat foot was tested for by impression method and x ray (Fig. 2). X ray of the arch

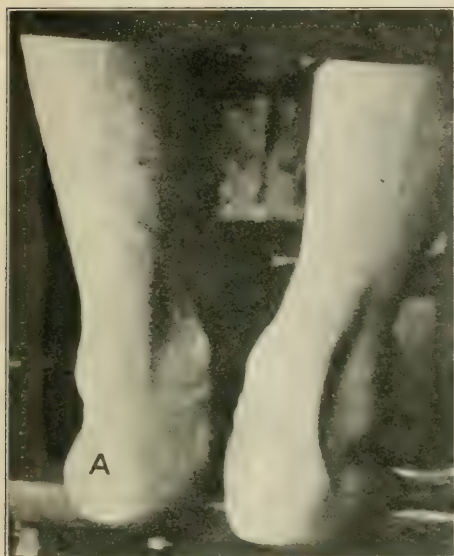


FIG. 3.—Showing edematous condition of legs and ankle joints.
A. Situation of bursa.

of the left leg proved flat foot to be a faulty diagnosis.

The synovial sac and the whole left ankle (Fig. 3) were treated with the galvanic current, and after one month's treatment the bursa or synovial sac disappeared; the joint diminished in circumference fully $1\frac{1}{4}$ inches (Fig. 4).

The ultraviolet ray was applied to lumbar region from the first day, from ten to fifteen minutes, three times a week; there was also peripheral treatment with static electricity daily.

March, 1904; had now received six months' treatment. The joint was perfectly normal and the patient had discarded the instep support. He had no pain, and stood on his feet seven or eight hours a day. Coordination was restored. The Argyll Robertson symptom still persisted. The knee reflex was now present, is perfect in the right, but still diminished in the left leg.

July 20, 1904; the patient had no pain. All symptoms of locomotor ataxia were gradually disappearing. The patient worked steadily seven to eight hours a day, standing on his feet.

CASE IV.—Miss A. L., 42 years of age, unmarried, lady of leisure; corpulent, weight 156 pounds, was brought to my office July 16, 1903, in an invalid chair, and complained of severe pain in the lumbar region and hips, extending down the legs below the patella. She attributed this condition to a fall in the cellar that occurred four years previously. Nine years before, she was laid up in bed for four weeks with rheumatism, due to severe exposure to cold and wet while driving in the Catskill mountains. Menstruation was irregular and painful. There was a specific his-

tory with constitutional symptoms, dating back twelve years.

Examination showed marked anæsthesia below the waist and down to the legs, also in the upper limbs. All the important symptoms of locomotor ataxia, as Argyll Robertson, Romberg, and Westphal symptoms were distinctly present. Treatment was begun at once. The ultraviolet ray was applied alternately with the x ray to the lumbar and cervical regions, and peripheral treatment with static electricity was used daily.

In this case attention was paid to reduction of superfluous adipose tissues through muscular exercise in the limbs, with massage and gymnastics. After one month's treatment the patient lost 12 pounds, and was able to walk two or three blocks.

February 13, 1904, pains in the limb were felt only once in a great while, and the reflex in the knee reappeared. The Argyll Robertson pupil persisted, although the incoordination diminished.

By July 20, 1904, the patient had received 146 ultraviolet ray applications. She was able to come to the office from her home, a distance of 14 blocks, was able to use her hands to dress herself, the Romberg's symptom was much less apparent, she had perfect control of bladder and rectum and suffered no pain.

In an overwhelming majority of these cases the disease manifests itself in the lumbar and sacral region, being thus limited for a long period, then advancing slowly upwards. The peculiar tired feeling, occurring mostly in the knees and ankles, and that is not relieved by rest, is present in all the cases in combination with the lightning like pains of such severity that usually the patient is forced to cry out. It is for the physician to dif-



FIG. 4.—Showing condition of legs and ankle joints a few months later.—Note distinct lines of tendo achillis and entire absence of bursa.

ferentiate between the tabetic and rheumatic pains. Tabetic pains are paroxysmal and the intermissions are complete; tabetic pains are neither aggravated by motion nor relieved by rest, while rheumatic pains are. Tabetic pain is usually relieved by pressure, while rheumatic pain is thus aggravated. Hyperæsthesia is usually present with tabes, and almost always absent with rheumatism. The patient's description of the tabetic pain, comparing it to tearing, boring, and the jumping of a violent toothache, is of great significance. That peculiar form of illusive sensation known as the girdle constrictor, is found in various situations, according to the level of the diseased part of the cord, whether low or high.

The following are helpful guides in the diagnosis:

Romberg's Symptom: Swaying of the body and inability to maintain the erect position with eyes closed; always present.

Argyll Robertson Symptom: Loss of pupil reflex to light, but reaction to accommodation retained.

Westphal's Symptom: Absence of patellar reflex, if carefully tested, can always be found.

Another and a very important symptom in the diagnosis of locomotor ataxia in its earliest stages is Frankel's hypotonia.

A few words as to its ætiology. Excluding all predisposing nervous and specific causes (syphilis being no more prolific in causing this than any other exhaustive disease, even excessive venery). I am quite disposed to consider severe and sudden exposure of cold and wet as a prominent ætiological factor. Feinberg has demonstrated that cold applied to the cord of animals may produce myelitis.

If excessive venery was as frequently a cause as is generally believed and confidently asserted in our textbooks, our large cities would be literally overrun with atactics. On the other hand, our male population would indeed be in a very deplorable state if masturbation and venereal excesses alone would produce locomotor ataxia.

In conclusion, it may be set down that not all, but some cases of locomotor ataxia readily respond to a judicious and persistent application of the ultraviolet ray, while others are decidedly obdurate and will try our skill to the utmost. The success thus far attained warrants us in holding out hope in all cases not too inveterate or too complicated. And, if in the incurable cases we can succeed in relieving or at least greatly mitigating the severe pains, in partially or wholly restoring the power of coordination and overcoming the ocular disturbances, we shall win the unmeasured gratitude of our suffering patients, and the supreme satisfaction of self absolution and self approval.

But let no one who intends to utilize this particular modality of electricity flatter himself that he can succeed, except by exercising eternal vigilance as to the thoroughness of his methods, the scientific perfection of his technique, and his constant exercise of his professional discretion, learned from the most painstaking clinical observation. If inclined to fall into haphazard methods which have heretofore been only too common, it were far better that he should never attempt the treatment.

If this brief and by no means exhaustive paper shall be the means of stimulating further investigation and of arousing some reasonable hope in many cases where hitherto there has been no hope, the author's highest ambition will have been realized.

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70 LENOX AVENUE.

THE PATHOLOGY OF CEREBELLAR TUMORS.*

By T. H. WEISENBURG, M. D.,

PHILADELPHIA,

INSTRUCTOR IN NEUROLOGY AND NEUROPATHOLOGY IN THE UNIVERSITY OF PENNSYLVANIA; ASSISTANT NEUROLOGIST TO THE PHILADELPHIA GENERAL HOSPITAL.

(Concluded from page 283.)

It may be impossible, as in Spiller's second case, to make a correct diagnosis in sarcomatosis of the brain and of the pial covering. Extensive alteration may cause few clinical symptoms, because the soft tumor masses grow in the pia and about the cranial nerves and spinal roots, and may produce little or no compression or destruction of the nervous tissue. Spiller insists upon the importance of remembering this fact, for when evidences of sarcomatosis are found, the case is an inoperative one.

Occasionally the process may invade the brain substance, while the nerve roots may escape. It is, according to Spiller, because of this escape of the nervous tissue in many cases that a correct diagnosis of the extent of the process may be impossible.

The infiltration of the pia may resemble that

* From the Neuropathological Laboratory of the University of Pennsylvania.

caused by syphilis or tuberculosis. Again, as in Nonne's case, the macroscopical examination may be normal.

Sarcomatous tumors, according to Westphal, occur more often in the young. When tumors occur in the posterior cranial fossa they have a predilection for the cerebellopontile angle and the internal auditory meatus.

Isolation of the sarcomata whether of the cerebellum or of any other region of the brain are, next to fibromata, among the most favorable forms of tumor for surgical removal. Of course the question of multiple sarcomatosis must always be carefully considered when deciding upon operation. With regard to surgical procedure the hard non-infiltrating sarcomata are the most favorable. Experience shows, however, that a sarcoma which appears to be infiltrating when the brain and tumor mass are first exposed, is often separable from the brain substance.

Syphilitic Growths.—Gummata are rarely found post mortem, although they are possibly the most common cranial growths. They are especially rare in the cerebellum. The resemblance between this growth and tuberculoma has already been discussed. In a recent article Mills recorded two cases in which the diagnosis of a tumor in the cerebellopontile angle was made. At the necropsy no tumors were apparent, but microscopically in the first case a diffuse syphilitic basal meningitis was found and in his second case besides a meningitis at the base, there were numerous areas of softening throughout the brain, extending from the gray into the white matter. These areas of softening were yellowish red in color, soft in consistence, and were well defined from the surrounding brain substance. Microscopically, there was an intense round cell infiltration about the blood vessels and within the tissues.

These cases illustrate well the nature of syphilitic new growths. It is well known that a syphilitic basal meningitis, or meningoencephalitis, may attack any cranial nerve or combination of cranial nerves, but according to Mills they show a predilection in favor of the nerves from the second to the seventh inclusive, of these the fifth perhaps most frequently escaping.

Syphilitic growths are rapid in development, but it must be remembered that the various pathological conditions which lead on to these growths have been long present.

Fibromata.—These tumors are rare, but they are relatively more frequent in the cerebellum than in the cerebrum, and especially in the cerebellopontile angle. This has been better recog-

nized within the last few years, because of the relatively successful surgical removal of tumors growing in this area.

A fibroma invading the cerebellopontile angle may be only a part of a general neurofibromatosis; this, however, is rare, or, what is more common, it may be the only expression of this process, a central neurofibromatosis. The growth is slow, and generally is unilateral, although in rare instances it may be present on both sides. Henneberg and Koch pointed out that these tu-

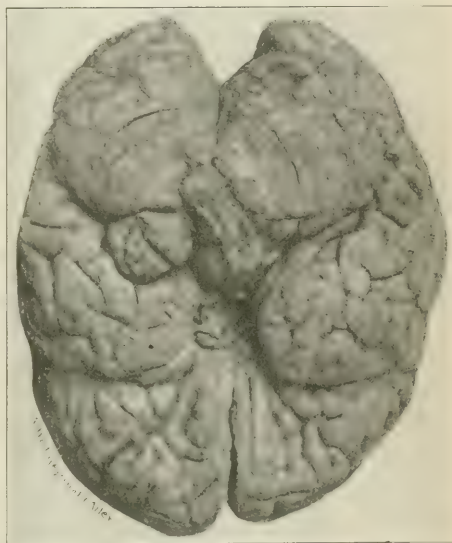


FIG. 2.—Fibroma growing from the left acoustic nerve compressing slightly the left lateral lobe of the cerebellum and the lower surface of the left temporal lobe.

mors are more often found on the left side in the ratio of three to two. In the cases reported by Dr. Mills, the pathological reports of which are here given, the neoplasms were on the left side. In an examination of the tumors situated in the pons, medulla oblongata and the cerebellum, we found that the majority were on the left side. It seems, therefore, that tumors of these areas are more prone to grow on the left side.

The fibroma may be as small as a cherry or the size of a large egg. The growth is firm, hard, nodular, and has a distinct capsule surrounding it. It is loosely attached to the brain by an atrophic nerve trunk, a few blood vessels or a meningeal process, and these attachments may be easily ruptured. These tumors are in organic relation, especially with the acoustic nerve, and more rarely with the trigeminus and facial nerves. They nearly always grow from the endoneurium

and rarely from the peri- or epineurium. Consequently we may find medullated nerve fibres either in the periphery of the tumor or in its centre. As a rule, if the process involves the other cranial nerves, we have a general neurofibromatosis.

The fibroma may undergo a cystic, fatty, or myxomatous degeneration. Very often in its advanced stages it may assume a sarcomatous tendency. Histologically we find a connective tissue structure with entire absence of nerve elements, except sometimes a few medullated nerve fibres either in the periphery or its central part. These are remnants of the nerve on which the fibroma grows and should not be mistaken for a part of the new growth. Most writers persist in calling these tumors neurofibromata. The best example of a true neurofibroma is the amputation neuroma, therefore, a fibroma would be a better term for these growths.

In a number of cases of fibroma of the acoustic there were associated cortical changes. Henneberg and Koch reported hyperplasia and hypertrophy of the glia cells of the cortex, especially of the deeper layer, and in another case endoelioma and psammomata of the dura mater. Fraenkel and Hunt made a similar observation. In another case reported by these authors there were protrusions and minute herniæ attached to and sometimes perforating the dura. Histologically, these consisted of large cells of the spindle type and of glia cells.

At times the fibromatous process may involve the whole of the intracranial portion of the acoustic. In a case of Alexander and v. Frankl-Hochwart, an anatomical examination of the labyrinth showed a degenerative atrophy of the cochlear nerve, the spiral ganglion, the organ of Corti, and the striæ vasculares.

These tumors compress greatly the lateral lobes of the cerebellum, the pons, and the medulla oblongata. In one of Dr. Mills's cases the temporal lobe was compressed. Because of the slow growth and the nature of the tumor, clinical symptoms may not appear at all, or only late in the disease. In one of Dr. Mills's cases there were no symptoms of such a growth, the tumor being found at necropsy.

The following pathological report of two cases of fibroma in the left cerebellopontile angle are from the service of Dr. Mills. They are referred to by him in the discussion of tumors of the cerebellopontile angle, the first extensively, the second briefly. The clinical report of the second case is appended:

CASE I.—A tumor 3 cm. wide and 2½ cm. in

length anteroposteriorly was found in the left cerebellopontile angle, compressing slightly the forward part of the left lateral lobe of the cerebellum and the under surface of the temporal lobe. The pons and medulla oblongata were not compressed. There was marked internal hydrocephalus. Microscopical examination showed it to be a fibroma.

CASE II.—A tumor (Fig. 3) 5 cm. wide and 3 to 4 cm. in length anteroposteriorly was found in the left cerebellopontile angle. The tumor was very firm and nodular, and compressed considerably the under surface of the left lateral lobe of the cerebellum and the left side of the pons. At no place did the tumor infiltrate the brain tissue, and it could be entirely enucleated. Microscopical examination showed it to be a fibroma.

Cysts.—Cystic degeneration of gliomata and sarcomata are very common, especially if they are situated in the cerebellum. This has been discussed when speaking of sarcoma. Other tumors, as fibroma and carcinoma, are prone to undergo cystic change, but more rarely. Some authors believe that the whole tumor may disappear and only a cyst remain. In other cases only a microscopical examination will detect a small tumor mass in the walls of the cyst. Spiller has pointed out that the wall of a congenital cyst may be the starting point for a neoplasm, and this possibility should not be ignored.

The most common cystic changes found in the brain are due to parasitic growth, the cysticercus cellulosa and the echinococcus. These, however, are so rare in this country that they will not be here discussed.

Cysts due to traumatism are recorded, but their genesis is by no means clear. Congenital

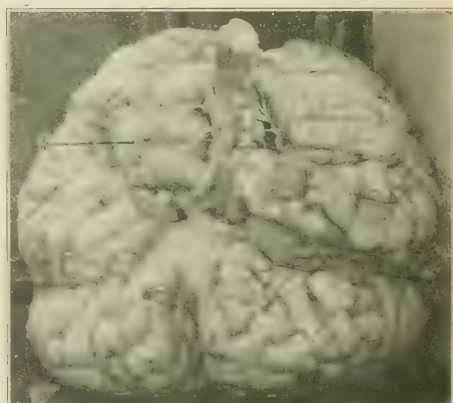


FIG. 3.—Fibroma growing in the left cerebellopontile angle compressing the lower surface of the cerebellum and the left side of the pons.

cysts are rare. They are probably offshoots of the primary cerebral vesicles. Dermoid cysts have been recorded as occurring in the cerebellum in several instances.

Carcinoma.—Carcinoma of the cerebellum is rare. This form of neoplasm is always secondary and grows from the dura or in the substance of the brain. Saenger recorded infiltration of the cerebral pia with cancer cells. The possibility of toxic changes must be considered, as it is not improbable that through intoxication caused by a carcinoma elsewhere in the body, symptoms of brain tumor may be present.

Osteoma.—In several instances an osteoma has been described as occurring in the cerebellum. It is probable that these growths are not primarily of bone formation, but are the result of calcification of such tumors as tuberculoma, fibroma, sarcoma, and even lipoma. Other neoplasms, as adenoma, lipoma, angioma, psammoma, and cholesteatoma are hardly ever found in the cerebellum, so they will not be discussed. It must also be remembered that aneurysm of the vertebral or basilar artery may give symptoms of cerebellar growth.

The Influence of Cerebellar Growths.—At the operation when the dura is removed there is nearly always increased tension and the parts may bulge. The surface of the cerebellum is flat and the fissures may be abolished. The pia covering the neoplasm is generally poor in its blood supply. The tissues near the growth may be softened. If the tumor is in the lateral lobe of the cerebellum it may compress the fifth, seventh, and eighth cranial nerves. The occipital lobes may even be compressed through the tentorium. If the cerebellar tumor is large it may compress the corpora quadrigemina, pons, and the medulla oblongata, and these structures may be flattened or deformed. Pressure may also be exerted upon the cranial nerves at the base of the brain. The influence of cerebellopontile growths upon surrounding structures has already been discussed.

The cerebrospinal fluid is almost always increased in cases of cerebellar tumor, because pressure is exerted upon the communication between the lateral ventricles and the fourth ventricle, or upon the veins of Galen, which convey the blood from the chorioid plexus to the sinus rectus. Because of this internal hydrocephalus undue pressure is brought to bear upon the different cranial nerves, as the optic and olfactory. The optic chiasm may be directly compressed through pressure from the third ventricle.

Alterations in the posterior roots and the posterior columns of the spinal cord have been re-

corded as occurring in conjunction with tumors of the brain. Such changes have been also found by Dr. Spiller. According to Batten and Collier they are especially present in cerebellar growths, and are due to the increased pressure. Dinkler and Becker believe that toxic or nutritional changes are at fault.

Tumors of the Fourth Ventricle, Medulla Oblongata, Pons, and Chorioid Plexus.—It is not in the province of this paper to consider *in extenso* neoplasms of these areas, but inasmuch as these growths sometimes give symptoms of cerebellar involvement, they will be briefly considered.

Tumors of the fourth ventricle and of the medulla oblongata may give no appreciable clinical symptoms. They may either be cystic or hard, and may grow in the substance of the medulla oblongata. This is especially true of parasitic and congenital cysts. Hunt recorded two congenital cysts of the fourth ventricle in which the cerebellum was greatly compressed and yet there were no cerebellar symptoms.

Neoplasms growing within or upon the corpora quadrigemina nearly always compress the middle or the lateral lobes of the cerebellum. They also cause internal hydrocephalus. Two such specimens are in our collection.

Tumors of the pons may cause pressure symptoms upon the cerebellum, or the growths may involve the middle cerebellar peduncles. Growths of the chorioid plexus, as in a case of Arnold's, where a psammoma of the size of an apple was found, may compress the pons, medulla oblongata, and the cerebellum.

Tumors in the Cerebrum Giving Symptoms of Cerebellar Growth.—Ascherson recorded an instance in which a sarcoma was found in the centrum ovale of the left side in the upper motor area. This neoplasm measured $1\frac{1}{2}$ by $2\frac{3}{4}$ inches, and could easily be enucleated. It caused a compression of the lateral ventricle in the same side. This author cites Raymond as having recorded an almost similar case. Ascherson is of the opinion that the cerebellar symptoms were due to pressure exerted through the lateral ventricle, and he emphasizes the importance of early symptoms before those of pressure are apparent. In this connection the fact that tumors of the post-parietal cortex or subcortex, may give unilateral ataxia should be borne in mind. The diagnosis between post parietal and cerebellar tumors is given in the paper of Dr. Mills.

Abscess.—Chronic otitis media is the most frequent cause of abscess in the cerebellum. It may be due to such other causes as traumatism or may be a part of a general pyæmic process,

but these instances are uncommon. The abscess occurs mostly in the anterior outer part of the cerebellum, and is generally single. It may involve also the adjoining temporal lobe. The abscess may be encapsulated or it may keep on forming pus. Surrounding it, œdema and softening of the brain substance are found. Pus may travel along the facialis and acousticus, and cause extradural abscesses. Hydrocephalus, sinus thrombosis, and thrombophlebitis are frequent complications.

Internal Hydrocephalus.—This condition is most often caused by a brain tumor, but it may be congenital or acquired. Spiller recorded an instance in which the symptoms were those of cerebellar tumor, and at the necropsy the cerebral ventricles were much distended, but the fourth ventricle was of normal size. The aqueduct of Sylvius was almost entirely occluded when examined, and the occlusion must have been congenital or have occurred early. Byrom Bramwell recorded a similar case, but here a localized meningitis caused a closure of the foramen of Magendie. The possibility of internal hydrocephalus should always be kept in mind when a cerebellar growth is considered.

Symptoms of Cerebellar Tumor Without Lesions.—In a very important paper, Nonne called attention to those cases in which the majority of the symptoms of brain tumor were present, and in which either spontaneously or under mercurial treatment the symptoms disappeared, leaving, perhaps, a partial optic nerve atrophy. There was no reason in any of the eight clinical cases he reported to suspect syphilis.

He also records three similar cases with necropsy, in two of which symptoms of a tumor in the posterior cranial fossa was diagnosed. At the necropsy in the first case, internal hydrocephalus was found. On the floor of the fourth ventricle, opposite the posterior medullary vulum, there was a hard, long, yellowish white structure, which obstructed the flow of the cerebrospinal fluid. Microscopically this was found to be a fibroma. In his second case, internal hydrocephalus was also found, this being caused by a sarcoma of the ependyma of the floor of the fourth ventricle.

He further records three cases with necropsy in which there was no internal hydrocephalus. Nonne also reports cases of internal hydrocephalus which gave largely basal symptoms due to various causes, and which terminated either in death or recovery. He leaves us in doubt as to what is the cause of such a condition.

Dr. Spiller has very kindly given me the records of such a case occurring in his service.

Woman, 44 years of age, domestic, past history unimportant. Two and one half years ago the patient began to have violent headache in the left cerebellar region. This headache became more severe and became localized in the left parietal region, where there was also great tenderness to pressure. She had an ataxic, drunken gait, and would fall to the left or backwards when walking. Extreme vertigo was also present, especially when she was lying on her left side or walking. Power was diminished in the lower limbs and sensation was also somewhat impaired. The patellar jerks were absent. There was no albumin in the urine.

Dr. Roberts operated at the point of great tenderness in the left posterior parietal region. There was nothing abnormal found and the brain appeared to be in a healthy condition.

The patient's symptoms steadily disappeared, the pain in the head became better and in a short time she seemed almost well.

Another case was studied by me repeatedly.

This woman was in the nervous wards of the Philadelphia General Hospital in the service of Dr. Spiller. She was 52 years of age, denied venereal history, and her past history was unimportant. Five years ago she began to have violent vertical headache, which has persisted more or less since. One year ago she began to have objective vertigo, and convulsions, Jacksonian in type, which always involved the left side of the face, and the left arm and leg. Sight also became poor at that time, and her memory was not as good as formerly. In my examination she showed a paresis of the left arm and leg, these being spastic, and the reflexes were exaggerated. The Babinski sign was present on this side. There was also a paresis of the lower distribution of the left seventh nerve, and a paralysis of the left abducens and the left fifth nerve, both in its motor and sensory distribution. Optic neuritis was present in both eyes.

On protruding her tongue she had a clonic to and fro movement which became apparent on talking or moving the tongue. She became steadily worse and finally was comatose. The urine examination was negative. She rallied, however, her symptoms steadily disappeared and she was discharged from the hospital four months afterwards, the only remaining symptom being a dimness of vision.

These two cases are similar to those recorded by Nonne. No adequate explanation for them can be given.

Lesions of the Cerebellum Without Symptoms.—These lesions may be either congenital, acquired early in life, or may be tumors. It is not surprising that injuries to the cerebellum early in life or that tumors of slow development which occur in the same period give no appreciable symptoms, because the functions of the cerebellum in such cases have probably been assumed by other parts of the brain. Lesions of the lateral lobes of the cerebellum are less liable to cause symptoms than when they implicate the

entire cerebellum. Spiller recorded three cases of lesion of the cerebellum in which there were no symptoms, and he also reviewed the literature upon this subject. In his first case one cerebellar lobe was smaller than the other, and it was sclerotic. In the second case there was a tumor upon the corpora quadrigemina in which the lateral lobe of the cerebellum was compressed. The third was one of tumor within the vermis.

Cases are recorded in which tubercles involved an entire lateral lobe and gliomata and cysts occupied the middle lobe, and yet there were no symptoms. Oppenheim refers to a case of Putnam's, where the only symptom for years was an optic nerve atrophy, in which at necropsy a cyst of the cerebellum was found. He also refers to Bramwell's case, where in a thoroughly studied case no symptoms were apparent, while at necropsy four tumors were found.

It can readily be understood why symptoms may not be apparent in a gliomatous tumor, because of its infiltrating character, and in tubercles, in which the axis cylinders are retained; but it is difficult to explain the absence of symptoms in the other instances.

The notes of the case of cerebellopontile tumor, as shown in the illustration, Fig. 3, and Case II of this paper, were furnished by Dr. Mills. The patient was seen by Dr. Mills in consultation with Dr. W. W. Keen; she was also examined in consultation by Dr. W. G. Spiller. The tumor sprang from the eighth nerve, and the chief focal symptoms were one sided deafness, tinnitus, facial monospasm, hypæsthesia of one side of the face, nystagmoid movements, slight paresis of right abducens, and vasomotor and cardiac disturbances. Severe headache, nausea, vomiting, and optic neuritis were also present.

This patient was a married woman, 30 years of age, five of whose maternal relatives had died of cancer. Four years before coming under observation the ossicles of her left ear were removed, on account of an annoying tinnitus, but without the desired result. About one year later she began to suffer from severe headache. The next year slight optic neuritis was observed in both eyes, the neuritis going on to atrophy and blindness, which was complete in less than two years. Headache, nausea, vomiting, and depression were recurring symptoms, and taste and smell were impaired. During two or three years she was treated for various complaints as anæmia and neurasthenia, and both Graves's disease and interstitial nephritis were suspected. About six months before coming under observation she had a convulsion with loss of consciousness, this being followed by several others of a similar kind.

The patient was having at somewhat frequent intervals attacks beginning with pain in the head, which was referred to the forehead and eyes. In these she became nauseated and then vomited, becoming pale or even cyanosed, with loss of consciousness. The vomiting was preceded or accompanied by marked facial monospasm, in which the mouth was drawn forcibly to the left and the eyelids were drawn together. Only the left side of the face was involved in the seizure. Examination showed that she had no ataxia of station or gait. Hearing on the right side was good, on the left side it was abolished. The mouth deviated slightly to the left when opened widely. Hypæsthesia to pain was present on the left side of the face and head, and sometimes appeared to be present in the left hand. The patient was not mentally impaired, but was easily exhausted mentally, and was at times irritable and depressed as the result of her sufferings. During the time she was under observation she had frequently recurring headaches, usually severe, sometimes accompanied with nausea or even vomiting, and sometimes with the facial spasm already described. Irregular nystagmoid movements occurred when the patient turned the eyeballs to the extreme right or left. She had complete loss of smell, and loss of taste on the left side of the tongue. On one occasion it was thought that the facial spasm was accompanied by some spasmodic movements of the left hand, but this was doubtful, and even the observer thought it may have been a voluntary movement.

The question of the existence of exophthalmic goitre was one which arose for diagnostic discussion several times during the history of this case. The diagnosis of this affection was first made a year or two before coming under our observation. It was also considered and favorably regarded by some of those who saw her in consultation late in the case. Her eyes had somewhat the staring expression of the blind; they were rather large, but her relatives stated that she had always had prominent eyes, and the exophthalmos was apparent rather than real. The enlargement of the thyroid was so doubtful as to cause some disagreement among those who examined her as to its existence. A slight enlargement of the gland on one side seemed sometimes to be present. Her pulse frequently, perhaps usually, was between 100 and 110, and sometimes rose above the latter point. It was a pulse such as is not infrequently seen in the late stages of an exhaustive intracranial disease. Graves's disease was finally excluded. In the light of the post mortem findings, it is not improbable that some of the symptoms simulating this affection were due to the tumor, from its position, causing vasomotor and cardiac disturbances.

Ocular and ophthalmoscopic examinations were made by Dr. W. C. Posey, who reported as follows: Ocular movements good in all directions, except externally to the right, where there is a slight limitation of movement, the right eye not being brought as far as normal into the external canthus. On fixation in the median line, and below, the eyeballs are quiet. Marked lat-

eral nystagmic movements appear, however, as soon as the eyes leave these primary positions, the nystagmus being most marked on extreme outward rotation to the right and to the left. The pupil in the right eye is round, and is 5 mm. in size; that in the left eye is oval, 3 by 4 mm., with its long axis at 50°. The irides do not respond to light or accommodation stimuli. The ophthalmoscopic examination reveals clear media in each eye, with the signs of regressive optic neuritis. The swelling of the nerves, however, is still very marked, both papillæ projecting into the fundi to the extent of 2 or 3 mm. The nerves are gray and succulent looking, and the retinal arteries and veins are tortuous and cord like. One nerve is not more swollen than the other. There are no extravasations or hæmorrhages, or traces of either of these in the fundi. The patient is totally blind.

Other examinations were made by Dr. Posey, but they did not demonstrate anything different from what is above recorded.

Eventually an operation was performed in this case by Dr. W. W. Keen, by whom the patient was seen in consultation with Dr. Mills. Although a tumor at the base was considered, it was thought for several reasons that lesion was probably in or beneath the facial centre. In the first place sufficient consideration was not given to the tinnitus and deafness. Owing to the fact that a peripheral operation had been performed early for the relief of the latter, it was supposed that the impairment and disturbance of hearing were due to causes which were at least in part peripheral. The facial monospasm was much like that which is observed in the case of subcortical or cortical growth. It is interesting to note that some disease of the cortex was present at the position of the trephining, as demonstrated at the necropsy, but no tumor was found here. The patient died a few hours after the operation.

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THE DIAGNOSIS OF TUMORS OF THE CEREBELLUM AND THE CEREBELLOPONTILE ANGLE, ESPECIALLY WITH REFERENCE TO THEIR SURGICAL REMOVAL.

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(Concluded from page 270.)

CASES ILLUSTRATING PAPERS OF DR. MILLS AND DR. FRAZIER.

CASE I.—Tumor of the left lateral lobe of the cerebellum; operation; recovery.

L. P., white, single, aged twenty-three years, was admitted to the Hospital of the University of Pennsylvania December 7, 1903. Her family history was negative. She was strong and well until the beginning of the illness, which brought her to the hospital.

In February, 1903, she began to have severe headaches with attacks characterized by vertigo, especially when standing and walking, but occasionally when lying down. She also at times early in the attack had a series of visual and ocular phenomena, including temporary hemianopsia; scotoma either early or late; light flashes sometimes lasting throughout an attack; subjective images, especially about the time of her coming to the hospital, when she saw dogs, cats, mice, bugs, spiders, etc.; and diplopia in which one image would be in advance of the other, this being especially constant in the left eye. Nausea preceded, accompanied, or came on late in the attack. Vomiting generally appeared late in the attack and gave the patient some relief.

Her headache was located in the forehead or at the base, or more commonly in both regions at the same time. From February, 1903, to September, 1903, the patient had suffered from these attacks once every five days, with the exception of two weeks in July. About the middle of August, 1903, and in October, 1903, her gait became staggering. During the latter part of November up to the time of admission to the hospital she had been unable to walk more than a few steps without support. Since August, 1903, the headaches had been more or less constant. On admission to the hospital she complained especially of nausea and of severe frontal headache, of pain in the back of her head and neck, and in her back. This patient was admitted to the University Hospital under the care of Dr. J. D. Steele, and was later transferred to the service of Dr. Mills. Careful examinations were made by Dr. Steele, but with negative results, except as regards her nervous system, and the existence of patches of brown

pigmentation over the entire body. Examinations of both urine and blood were negative.

Later repeated examinations were made by Dr. Mills and also by Dr. Spiller in consultation. The results of these examinations can be summarized, as but little change took place until the time of operation, except for the worse as regards particular symptoms, like optic neuritis, headache, nausea, and ataxia. The patient exhibited marked ataxia of station. The incoordination in standing was usually not increased by closing the eyes. Numerous examinations showed a tendency of the patient to deviate, pitch, or fall to the left in standing and walking; exceptionally the tendency was in the other direction. Testing the extremities separately, fairly marked ataxia was present on the left, and to a slighter extent on the right. On several examinations the patient showed distinct asynergia in the left lower extremity. The symptom was not, however, uniformly present, and on at least one occasion some asynergia seemed to be present in the right. The Babinski response was present on the right; both knee jerks were absent and the tendon and muscle jerks in the upper and lower extremities were generally depressed. Apparently the movements of both external straight muscles were at times impaired, although the report of Dr. de Schweinitz showed abducens weakness only on the left. On the negative side nystagmus was absent, as were also involvement of the fifth, seventh, or other cranial nerves, and of disturbances of sensation. The patient continued to suffer greatly from headache, vertigo, nausea, and vomiting, the optic neuritis increasing and becoming of the highest grade.

Eye examinations were made by Dr. G. E. de Schweinitz, who reported as follows: December 8, 1903, the vision of each eye equals hand movements. The pupils react sluggishly to light and convergence. There is a history of diplopia and there probably is paresis of the left external rectus, but the double images cannot be elicited, and this is inferred only from the failure of rotation in the line of the direction of the action of the left externus. The ophthalmoscope reveals the following conditions: in the right eye there is a high grade of papillitis (choked disc), the apex of the swelling being 7 D. It is intensely injected, and the sloping margins of the elevation are thickly infiltrated with hæmorrhages. In the left eye there is an exactly similar condition, and in addition a typical macular figure resembling that seen in albuminuric retinitis. Careful testing of the visual field indicates that while it is contracted there is no hemianopic defect.

December 17, 1903, Dr. Frazier operated. An incision was made, following and a little above the superior curved line from the mastoid process to the occipital protuberance, and thence downwards in the median line for a distance of 4 cm. The opening in the skull was made with the chisel and enlarged with the rongeur forceps. The dura was normal in appearance and seemed thinner than usual, and seemed unusually tense. A dural flap was reflected and the surface of the hemisphere inspected. Failing to determine the

presence of a tumor by the sense of sight or touch, an incision was made in the left cerebellar hemisphere, which revealed a small encapsulated tumor of about the size of a hazelnut; the tumor was easily shelled out. The protrusion of the cerebellar tissue was so great that it was necessary to remove, in addition, about one fourth of the cerebellar hemisphere in order to be able to close the dural wound. The patient reacted promptly from the operation, and convalescence was uninterrupted.

The following reports were made by Dr. de Schweinitz after the operation:

December 20, 1903.—The changes evident to the ophthalmoscope are almost exactly those which have been recorded, with the exception of some fresh hæmorrhages which have appeared on the nasal halves of the swollen nerve heads.

January 4, 1904.—The ophthalmoscopic appearances noted by Dr. Shumway are double optic neuritis, plus 6 D. The vision of the right eye is doubtful light perception. The left eye is absolutely blind. A repetition of his examination on the following day by Dr. de Schweinitz confirmed the observations. No changes were noted at the next examination, on the 7th of January.

Examination, January 17, 1904.—There is marked subsidence of the swelling of the discs, the apices of which are not more than 3 D., and the edges of the disc margins are beginning to appear. The macular figure noted before is very marked, and is now evident in both eyes. The retinal vessels are beginning to shrink and atrophy is rapidly supervening. There is no light perception. This examination was repeated on January 25th, with practically the same results, possibly still further diminution of the swelling of the discs. Some weeks later, after the patient was dismissed from the hospital, the ordinary signs of postneuritic atrophy were present. The eyes were divergent, the pupils large and not responding to light.

This patient who presented the typical symptoms of a tumor involving in large part one lateral lobe of the cerebellum, and therefore one of the most desirable cases for operation, was greatly benefited so far as the focal symptoms of a cerebellar tumor and the general symptoms of an intracranial growth were concerned. Her headache, nausea, vomiting, and vertigo disappeared in spite of her almost total blindness; her ataxia was also almost entirely relieved. The optic neuritis had advanced to such a degree, even before she was admitted to the hospital, that operation did not save her from blindness, although surgical procedure was adopted about ten days from the time of her admission.

CASE II.—Tumor of left lateral lobe of the cerebellum; operation; recovery; relapse.

F. M., ten years old, was referred to the University Hospital by Dr. D. J. McCarthy, with a diagnosis of tumor of the cerebellum, and was admitted to the wards of Dr. Frazier, March 7, 1904. After admission to the hospital he was seen in consultation by Dr. William G. Spiller and also by Dr. Mills.

One point of interest in the family history was

the fact that one brother of the patient had some pulmonary disease, chronic in character. The patient, up to the time of his present illness, had been a healthy child, had gone to school at the age of six years, and had been able to keep up with his classmates.

Toward the end of December, 1903, the mother noticed that the boy was not as lively as before, and that he stayed in the house in preference to going out of doors. She took him to the Episcopal Hospital, where he was treated for a cough. At this time he had lost some weight and was generally run down in health. After treatment he improved, gaining weight, but he was unsteady in walking.

About the middle of January, 1904, the boy began to suffer from severe headaches, apparently causeless, these being accompanied by vertigo. At this time the patient held his head up straight and avoided stooping, fearing increased dizziness. During two or three weeks vomiting had been added to his other symptoms, this occurring two or three times a week. Evacuation of the contents of the stomach did not bring relief.

At about the time of his admission it was noted that he had not had any convulsions, that his hearing was unaffected, that he had not complained of interference with vision, that a gradually increasing ataxia was present, and also that his headache, vertigo, and vomiting were augmenting.

The analysis of his urine showed no albumin, casts, or sugar, and a specific gravity of 1.018, the examination being practically negative.

Examination showed that his mental state was distinctly that of lassitude; he was drowsy, took little notice of his surroundings, and manifested when examined, a degree of impatience which was almost irritation. General physical examination of heart, stomach, and other viscera showed nothing of special importance, except of the lungs as given below.

The respiratory excursions were of fair amplitude, apparently equal on both sides. The percussion note showed an impairment over the left apex down to the third rib. Over this area faint crepitant râles were heard on inspiration. Expiration was prolonged, somewhat blowing. Fremitus, both local and tactile, were slightly increased. Various examinations showed ataxia, this present to some extent in the upper extremities as well as markedly present in the lower. No Romberg sign was noted. The examination by Dr. Spiller given below covers, however, the important points in his neurological symptomatology. His pupils were dilated and there was a suggestion of photophobia.

The patient complained of severe headache, locating the pain in the frontoparietal region. Tapping with the finger elicited pain all over the head, this being especially marked over the temporo-parietal portion on the left. No scars or other evidences of injury were discovered.

Shortly after admission while suffering from severe headache, the patient's pulse became exceedingly irregular, both as to volume and rhythm, and its rate was greatly decreased and weakened.

Eye examination of the patient was made by Dr. G. E. de Schweinitz and Dr. John T. Carpenter. The examination made March 8th showed the following: V. of O. D. $\frac{6}{75}$, of O. S. $\frac{6}{75}$. The amplitude of accommodation of each eye is 12 D. The pupils are round and the irides react promptly to light and accommodation and convergence. With the exception of a slight esophoria, there is no defect of muscle balance and no diplopia. The ophthalmoscope reveals the following conditions: Right eye papillitis (choked disc), the apex of the swelling being 4 D., the vessels on the surface of the disc $1\frac{1}{2}$ D. higher. The nerve edges are entirely obscured. The surrounding retina is not involved. In the left eye there is an exactly similar swelling of the disc, with the exception that its nasal edge is more involved. There is a moderate concentric contraction of each visual field, more marked upon the left than upon the right side.

Examination by Dr. Spiller on March 9th showed the following: The tenderness of the scalp to percussion formerly noted had disappeared. He held his head retracted, because he said it caused him pain to hold it straight. There was no distinct rigidity of his neck; movements of the head were free in all directions; passive movements caused headache. The movements of the eyeball were free in all directions; some nystagmoid movements were present when looking to the extreme right or left. The fifth and seventh nerves were not involved on either side. The tongue showed a slight tendency to deviate to the right when protruded; no distinct fibrillary tremors of the tongue were noted.

The grasp of each hand was fair and equal on both sides. The finger to nose test did not reveal distinct ataxia. The upper limbs were slightly but not distinctly atrophied. The biceps, triceps, and wrist reflexes were not distinct on either side. The voluntary movements of the upper limbs were normal. There was no loss of sensation to touch or pain. The muscles of the trunk were fairly well developed.

The voluntary movements of the lower limbs showed normal muscular power and no wasting. The patellar reflex was lost on both sides; even when sitting on the edge of the bed with reinforcement there was no response. The Achilles jerk was not present on either side; the Babinski reflex could not be obtained on either side; there was no ankle clonus. The heel to knee test did not reveal ataxia. Sensation for touch and pain was normal. At the time of this examination the gait was not ataxic with eyes open; it was slightly so when the eyes were closed. There was no sway when standing erect, either with the eyes open or closed. No hemiasynergia was present on either side; Koenig's sign was also absent on both sides. The operation was performed by Dr. Frazier on March 13, 1904. The bone overlying the left lobe of the cerebellum was very thin and the dura was unusually tense. Immediately after the dura was opened the hemisphere protruded to a much greater degree than usual. No adhesions were found either between the skull and dura or between the dura and cerebellum. The latter did not pulsate. A thorough exploration of the left

hemisphere failed to reveal the presence of a tumor. As a palliative procedure one third of the cerebellar hemisphere was removed. The patient's condition immediately after the operation caused some anxiety, but after intravenous injection and mild stimulation the patient improved rapidly and spent a comfortable night. The wound healed by first intention. On March 27th the patient's condition was noted as being greatly improved. His whole disposition had changed; he was bright and cheerful and complained neither of headache nor vomiting.

In November, 1904, the patient returned to the hospital, because of recurrence of some of the symptoms. On the following day an incision was made, following the line of the old cicatrix, and an infiltrating tumor of about the size of a walnut was found in the hemisphere, apparently taking its origin from some point near the cerebellopontile angle. The patient reacted promptly after the operation, the wound healed by first intention throughout, and convalescence was uninterrupted. The tumor was a glioma. After the notes of the case were sent to the press the patient relapsed, showing that the growth was probably infiltrating and had not been fully removed.

Eye examination made after the operation by Dr. G. E. de Schweinitz and Dr. J. T. Carpenter, March 14th. The condition of the right disc is unchanged. On the left side there has been a subsidence of the swelling, which is now 3 D. in place of 4 or 4½ D.

CASE III.—Tumor of the cerebellum, probably of the vermis and left lateral lobe; operation; tumor not found; recovery from operation, with relief of symptoms.

J. H., forty-one years old, was admitted to the University Hospital March 6, 1902, under the care of Dr. Mills and Dr. Frazier. No history of nervous or tuberculous disease or of tumor could be ascertained, but an aunt had suffered from cancer of the face, probably dying from this affection. The patient denied syphilis.

About two years before admission to the hospital he began to have headache, most marked behind the eyes and in the temporal regions. His sight also began to fail at this time, and his gait became unsteady, he tending to totter or fall to the right side. His headache improved under treatment, but his sight and gait remained the same.

In May, 1901, he had a crisis of vomiting, which lasted for about a week; he vomited almost daily, immediately after eating, there being little retching or straining accompanying the vomiting. The left leg at this time seemed weaker than the right. His bowels were constipated, and were moved by laxatives daily for two years before he came to the hospital. He had no pain in the anus or in the legs. He was not paralyzed and had no vesical symptoms. There was no history of vertigo; his hearing was not disturbed and his memory was good. On rising in the morning he had on a few occasions attacks of faintness or weakness, but he had never lost consciousness.

Examination of the urine two days after admission to the hospital was negative.

Several examinations of this patient, made by Dr. Mills and Dr. Spiller shortly after admission, gave the following results: Vertical nystagmus was present when the eyes were at rest or when they looked upward or downward, the nystagmus becoming lateral when the eyes were turned to the right or left. The patient in walking took short, unequal steps, showing a lack of confidence; at times he exhibited a tendency to go to the right. In standing the feet were kept wide apart, as he swayed greatly and would have fallen if not supported when the feet were together. The sway was not distinctly increased by closure of the eyes. Ataxia was present in the left upper extremity, and doubtfully in the right. Speech and mental response were both slow. The tongue was protruded straight and without fibrillary tremor. The knee jerks were prompt, the left distinctly exaggerated. The Achilles jerk was present on each side. Ankle clonus was not present on the right, but was slightly indicated on the left. The Babinski reflex was not present on either side, the movement of the toes being that of slight flexion on both sides.

An eye-examination was made by Dr. Howard Mellor, March 7th, the date of his admission. Visual acuity and the amplitude of accommodation were not recorded. He reported the following: The pupils are equal in size and the irides react promptly to light and in convergence. The ophthalmoscope reveals the following conditions: A low grade neuritis with involvement of the surrounding retina (neuroretinitis), which is most marked in the left eye. There is very distinct vertical nystagmus when the patient looks directly forward, and extremely marked lateral nystagmus on looking to either side. When the gaze is directed upwards or downwards, the vertical nystagmus increases. The rotations of the eyeballs are normal in all directions.

The patient left the hospital and was readmitted on October 9, 1902. His difficulty in walking had gradually increased until he was able to walk only a few steps with a cane, and at times he fell. When assisted he walked by raising the leg and foot high, and bringing it down heavily. His feet were always wide apart. Ataxia was marked. He had not vomited since leaving the hospital. The nystagmus was the same as on the first admission. A twitch of the orbicular muscle in the left eye was noticeable at times. He could hear a watch at three feet, on the right side, on the left he could hear it at a distance of two inches. He had no tinnitus or other abnormal sounds. He complained of no trouble with the bladder or rectum. He had no astereognosis.

Examination by Dr. de Schweinitz, October 9, 1902.—V. of O. D. $\frac{1}{22}$, of O. S. $\frac{1}{22}$. The patient reads J. 2 at 33 cm. with each eye. The pupils are equal and respond promptly to light and convergence. The nystagmus recorded in the previous examination continues unchanged. The ophthalmoscope reveals the following conditions: The right optic nerve is beginning to be atrophic, the vessels being reduced in calibre, and there is an area of atrophy of the chorioid surrounding the nerve head. In the left eye a moderate neuritis with indications of beginning atrophy is evident.

No atrophy, rigidity, contractures, or spasticity was present in the lower extremities on either side. Late in the case the muscles of mastication were normal on the right, and distinctly weak, although not paralyzed fully, on the left. When the mouth was opened the jaw tended to go slightly toward the left. Sensation was unimpaired everywhere. No hemiasynergia was present on either side.

The prominent symptoms in this case just before the operation were secondary optic atrophy, headache and vomiting, nystagmus, cerebellar gait, exaggerated reflexes, deafness on the left side, weakness of the left motor fifth, and probably some weakness of the soft palate on the left side.

October 25, 1902, the patient was operated upon by Dr. Frazier. Upon the left side of the head a horseshoe-shaped flap was reflected, the incision beginning at the tip of the mastoid process following the superior curved line, and terminating in the median line of the neck, opposite the spinous process of the second cervical vertebra. The skull was opened as usual with a chisel and mallet, and the opening enlarged with a rongeur forceps. There was an escape of a moderate amount of cerebrospinal fluid. Inspection and palpation of the cerebellar hemisphere revealed no abnormality. There was no thickening of the meninges, no alteration in color or consistency of the cerebellar tissue. It was deemed inadvisable to make any further inspection and the wound was closed. The patient recovered from the effects of the operation, and declined any other intervention, although Dr. Mills and Dr. Frazier advised an exploratory operation upon the opposite side.

CASE IV.—Tumor of the cerebellum or cerebellopontile angle; tumor not found, but lateral lobe partly excised with great benefit.

G. E., twenty-three years of age, was referred to Dr. Mills for opinion and treatment. When the patient presented himself to the hospital he was suffering from most distressing headache, which was almost constant, and from vertigo and ataxia, to such an extent that it was impossible for him to walk alone or without support. Nor could he even stand alone, unless leaning against some stationary object. His vision was so affected that he could not see gross objects, and examination of his eye grounds revealed the presence of very marked choked discs and optic neuritis.

The patient was suffering to such an extent that it did not seem justifiable to postpone operation for further and more elaborate study of the case. Accordingly within a week of his admission to the hospital a left cerebellar craniectomy was performed by Dr. Frazier. The dura was noted to be unusually tense, and upon reflecting the dural flap a considerable portion of the cerebellar hemisphere protruded through the opening. It was found to be almost impossible on account of the protrusion of cerebellar tissue to make further exploration, so the operator proceeded to remove from one third to one half of

the lateral lobe. After this was accomplished exploration was continued, but to no avail. No tumor could be seen or be felt in any portion of the left cerebellar fossa. The postoperative record of this patient is one of unusual interest, because of the remarkably rapid improvement which followed. Within one week of the operation the patient's headache had entirely disappeared, his vision was restored so that he could see minute objects on the ceiling as he lay in bed, and his vertigo and ataxia had almost entirely disappeared. At no time during the convalescing period was the patient's condition such as to give any concern. He was kept under observation in the hospital for a period of two months, and inasmuch as there was not the slightest return of symptoms he was allowed to go home with the understanding that he would return to the hospital if any of his cerebellar symptoms recurred.

CASE V.—Tumor probably of the cerebellum involving the vermis and right lateral lobe; operation in two stages planned; death from hemorrhage from bony sinuses twelve hours after first operation.

J. C., fifteen years old, was referred by Dr. Samuel Freeman and Dr. Frank V. Cantwell, of Trenton, N. J., to Dr. Mills for opinion and treatment. He had a history that fifteen months before coming under observation he had begun to suffer with headache, this having been preceded by dizziness; he also began to suffer from vomiting six months before, and exhibited a staggering gait one month later. The attacks of headache, dizziness and nausea and vomiting increased in frequency and in severity, and the uncertainty of gait became steadily more and more marked.

When the patient was first examined it was found that he was suffering intensely from headache, which was almost continuous, while his dizziness, nausea, and vomiting were of frequent occurrence.

The eye examination made by Dr. G. E. de Schweinitz, July 5, 1904, resulted as follows: V. of O. D. $\frac{4}{8}$, of O. S. $\frac{4}{8}$. Amplitude of accommodation markedly defective, the patient being able to read only D. = 1 at 18 cm. The pupils are large, but their reactions are normal. There is paresis of the left external rectus muscle, and lateral nystagmus develops, when the eyes are directed to the left, that is to say, in *lævo*version. The ophthalmoscope reveals the following conditions: In the right eye papillitis, the apex of the swelling being 3 D. It is vascular in the extreme, but the centre of the disc is not markedly filled in. The veins are full and carry very dark-colored blood. There is no macular figure. In the left eye the papillitis is greater than on the opposite side, the apex of the swelling being 5 D. with decided engorgement, and the appearance to which the name choked disc is ordinarily given. The veins are even fuller and darker than upon the other side. The peripheral visual field for form of each eye is normal. There are no scotomas.

Comment.—The double optic neuritis (choked disc), together with paresis of the left external

rectus muscle and lateral nystagmus, especially when the eyes are directed towards the left, are ocular signs frequently seen in cerebellar diseases.

At one examination it was noted that in standing or walking the patient was markedly ataxic and asthenic, always tending to the right, and that ataxia, less marked, was present also in the upper extremities as determined by having him touch his nose with the finger and in other ways. This ataxia was doubtfully more marked on the right. Hemiasynergia was not present.

His mental condition was good, except in so far as he was irritated, depressed and worried by the pain.

His muscles were flaccid and atonic. There was no distinct paralysis of the extremities, but his head showed some tendency to drop backwards, especially when he would look upward. This was probably due to weakness of the supporting muscles of the neck.

At a second examination a few days later it was noticed that he swayed markedly to the right, standing with eyes shut and considerably with eyes open. He invariably staggered or tended to the right in walking, his gait being somewhat titubating. There was some ataxia in both arms, possibly a little more on the right. No hemiasynergia was present. Tremor was marked in both upper extremities, a little more so on the left; it was coarse, jerky and increased by action. The muscular sense was preserved, as was also stereognostic perception. The right side of the face was apparently hypæsthetic, as were also the arm and leg of the same side. This symptom, however, seemed variable or doubtful, as the patient did not always answer in the same way as regards the impression made. The head was not carried towards either shoulder, but, as stated above, sometimes it had a tendency to droop or fall backwards. Both knee jerks were plus. The Babinski response was absent on each side. Incontinence of urine or feces was not present.

Paresis of the left external rectus, with nystagmoid movements when the eyes are turned far to the left, was present; no such movements were shown when the head was turned to the right upwards or downwards. When the patient followed the finger with his eyeballs von Graefe's sign was very distinct. About $\frac{1}{8}$ inch and possibly even more of the white of the eyeball was seen between the iris and the upper lid on each side.

The knee jerks were slightly plus; the ankle jerks about normal; the muscle jerks a little below normal. The tongue was protruded straight and was not atrophied. It exhibited no fibrillary tremor.

Speech was a little peculiar, but the patient said that it had always been the same as it was at this time.

According to Dr. B. A. Randall's report, the patient had nearly normal ears in appearance and function with possibly a trace of tympanic reduction of hearing; the auditory nerves seemed to be in perfect condition.

There was no thyroid or other glandular enlargement of the neck. The thorax was small, narrow, and poorly shaped and developed; the supraclavicular and infraclavicular spaces were prominent; the expansion was poor. In front and back of the lungs the breath sounds were clear but faint. The action of the heart was regular; there were no murmurs. The abdomen was flat.

The patient came under observation July 6, 1904, and was admitted the same day to the University Hospital, where he was seen by Dr. Spiller in consultation with Dr. Mills. The diagnosis of tumor of the cerebellum probably involving the right lateral lobe, was made.

The operation was performed by Dr. Frazier July 9, 1904, with the object of exposing the right lateral lobe of the cerebellum. The usual incision was made and the skull opened in the customary way. Upon reflection of the musculocutaneous flap, two large anomalous sinuses were exposed, making their exit at a point about 2 cm. from the occipital protuberance and a little below the superior curved line. The blood poured out from these sinuses in great quantities, and every attempt which was made to control the hemorrhage by pressure, Horsley's wax, etc., failed, until some small plugs of wood, made from swab sticks, were driven into the bone. By this time the patient had lost considerable amount of blood, and was evidently suffering from its effect. Stimulation was resorted to; a hypodermic of strychnine was given and a pint of 1 to 50,000 adrenalin salt solution was administered intravenously. By this time the blood pressure had fallen to 55, and for the next fifteen minutes remained at 50. It then fell to a point too low to estimate, and another pint of 1 to 50,000 adrenalin salt solution was given intravenously. In twenty-five minutes the blood pressure rose to 100, and the adrenalin was discontinued. The blood pressure began to fall again and resort was had again to intravenous injections of adrenalin. Owing to the excessive hemorrhage it was decided to postpone the actual exploration for the tumor until the patient had fully reacted. The operation was performed at 2 p. m., and from that on to 1 a. m. on the following morning the patient's condition gradually improved. At 1 a. m. his pulse was only 96 and of fair volume. His color good and his respirations were 15. At 1.15 a. m. his pulse was 98, and his respirations were 14. At 1.30 a. m. his condition was reported as unchanged, with the exception that his respirations had dropped to 11. At 1.40 a. m., without any warning, the pulse suddenly shot up to 120, respirations dropped to four. The patient became cyanotic and died at 1.45 a. m. No autopsy was permitted.

It is difficult to account for the death of this patient. One can hardly attribute it to the excessive hemorrhage at the time of the operation, although this may have been a contributory cause. The condition of the pulse and blood pressure showed that the patient had almost fully reacted soon after the operation. The slow respiratory rate suggests the possibility of an in-

jury to the respiratory centre, although this would hardly have been inflicted by any step in the operation, inasmuch as no attempt was made to explore the cerebellar fossa.

CASE VI.—Cerebellopontile operation for tumor of pons; probable second lesion in parietal lobe; cyst evacuated; permanent disappearance of severe headache and facial neuralgia.

This patient, a woman, about forty-five years old, first came under the care of Dr. Mills in November, 1902. One year before coming under observation she had an attack of vertigo without unconsciousness and after this partial paralysis of the left third nerve was observed, ptosis, dilated pupil and paresis of the internal rectus being present, according to the physician then in attendance. She also appeared from the history to have had temporary paralysis of the left side of the face. She had subsequent similar attacks, some of these shortly before coming under observation. In one of the recent seizures she was found in the cellar, pacing up and down with her hands above her head, eyes dilated and apparently struggling against suffocation. She was taken upstairs and put to bed; she tried to speak, moving her jaws without uttering any sound; her face was pale, her eyes were open. At the time of the first examinations she had paresis of the left side of the face, partial ptosis, pupils equal and responsive, the superior rectus not being as active on the left side as on the right.

In the fall of 1902 the patient was under the care of Dr. Mills in a private hospital. During this period her chief symptoms were occasional headache, general nervousness, and at times slight mental confusion. The partial palsies of the third and seventh nerves as above noted were present.

In the summer of 1903 she went to a mountain resort, and while there she had an attack of convulsions, after which she had partial paralysis in the right half of the body. The physician called in to see the patient because of the attack of spasm, wrote to me as follows regarding his observations:

"When I saw the patient she was in a semi-comatose state, and from superficial observation and the history given I thought that I had a hysterical condition. A dose of potassium bromide aroused her from the stupor following the convulsions, which, with the stupor, had lasted eight or ten hours. The spasms had not been especially pronounced, and had subsided some three hours previous, with the exception of some twitching around the mouth. From the account given, the contractions were alike on each side, and at the time of my visit no paralysis was present, although it was stated that at some previous time she had had left-sided paralysis, but not in this attack. Mentally she was unbalanced. She seemed to grasp the purport of a question, but generally gave meaningless answers. She was hunting for some imaginary thing which she had lost, and every moment or two earnestly asked the time of day. On attempting to arise in the morning, she fell from the bed, prone, evidently the commencement of

her convulsive attack. Inquiry elicited the fact that there had been some previous brain lesion, which I could not definitely locate, but the knowledge of which, with the other symptoms, excluded the idea of hysteria."

When seen shortly after this, in addition to the symptoms already noted, she also showed some amnesia for names, and some mental change or weakening hard to describe and complained much of headache. Ophthalmoscopic examination made about this time by Dr. S. D. Risley showed no optic neuritis, but bad eye grounds, probably due to eye strain.

An eye examination was made by Dr. G. E. de Schweinitz on September 10, 1903, who reported as follows: V. of O. D. $\frac{5}{6}$, of O. S. $\frac{5}{6}$. Amplitude of accommodation, 4 D. The pupils are round and react normally to light, accommodation and convergence. There is slight ptosis of the left eye and paralysis of the left inferior rectus muscle. The ophthalmoscope reveals the following conditions: Both optic nerves are round, their nasal and upper edges being veiled. The central lymph sheaths are fuller than normal and the veins somewhat overdilated. This is particularly true of the lower temporal vein of the left side. The veiling of the disc edges is evident, as well by indirect as by direct method of ophthalmoscopy, and taken into consideration with the overcapillarity of the disc surface, may be regarded as indicating a congestion of the nerve heads. Actual neuritis is not present, as there is no swelling of the papillæ. The visual fields are normal.

The patient was examined by Dr. Mills, Dr. Dercum, and Dr. Spiller in consultation on September 11, 1903. Resistance to passive movements in the lower limbs was about equal. Knee jerks were much exaggerated on both sides; ankle clonus was easily obtained and persistent on the right; it was faint and not persistent on the left. Her station was erect and normal with eyes open. She swayed distinctly with eyes closed, the sway being greater towards the right. Her gait was a little uncertain, much more so with the eyes closed. She showed a slight tendency to drag the right foot as if it stuck to the floor. In walking backward with her eyes closed she put the left foot backward and drew the right foot to it. The Babinski reflex was doubtfully present on the right side, but was not obtained at all on the left, the toes responding by plantar flexion. When a pencil was laid lengthwise or crosswise on either foot she was unable to give the correct position; the position seemed to her usually as being across the toes. Touch was felt everywhere, but distinctly better in the upper and lower limbs on the left side and on the left side of the face than in the corresponding parts of the right side. Pain stimulus was felt everywhere, but like tactile sensation was more distinct in the left upper and lower limbs and left side of the face. Sensation for cold and heat was everywhere normal.

The grasp of the right hand was distinctly weaker than that of the left. The fingers of the right hand were kept partially flexed at the junc-

tion of the second and third phalanx, the thumb extended. She could fully extend the fingers, with the exception of the middle one. Apposing the thumb to the little finger on the right hand was very difficult. Triceps tendon jerks and wrist reflexes were exaggerated on each side, distinctly more so on the right than on the left. The palm of the right hand was a little puffy, but not distinctly cedematous. She could raise the right upper limb to the full extent above the head; resistance to passive movements was much impaired in the right upper limb. She experienced difficulty in placing the first finger of the right hand on the nose, usually carrying it to one side of the nose. She was uncertain as to the position of her little finger when it was raised, usually saying it was the ring finger; she knew the other fingers on the right hand when they were raised. Stereognostic perception was greatly impaired on the right hand and not on the left. She could not, for instance, recognize a knife, pencil, or other object in the right hand, but recognized them promptly in the left. The sense of position of the toes of both the right and the left foot seemed to be preserved. She exhibited a slight weakness in drawing up the right corner of her mouth, but drew the left side up better. She closed her eyelids firmly on each side, and wrinkled her forehead well and equally on the two sides. The tongue was protruded straight and showed fibrillary tremor. She said that her tongue had felt numb and stiff for two days before the examination. The masseters and temporals contracted firmly on each side. She heard a low ticking watch only when it approached to within about two inches of either ear, the hearing seeming to be the same in each ear. Sugar and salt were tasted promptly on each side of the tongue.

Dr. J. W. McConnell examined the patient on September 12, 1903, and reported that subsequent to the above examination she had an attack of twitching of the right arm and the right leg with unconsciousness. There were no changes from the examination of the previous day. She complained of intense pain in the left parietal region, and also said that she had some numbness in the left arm and leg.

After this she was seen from time to time by Dr. Mills, and on several occasions for him by Dr. T. H. Weisenburg, who made a few notes as follows: September 14, 1903. Paresis of the left internal rectus was present. Astereognosis was not present in the right hand, and the sense of position of the right hand was normal.

September 16, 1903.—She had a left-sided peripheral facial palsy, also a paresis of the left external rectus and of the internal rectus. No sensory changes were present on the left side.

The patient was again examined by Dr. Mills and Dr. Spiller on September 22, 1903. The left side of the face was paralyzed in the entire distribution of the seventh nerve. She complained of much pain, confined to the left side of the face and in the distribution of the fifth nerve. The masseter and temporal muscles contracted well in chewing on each side. No distinct objective disturbance of sensation on the left side of the

face was made out. The left external rectus seemed to be the only external ocular muscle distinctly paretic. Astereognosis in the right hand was almost complete.

She complained of much pain on both sides of the forehead, extending down the left side of the face to the lower border of the lower jaw. The pain did not extend below the median line of the lower jaw; it extended to the mastoid process, but not beyond this on the left side; it did not extend into the neck. She had constant pain in both temples, but it was greater in the left than in the right. All points of exit of the fifth nerve were painful to pressure; as much so on the right side as on the left. Sensation for touch and for pain on the two sides of the face seemed to be normal; she felt a touch or pin prick as well on the left side of the face as on the right. In such instances as when chewing a hard crust of bread, the left masseter contracted, but not so well as the right; in opening the mouth the lower jaw did not deviate distinctly. She complained of a sense of numbness in the left side of the face; this involved the entire distribution of the fifth nerve and extended up on the left to the temple, but not far beyond the border of the hair. There was considerable improvement in the paralysis of the orbicularis palpebrarum. There was complete paralysis in the lower distribution of the left facial nerve. The right side of the face was normal.

She did not have any nausea and seldom had spells of vertigo, although formerly the latter occurred frequently. She showed a tendency at times to fall backwards or towards the left, but did not stagger as much as formerly; closing the eyelids did not affect the gait very distinctly. Hemiasynergia was not present on either side.

As the patient was slowly getting worse and was suffering extremely with pain in her head and face, it was finally decided to remove her to the University Hospital for the purpose of having an operation, which might at least be palliative. Her pain increased until it became torturing, and for days before the operation it was necessary to keep her continuously under the effects of morphine or codeine. No change of any moment occurred in her focal symptoms after the above recorded notes.

The operation was performed by Dr. Frazier on October 14, 1903, under ether anesthesia. A musculocutaneous flap together with the periosteum was reflected and an opening was made in the skull with the chisel and enlarged with Rongeur forceps. Nothing abnormal as regards pulsation nor consistency of the left lateral lobe of the cerebellum was noted. The dural flap was reflected; at one point this flap was adherent to the underlying brain. Cerebellar tissue bulged only moderately through the wound. On exploring with the index finger in the region of the cerebellopontile angle some adhesions were separated on the lateral aspect of the cerebellum. This was followed by a gush of fluid which had evidently been walled off by adhesions. After the evacuation of the cyst the bulging subsided immediately and with a brain retractor it was

possible to inspect the region of the cerebello-pontile angle and to demonstrate to those present at the operation, the fifth, seventh, and eighth cranial nerves. It was noted on the blood pressure chart that when the dura was opened the blood pressure dropped thirty points, and that upon introducing gauze packing or upon compressing the brain with the retractor that the blood pressure rose forty points. The patient's condition was not depressed to any considerable degree by the operation; upon her return to bed her pulse was 145; respirations were 40, and blood pressure was 115.

The interesting feature of the case was the ease with which the cranial nerves were exposed after the cyst had been evacuated.

The patient reacted well after the operation and passed a fairly comfortable night. There was very profuse oozing of blood and cerebrospinal fluid, necessitating frequent reinforcement of dressing. The patient was much nauseated, vomiting curds of milk and bile stained fluid. She complained of pain in her temples. A hurried examination showed that sensation was present on both sides of the face and no inequality of pupil was noted.

On October 15th the wound was dressed; it was found in good condition; the drainage was removed; there was a free flow of cerebrospinal fluid.

An examination by Dr. Mills and Dr. Spiller on this date (October 15th) resulted as follows: No cutaneous anæsthesia was present on either side; not even any hypæsthesia on the left. There was great impairment of the motor division of the fifth nerve, the masseter and pterygoid muscles being tested. Complete paralysis in the muscles supplied by both the upper and lower branches of the seventh nerve was present. She was completely deaf in the left ear. Slight paralysis in the right upper extremity was noticed. Astereognosis or pseudoastereognosis was present in the right hand. Anæsthesia for both touch and pain and hyperæsthesia were absent. She had had no pain in the face or head since the operation, and had required no anodynes.

On October 19th the wound was again dressed and the stitches were removed; the wound was all healed, with the exception of one angle; a small piece of gauze was inserted for drainage. The patient's general condition had been very good. Her pupils were now normal.

On October 24th the surgical condition was entirely satisfactory; the wound was all healed, with the exception of one spot, which was rapidly granulating. The patient's general condition had rapidly improved since last noted. She was regaining strength, had been sitting up and was quite comfortable.

On October 29th the patient was discharged, the surgical condition left nothing to be desired; the wound was completely healed; there was no bulging of the flap, no signs of inflammation or edema of the scalp. The patient had not had any pain in the head or ears; the only discomfort had been some irritation of the conjunctiva of the left eye, which was probably due to facial palsy.

This patient has continued under the observation of Dr. Mills and Dr. Frazier from the time of operation until that of writing (December, 1904). From the time of operation until the present she has not had any pain in the head, although as previously stated, the pain for some time before the operation was of the most intense character. In other respects, her general condition has been good. She still, however, continues to be partially paralyzed with astereognosis and sensory changes on the right side, and still has paralysis in the distribution of the left seventh nerve. It is altogether probable that a lesion of some sort is still present; not improbably she has more than one lesion, as the symptoms point both to the pons and to the left parietal lobe. The case is especially interesting as showing how in some cases the cerebellopontile angle can be exposed and how pain and other symptoms of brain tumor are sometimes relieved even when full success is not obtained.

REMARKS UPON THE SURGICAL ASPECTS OF TUMORS OF THE CEREBELLUM.

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(Concluded from page 280.)

RESULTS.

To speak first of the results of the cases which have come under the author's observation: During the past twelve months, six patients have been subjected to operation at the University Hospital: five of them were patients of Dr. Mills, and one was a patient of Dr. McCarthy. The records of these cases appear below, but the results may be expressed briefly in the following table:

TABLE I. — CASES UNDER AUTHOR'S OBSERVATION DURING PAST TWELVE MONTHS.

Case 1.	Cranlectomy.	Tumor found and removed.	Recovery.
Case 2.	Cranlectomy.	Tumor found and removed.	Recovery.*
Case 3.	Unilateral cranlectomy.	Tumor not found.	Recovery from operation, without improvement. Patient would not consent to further exploration.
Case 4.	Cranlectomy.	Tumor not found; one-third of hemisphere removed.	Striking improvement. Restoration of vision, relieved of headache, vomiting, and vertigo.
Case 5.	Cranlectomy; 2 stage operation planned.	Dura not opened.	Death, sudden and unaccountable, twelve hours after first stage.
Case 6.	Cranlectomy.	Cyst found and evacuated.	Recovery from operation; great relief of headache and other symptoms.

* Since this writing there has been a recurrence of the growth.

Still further condensed the results were as follows: Of 6 cases: 1 died after first stage of operation; 2 recovered after removal of tumor; 1 relieved

after evacuation of cyst, no recurrence more than a year after operation; 1 considerably improved after palliative operation; 1 no-improvement; tumor not found.

My personal experience with this series of cases leads me to believe that the dangers attending cerebellar operations have been somewhat exaggerated. The present generation of surgeons has inherited the traditional fear of operations within the cranial cavity. It was not very long ago that operations upon the Gasserian ganglion were regarded as desperate undertakings, when it was a case of kill or cure, whereas at the present time the operation is undertaken with no especial concern except upon individuals, who on account of their advanced years might be unfavorable subjects for any major operation. And so it is with tumors of the brain generally and especially with regard to tumors of the cerebellum. Physicians put off the question of operation until the patient's condition becomes critical and the surgeon undertakes the operation with fear and reluctance. It was not so long ago that Oppenheim classed all tumors of the cerebellum as inoperable, but in the last editions of his book (1902) he frankly confesses that his opinion on this point is in need of revision.

The dangers and risk peculiar to this operation lie in the proximity of the medulla and pons to the field of operation and the traumatism to which they may be subjected in the course of the operation. It is on this account that stress has been laid upon the advisability of approaching the cerebellopontile angle from the lateral aspect in order not to injure these structures. In a case of Woolsey's previously referred to, the autopsy revealed a hæmorrhage in the pons which the operator attributed to the traumatism to which it was subjected while he was removing piecemeal a tumor of the auditory nerve. If in the fatal cases a careful examination of pons and medulla had been made we believe that in a majority some evidence of traumatism would have been found. *It is only in the avoidance of every possible source or degree of traumatism to these vital structures that surgeons can hope to obtain better results.* In this connection we refer again to the impunity with which a considerable portion of one cerebellar hemisphere can be removed, since by so doing the operator not only can explore and expose the tumor, but also remove it without the necessity of exerting undue traction or pressure directly or indirectly upon the pons. This of course applies especially to tumors that were not within the hemisphere.

We have been struck especially with the comparatively slight depression attending operations upon the cerebellum and with the rapidity with which reaction ensues. In one of our cases the pa-

tient lost a large quantity of blood in a very short time, but recovered promptly from the effects, after the administration of appropriate remedies. This patient died twelve hours after the operation suddenly and unexpectedly, but ten minutes before he died his general condition was reported as excellent. Our experiences, however, we believe to be exceptional, as there are recorded in literature many cases in which the patients died on the table or a few hours after the operation.

We have noted, however, that the gravity of the operation does not seem to have been affected by the act of removing the tumor; whether the operation was solely exploratory or palliative, or whether a tumor was removed, the effect upon the patient was the same.

STATISTICAL STUDY OF 116 CASES OF OPERATION UPON THE CEREBELLUM, COLLECTED BY FRAZIER.

The following statistics were compiled from the 116 cases of cerebellar tumors found in the appended table, pp. 334 to 337:

	Per cent.
Tumors found.....	45
Tumors not found.....	55
Removal with recovery.....	15
Removal with improvement.....	13.9
Removal without improvement.....	0.9
Improvement without removal.....	13.9
No improvement without removal.....	13.9
Death when tumor was removed.....	12.9
Death when tumor was not found and not removed.....	28.7

A COMPARISON OF THE STATISTICS OF SUCCESSIVE DATES, SHOWING AN INCREASE IN THE PERCENTAGE OF RECOVERIES AND IMPROVEMENTS, AND A REDUCTION IN THE MORTALITY.

Results.	Frazier's table.—1904. Per cent.	Duret's table.—1903. Per cent.	Oppenheim's table.—1902. Per cent.
Recovery	15	14	7.5
Improved	28	25	7.5
Unimproved	15	..	13
Mortality	42	60	71

A COMPARISON OF THE STATISTICS OF TOTAL NUMBER OF CASES IN FRAZIER'S COLLECTION WITH THE STATISTICS OF THE LAST FIVE YEARS, SHOWING A MANIFEST IMPROVEMENT IN THE RESULTS.

Results.	Total number of cases. Per cent.	Cases reported during past five years, 1899—1904. Per cent.
Recovery	15	24
Improved	28	28.5
Unimproved	15	11
Mortality	42	35.8

From a review of these tables one is struck at once with the progress that has been made in this field of surgery from every point of view. The percentage of tumors found is yearly growing larger, the percentage of partial or complete recoveries is larger and the mortality has fallen from 70 per cent. to 38 per cent. We believe that the results of surgical intervention upon the cerebellar hemisphere will continue to improve, if not generally, at least in the hands of those who are giving this subject especial thought and attention.

FRAZIER'S TABLE OF 116 CASES OF CEREBELLAR TUMORS IN WHICH OPERATIVE TREATMENT WAS RESORTED TO.

No.	Authors.	Age, Sex.	Nature and Position of Tumor.	Tumor Found or Not Found.	Results.
1	Albert. <i>Wien. med. Woch.</i> , 1895, No. 1.	39 years. M.	(Autopsy) Endothelioma of tentorium, penetrating left lobe	Not found.	Improvement. Death December 6th.
2	Annandale. <i>Edinburgh Hosp. Rep.</i> , 1895, p. 127.		Sarcoma of right lobe.	Removed	Improvement after two months.
3	Azais. Montpeller thesis, 1900-1901, No. 31.	37 years. M.	Sarcoma in substance on superior aspect.	Not found.	No relief, pain worse; death in two weeks.
4	Beck. Thèse de Paris, 1896, p. 221.	42 years. F.	(Operated on at the age of 27 for tumor of breast.) Carcinoma of pons.	Not found.	Death, third day after operation.
5	Bennett. <i>Lancet</i> , May, 1887, p. 768.	7 years. M.	Tubercle of right lobe.	Removed	Death from shock several hours after.
6	Von Bergmann. <i>Berl. klin. Woch.</i> , 38, p. 219.		Cyst	Removed.	Recovery.
7	V. Bergmann. <i>Deutsche Med.-Zeit.</i> , 1901.	1 years. F.	Cyst under tentorium, arising from gliomatous tumor.	Removed.	Recovery.
8	Devor-Ballance and Lunn. <i>Brain</i> , 1897.		Fibrosarcoma, anterior right cerebellum	Removed.	Recovery.
9	Birdsall. <i>Med. News</i> , 1837.		Spindle cell sarcoma, left side; medulla compressed	Not found.	Death after two months; metastasis into neck.
10	Borelius. <i>Neurol. Centralbl.</i> , 1897, p. 1063.	23 years. M.	Fibroma, size of goose egg in right fossa.	Not found; no distinct local symptoms	Death shortly after operation.
11	Bradford and Knapp. <i>Jour. of Ment. and Nerv. Dis.</i> , 1892, p. 97.	28 years. M.	Glioma of left lobe.	Not found.	Improvement as to headache; death several weeks later.
12	Brewer. <i>Med. News</i> , 1899, 26 years.	M.	Tumor, situated near median line	Removed	Improvement; recurrence; death in two months after second operation.
13	Bruce. <i>Edinburgh. Lancet</i> , 1899, p. 159.	34 years. M.	Central tumor, including pons and vermiform process.	Not found.	Sudden death three days later.
14	Bullard and Bradford. <i>Boston Med. and Surg. Journal</i> , 1891, I, 231.		Tubercle of cerebellum.	Not found.	Death during operation; hemorrhage from wound of superior longitudinal sinus.
15	Carracciolo. <i>R. Polichinico</i> Vol. IX, Fasc. 12.		Tumor of R. cerebellar lobe with compression and displacement of bulb.		
16	Chipault and Raymond. <i>Cliniques</i> , 1898, VIII Lesson	25 years. F.	Tumor (perhaps tubercle) probably situated inside and below left lobe.	Found, but not removed	Improvement; cerebral hernia; reappearance of symptoms after two months.
17	Chipault and Raymond. <i>Cliniques</i> , 1898, VIII Lesson	28 years. F.	Tumor of anteroinferior portion of both lobes, including peduncles	Not found.	No improvement; death several weeks later.
18	Churton. <i>Brit. Med. Jour.</i> , 1899, I, 1098.	30 years. M.	Doubtful tumor (ataxia, headache, etc.)	Not found.	Rapid recovery.
19	Collins and Brewer. <i>Med. Rec.</i> , 1897, May 15.	28 years. M.	Tubercle of right lobe (autopsy)	Removed	Sudden death during second operation, after recurrence.
20	Cuneo. <i>Congr. de chir. It.</i> , 1899.	32 years. M.	Sarcoma of left lobe.	Removed	Death on twentieth day, meningoencephalitis.
21	D'Almeida et Sajanti. <i>Riform. med.</i> , 1896.	19 years. M.	Cystic gliosarcoma of entire cerebellum	Puncture of cyst; tumor not removed	Death on eighth day.
22	Deansley. <i>Lancet</i> , 1901.	14 years. M.	None discovered.	Not found.	Improvement.
23	<i>Ibid.</i>	20 years. M.	Not found.	Not found.	Slow and slight improvement.
24	<i>Ibid.</i>	18 years. M.	Not found.	Not found.	Almost complete relief.
25	Descos. <i>Lyon méd.</i> , XCII.			Not found.	Death.
26	Deaver and Mills. <i>Boston Med. and Surg. Jour.</i> , 1892, II, 221.	11 years. M.	Pulsating tumor of occipital region. Autopsy: diffuse glioma of 4th ventricle and of both lobes	Not found.	Death after several months.
27	Dercum and Heath. <i>Phila. Hosp. Rep.</i> , 1890, I, 270.		Tumor; hydrops of ventricle.	Not found.	Death on fifth day.
28	Diller. <i>Pittsburgh. Med. Review</i> , 1892, 292.	39 years. M.	Autopsy: gumma about as large as a pigeon's egg in right lobe, including the vermiform.	Not found.	Death forty-eight hours after, without return of consciousness.

No.	Authors.	Age, Sex.	Nature and Position of Tumor.	Tumor Found or Not Found.	Results.
29	Durante. <i>Chir. nerv. Chi- pault</i> , Vol. 1, 1902....	11 years. F....	Glioma of median lobe.....	Not found.....	Death twenty minutes later. Enormous dilatation of ven- tricles and aqueduct of Syl- vius.
30	Durante. <i>Ibid.</i>	37 years. F....	Tumor of right lobe.....	Removed	Death one hour afterward from shock.
31	Duret. <i>Congress fr. de chir.</i> , 1903.....	45 years. M....	Sarcoma of left lobe.....	Not found.....	Operative recovery; death six- teen days afterward.
32	Ferrier and Burghard. <i>Brain</i> , 1901.....	12 years. M....	Fibroendothelioma of right lobe.	Removed	Recovery.
33	Fischer. <i>Journal of Nerv. and Ment. Dis.</i> , 1895, 544.	30 years. F....	Glioma of right lobe (autopsy).	Not found.....	Death in the third week (infection).
34	Fison and Luckham. <i>Lancet</i> , 1900, II, 329.....	16 years. M....	Tubercle of left lobe.....	Not found.....	Death four hours after opera- tion.
35	Frazier and McCarthy. <i>N. Y. Med. Jour. and Phil. Med. Jour.</i> , Jan. 22, '04.	10 years. M....	Glioma of right hemisphere....	Removed	Symptoms relieved, improve- ment continuing two months after operation.
36	Frazier and Mills. <i>Ibid.</i>	23 years. F....	Sarcoma of left hemisphere, about size of hazel nut.....	Removed	Recovery.
37	Frazier and Mills. <i>Ibid.</i>	41 years. M....	Tumor not found.....	Not found.....	Recovery from operation, no im- provement; patient declined further operative interven- tion.
38	Frazier and Mills. <i>Ibid.</i>	F.....	Cyst	Cyst evacuated..	Recovery.
39	Frazier and Mills. <i>Ibid.</i>	Adult, M....	Tumor not found.....	Not found.....	Recovery from operation, im- mediate relief from headache, vomiting, vertigo, and dim- ness of vision.
40	Gerster. <i>Am. Jour. of the Med. Sc.</i> , May, 1896....	.....	Tumor	Not found.....	.....
41	Gherardo, Ferreri. <i>Ann. di medicina navale</i> , Feb., 1900. <i>Gaz. heb- dom.</i> , 1900, p. 357....	18 years. F....	Myxosarcoma	Removed	Death in coma some days after operation.
42	Gibson Hildebrandt. <i>Jah- resbericht</i> , 1895.....	25 years. F....	Cystic fibrosarcoma of right lobe	Removed	Recovery.
43	Grainger Stewart. <i>Edinb. Med. J.</i> , 1894.....	Adult, M....	Tumor	Not found.....	Death.
44	Guldenarm. <i>Hermanides. R. S. Weekblad.</i> , 1895, p. 302.....	31 years. M....	Tumor of vermiform, enroach- ing on right lobe.....	Not found.....	Improvement for three months.
45	Guldenarm. <i>Edin. Med. Journal</i> , 1894.....	53 years. F....	Sarcoma of left lobe.....	Removed	Death, the day after operation.
46	Guldenarm and Winkler. <i>Chir. nerv. Chipault</i> , Vol. 1, 1902.....	.....	Endothelioma attached by a pedicle to right tentorium.....	Not found.....	Temporary improvement; death three months later.
47	<i>Ibid.</i>	29 years. M....	Endothelioma of left lobe.....	Removed	Patient greatly relieved; sud- den and unaccountable death.
48	Guldenarm and Ziegen- weidt. <i>Ibid.</i>	41 years. M....	Fibrosarcoma between hemi- sphere and tentorium.....	Not found.....	Death, nine days after operation.
49	Guthrie and Stansfield Col- lier. <i>Brit. M. J.</i> , 1899, II, 1289.....	9 years. M....	Gliomatous cyst of median lobe.	Evacuated	Results perfect after eighteen months, except for persistence of headache.
50	Hedra. <i>Texas M. News</i> , 1902, 380.....	32 years. M....	Tumor, combined with abscess; character of tumor not de- termined	Abscess evacu- ated; tumor not found	Died about eight weeks after first operation.
51	Heldenhain. <i>Arch. f. klin. Chir.</i> , 64, p. 848.....	12 years. M....	Sarcoma, non-encapsulated, me- dian line between superior and inferior vermiform processes.	Not found.....	Died suddenly in collapse night after operation.
52	Herw. <i>Brit. M. J.</i> , 1893.....	.....	Large tumor.....	Not found.....	.....
53	Horsley. <i>Brit. Med. J.</i> , 1887, 818.....	.....	Tumor affecting median lobe....	Two operations; Not found.....	Temporary improvement; death eighteen months later.
54	Hudson. <i>Amer. Jour. of the Med. Sc.</i> , Sept. 1903.	9 years. F....	Cyst of right hemisphere.....	Cyst found and evacuated	Considerable improvement, mod- erate cerebellar hernia; no re- currence.
55	<i>Ibid.</i>	M.....	Tumor, size of pullet's egg, one inch below surface in hemi- sphere	Removed	Patient developed serious diar- rhea, and died from exhaus- tion on eleventh day.
56	Iterson in <i>Hermanides. R. S. Weekblad.</i> , 1895, p. 302.....	13 years. M....	Cyst of left lobe in centre.....	Removed	Recovery, with hernia of cere- bellum.

No.	Authors.	Age, Sex.	Nature and Position of Tumor.	Tumor Found or Not Found.	Results.
57	Jaboulay (Soc. of med. sc. of Lyons, 1899). <i>Progr. inc. méd.</i> , 1899, p. 321.	30 years. M....	Tumor as large as nut in right lobe	Not found.....	Death one hour after second operation.
58	<i>Ibid.</i> , 1901.....	26 years. M....	Chronic tuberculous mastoiditis. Tubercle of right lobe (histological examination)...	Not found.....	Death in coma, nine days later.
59	<i>Ibid.</i> and Lyon <i>méd.</i> , August 11, 1901.....	34 years. M....	Glioma of left lobe.....	Removed	Recovery with persistent deafness in left ear and amblyopia (four and a half months after operation).
60	Jaboulay and Destot. <i>Ibid.</i>	30 years. M....	Fibrocereous tubercle in right lobe	Not found.....	Sudden death after second operation.
61	Jaboulay. <i>Lyon méd.</i> , 1902.	40 years. M....	Glioma, principally in left lobe.	Removed	Disappearance of headache and vertigo; improvement of vision.
62	Jaffe. <i>Deutsche. med. Woch.</i> , 1897, No. 5....	52 years. F....	Fibrosarcoma of right lobe.....	Not found.....	Collapse on table; death twelve hours afterward.
63	Janz. <i>Schmidt's Jahr.</i> , 1897	4 years. M....	Tumor	Not found.....	Death immediately after operation.
64	Janz. <i>Schmidt's Jahr.</i> , 1897	21 years. M....	Tumor	Not found.....	Death immediately after operation.
65	Keen. <i>Am. Jour. of the Med. Sci.</i> , 1894, 38....	14 years. M....	Cystic neuroglioma on floor of third ventricle.....	Not found.....	Death after nine hours.
66	Keen. <i>Am. J. of the Med. Sc.</i> , 1894.....	31 years. M....	Tumor, left hemisphere.....	Removed.....	Immediately after operation considerable aggravation; after 4½ months some improvement.
67	Korteweg and Winkler. <i>Ibid.</i> <i>Trans. Med. and Clin. Soc., Edinburgh</i> Vol. XV.....		Cyst of left lobe.....	Evacuated	Recovery.
68	Krause. <i>Deutsche med. Woch.</i> , 1902.....	11 years. M....	No tumor, internal hydrocephalus	None present...	Very much improved; lived three years.
69	Krause. <i>Deutsche med. Woch.</i> , 1902, No. 51, p. 367	18 years. F....	No tumor, internal hydrocephalus	None present...	Died suddenly, one week after operation.
70	Lamplasi in Lobella (<i>La Psichiatria</i> , 1891, VIII, 261)	2 years.....	Solitary tubercle of left lobe; dilatation of the ventricles...	Not found.....	Death after four days.
71	Lamplasi-Hildebrandt. <i>Jahresbericht</i> , 1895....	45 years. M....	Small tumor		Death thirteen hours after operation.
72	Lloyd, Suckling. <i>Lancet</i> , 1887, II, 863.....	12 years. F....	Glioma affecting whole left lobe and part of vermiciform.....	Partially removed	Collapse after twelve hours; death after forty-eight hours.
73	Macewen. <i>Brit. Med. J.</i> , 1893, II, 1367.....		Tubercles	Two tubercles removed	Improvement; reappearance of symptoms seven months later; death nine months (small tubercle in wall of fourth ventricle).
74	<i>Ibid.</i>		Tumor	Not found.....	Improvement, except for amaurosis.
75	<i>Ibid.</i>		Tumor	Not found.....	Improvement; death in fourth month (pulmonary tuberculosis).
76	Maudsley and Fitzgerald. <i>London Med. Record</i> , 1890	28 years. M....	Tumor of left lobe.....	Removed	Recovered from operation, but remained blind and deaf.
77	Maudsley. <i>Internat. Med. Congress of Australia</i> , 1899	30 years. M....	Glioma	Removed	No return of pains or attacks of vomiting.
78	Mannsell. <i>New Zealand Med. J.</i> , 1899.....	18 years. M....	Hydatid cyst of meninges under tentorium, involving left lobe	Removed	Recovery, with persistence of blindness.
79	Moran and Kerr. <i>Virg. Med. Semi-Monthly</i>		Cyst	Removed	Improved.
80	Munn. <i>Internat. J. of Surg.</i> , 1895, 40.....		Diffuse glioma of right lobe.....	Removed	Improvement immediately following operation; death thirty-six hours later.
81	Murri (of Bologna). <i>Lancet</i> , 1897, I, 291.....	17 years. M....	Fibrosarcoma of left lobe.....	Partially removed	Improvement after one month.
82	Newton. <i>R. E. Australas. Med. Gaz.</i> , 1903, XXII, 219	42 years. M....	Hydatid cyst, containing about 6 drachms, in left hemisphere.	Evacuated	Vomiting and headache relieved at once; nearly all other symptoms subsided.
83	Nota. <i>Chippault. Chir. nerv.</i> , Vol. I, 1902.....	7 years. M....	Tubercle	Not found.....	Death.
84	O'Kynzie. <i>Tuffier. Soc. d'anat.</i> , 1902.....	18 years. M....	Large tubercle of right lobe...	Not found.....	Death on day following second operation.

No.	Authors.	Age, Sex.	Nature and Position of Tumor.	Tumor Found or Not Found.	Results.
85	Parkin. <i>Lancet</i> , Dec. 1896	3 years. M.	Diffuse glioma of vermiform and surrounding parts of median lobe	Removed	Recovery; no recurrence after 2½ years; persistence of optic neuritis.
86	Parry. <i>Glasgow Med. J.</i> , 1893, II, 36.	15 years. M.	Tubercle of posterior part of left lobe.	Removed	Death.
87	Perashing. <i>Med. News</i> , 1898		Glioma	Removed	Death.
88	Portempski. <i>Arch. della Soc. Ital. di chir.</i> , 1892, 21	22 years. M.	Tumor	Not found.	Partial relief.
89	Rotgans and Winkler. <i>Ibid.</i>	21 years. M.	Cyst	Evacuated	Recovery.
90	Saenger. <i>Munch. med. Woch.</i> , 1899, 845.	47 years. F.	Gliosarcoma of base, affecting left auditory and trigeminal nerves	Not found.	Improvement (oozing of cerebrospinal fluid for several weeks); death nine months later.
91	Saenger. <i>Neurolog. Centralbl.</i> , 1899, p. 1117.		Tumor between pons, medulla and cerebellum.	Tumor found; not removed.	Slight improvement.
92	<i>Ibid.</i>			Tumor found; not removed.	Partial recovery.
93	M. Schede. <i>Deutsche med. Woch.</i> , 1900, 477.	Adult. M.	Encapsulated glioma of right lobe	Removed	Recovery.
94	M. Schede. <i>Deutsche med. Woch.</i> , 1900, 477.	17 years. M.	Cystic glioma of right lobe.	Evacuated	Temporary improvement; sudden death several days later.
95	Schönborn (Hirsch). <i>Inaug. Dissert. Würzburg</i> , 1891	24 years. F.	Cystic myxosarcoma of right hemisphere and cuneus.	Tumor found(?)	Temporary improvement; death on eighth day.
96	Springthorpe. <i>Austral. M. J.</i> , 1890, 509.	13 years. M.	Glioma	Not found.	
97	Allen Starr. <i>Brain Surgery</i> , 1893, case XXII.	30 years. M.	Gliosarcoma of left lobe, including pons	Not found.	Death on twelfth day (coma).
98	Starr. <i>Brain</i> , 1893.	10 years. M.	Cystic glioma of right hemisphere	Partially removed	Temporary improvement; death on eleventh day.
99	Starr and McBurney.	7 years. F.	Cystic gliosarcoma of vermiform process, extending to both hemispheres.	Not found.	Death on sixth day.
100	Starr. <i>Brit. M. J.</i> , 10-16, 1897		Glioma, right hemisphere.	Not found.	Improvement; death on eighth day.
101	Starr. <i>Ibid.</i>		Tumor	Not found.	Unimproved.
102	Allen Starr. <i>Brain Surgery</i> , 1893.	(?) F.	Gliosarcoma, subcortical of vermiform, with central cyst.	Not found.	Death on sixth day (convulsions).
103	<i>Ibid.</i>	10 years. M.	Gliosarcoma of right lobe.	Removed	Temporary improvement; death on fourteenth day.
104	Stef. Personall. (<i>Riv. med.</i> , 1900). <i>Revue de neurologie</i> , 1901, 408.	(?) M.	Tumor of lateral lobe.	Removed	Extreme emaciation; meningitis; death.
105	Stieglitz. <i>Journal of Nervous and Mental Disease</i> , 1895, 729.		Gliosarcoma (size of large nut) of right lobe (autopsy).	Not found.	Death (infection, purulent meningitis).
106	Suckling. <i>Am. Jr. Med. Sci.</i> , 1895.	12 years. F.	Glioma, left lobe.	Removed	Death in collapse.
107	Syme. <i>Internat. Colonial Med. J.</i> , 1899.	47 years. M.	Tumor of left lobe.	Not found.	Sudden death from respiratory failure following operation.
108	Tanton. <i>Bull. et mém. de la Soc. anat.</i> , Paris, 1903, III, 584.		Colloid tumor.	Not found.	Death about two months afterward.
109	Terrier in Aubray. <i>Th. de Paris</i> , 1896.	Adult. M.	Tumor of left lobe.	Not found.	Temporary improvement; death two months later.
110	Thomas and Lund. <i>Boston M. and S. J.</i> , 1905.	5 years. M.	Tumor of vermiform.	Not found.	Patient died following morning
111	<i>Ibid.</i>	8 years. M.	Glioma of vermiform with large hydrocephalus	Not found.	Death on fourteenth day.
112	Tricomi. <i>Riforma med.</i> , 1899	9½ years. F.	Glioma of petuncle and quadrigeminal lobe.	Tumor not found	Death on the following day.
113	Von Voss. <i>Deutsche Zeitschrift f. Nervenheide</i> , 1902, XXI, 48.	35 years. F.	Gliosarcoma, left hemisphere.	Not found.	Died in convulsions three days after operation.
114	Weir. <i>Annals of Surg.</i> , 1887, I, 506.	26 years. F.	Tumor	Not found.	Death two months later.
115	Wyman. <i>Med. News</i> , 1890, I, 134.	Adult. M.	Small tumor in left lobe.	Not found.	Death during operation.
116	Ziegenwilde. <i>Psych. en neurol.</i> , 1899.		Suspected in cerebellum on autopsy found between right cerebellum, tentorium, and pons	Not found.	Death.

REPORT OF THREE CASES OF RUPTURED
TUBAL PREGNANCY.

By F. ALAN G. MURRAY, M. D.,

MOUNT SAVAGE, MD.

The following three cases of ruptured tubal pregnancy occurred in my practice within two months of one another. They are the first cases, as far as I can find, that were ever diagnosed in this town, and physicians who have practised twenty years in this region say that they have never had a case in their practice. I used Fowler's position in all three of these cases and also vaginal drainage. I believe that the position and drainage are the only things that saved the patients from developing general peritonitis, as they were all operated on at a few hours' notice, in their own houses, and the rooms in which the operations were done were most decidedly dirty.

In the first case the tube had ruptured thirty-six hours before I saw the patient and she was almost moribund. In the second case the tube had ruptured about six hours before I saw it, and in the third case the tube had ruptured about twelve hours before I saw it.

All patients complained of the same symptoms, a sudden sharp pain in the abdomen, and either fainting or a feeling of faintness and nausea. In the first case the pregnancy was advanced about four weeks, and ruptured in the right fallopian tube about three quarter inch from the uterus. The rupture went through both sides of the tube.

In the second case the pregnancy was about two months advanced and the rupture was in the fimbriated extremity of the right tube. The sac with the foetus in it was about the size of an orange. In the third case the pregnancy was of about five weeks and the tube had partially ruptured several times, as there was some organized clot and strong adhesions existed in and around the left tube. The right ovary in this case was cystic, so I removed it.

The treatment in all the cases was the same. The abdomen was opened in the median line, the blood and clots were cleaned out, the tube and broad ligament tied off in sections, then cut off and the peritonæum was sewed over the stump with a running silk suture. The abdomen was washed out with hot salt solution, an incision made through the posterior wall of the vagina into the cul de sac and a gauze drain about eight inches long pushed through. The abdominal cavity was filled with hot normal salt solution, and the peritonæum brought together with a running silk suture, the muscles with silk worm gut mattress suture and the skin with subcutaneous silkworm gut suture. The patients were put to bed with the head of the bed raised fifteen inches higher than the foot and kept

in that position for ten days. This position caused all blood clots to gravitate to the pelvis and the gauze drain insured free drainage of the broken down material. This position also relieved the patients from nausea and vomiting, as there was no pressure on the stomach by the distended intestines. For the first three days the patients received nothing by mouth, but an eight ounce rectal stimulant injection was given every six hours and strychnine and morphine were administered hypodermically as required. The gauze drain came away in the third week, the drainage ceased, and the vaginal vault healed promptly. Vaginal douches of hot salt solution were given twice a day, beginning the day after operation, and were continued until the drainage ceased entirely. All three of the cases did well and recovered promptly.

CASE I.—November 10, 1903.—Mrs. J. M. Patient had had some uterine bleeding since October 29th; her last regular menstrual period was from October 10th to 14th. On the evening of November 8th she was suddenly taken with a very severe pain in the right iliac fossa and fainted. During that night and the next day and night she had severe pains and fainting spells. I was called in the morning of November 10th and found her in great pain, her pulse 130 and thready, temperature 98°, face pale, black circles under eyes, abdomen distended and tympanic anteriorly, with dullness in both flanks. Severe pain on pressure in right iliac fossa, tongue dry and glazed, vomiting occasionally. On vaginal examination I found a boggy mass in the pelvis very tender on pressure, os patulous, uterus not much enlarged, and some bloody discharge. I called in Dr. Cobey, of Frostburg, who agreed with me as to diagnosis of ruptured right tubal pregnancy. I operated at once with the assistance of Dr. Cobey and two trained nurses. The abdomen was opened in the median line from the umbilicus to the pubes and was found to be filled with blood and clots. I pulled up the right tube and ovary and found blood spurting from a hole which had ruptured through both sides of the tube about three quarter inch from the uterus. The tube and broad ligament were clamped and tied off in sections, then cut off with the ovary, and the stump was reinforced with a running suture and covered over with peritonæum. The abdominal cavity was then thoroughly washed out with hot salt solution, an incision made through the posterior vaginal wall into the cul de sac and a gauze drain inserted. The abdominal cavity was filled with hot salt solution and the peritonæum brought together with a running silk suture, the muscles with silkworm gut mattress suture and the skin with silkworm gut subcutaneous suture. Patient took the chloroform well. Pulse when she came off the table, 130. Gave her strychnine one thirtieth grain, and morphine one quarter grain, hypodermically at once, also one and half pints of salt solution per rectum. The head of the bed was raised fifteen inches. The after treatment consisted of eight ounce nutrient enemata every six hours and strychnine and morphine hypodermically as she needed it. November 11th, patient's

temperature reached 104° and her pulse 160; from this time on her pulse and temperature gradually came down until they reached and stayed normal from November 22d on. During this time there was free drainage from the cul de sac of bits of broken down and disintegrated blood clot. She was douched twice a day. On the fourth day after operation she had her first nourishment by mouth. November 23d, removed skin suture and found the line of incision perfectly healed and firm. November 30th, allowed patient to sit up in a chair. December 10th, made a vaginal examination and found everything healed well; discharged patient cured.

CASE II.—December 23, 1903.—Mrs. G. K. Patient had been sick about one week, complaining of pain in the right side of her abdomen. I saw her several times, but found no marked symptoms of any kind. December 23d, I was called hurriedly to see her and found her with very severe pain in the right iliac fossa, extreme tenderness on pressure, muscles rigid, abdomen distended, pulse 110 and bad, expression anxious, respiration hurried, temperature 97.5°. Immediate operation advised. I called in two trained nurses and a non-medical friend to assist in the operation. One of the nurses administered the chloroform and the friend and other nurse assisted me. I made an incision five inches long and found the abdominal cavity full of blood and clots; on pulling up the ovary and tube a ruptured sac with about a two months foetus showed itself. The sac with the foetus was in the fibrinated extremity of the right tube, and was about the size of an orange. I clamped the tube and broad ligament, tied them off in sections, cut them off with the ovary, and then reinforced the stump with a running silk suture and buried it under the peritonæum. The abdominal cavity was thoroughly flushed out with hot normal salt solution, an incision made through the posterior vaginal wall into the cul de sac, and a gauze drain inserted. The abdominal cavity was then filled with hot salt solution and sewed up, the peritonæum with running silk suture, the muscles with silkworm gut mattress suture, and the skin with silkworm gut subcutaneous suture. Patient reacted well from the operation. Gave her strychnine one thirtieth grain and morphine one quarter grain, hypodermically, also one and one half pints of hot salt solution per rectum on putting her to bed. The head of the bed was raised fifteen inches, three hours after the operation. December 24th: Patient rested fairly well during night. Abdomen distended. Morning temperature 101°, pulse 108, respiration 24. December 25th: Vomited dark green matter several times during night and passed a good deal of flatus with assistance of rectal tube. Morning temperature 100°, pulse 160, respiration 26. From this time on patient gradually improved and on January 6, 1904, the suture was removed from the skin, and the scar found to be firm. January 16th, removed rest of vaginal drain. January 22d, discharged patient, well.

CASE III.—January 9, 1904.—Mrs. C. H. Patient had been sick about two weeks, complaining of cramps in her left side, low down in the pelvis. She

had had some uterine bleeding off and on for the last ten days. Prior to this time she had not menstruated for six weeks. Vaginal examination during this time showed some tenderness over both ovaries and tubes, and the uterus slightly enlarged. During night of January 8th patient was taken with very severe cramps in the left side. January 9th, Dr. Quarles and I saw her together and found her very pale, suffering severe pain, abdomen distended, very tender on pressure and considerable uterine bleeding. Temperature 98°, pulse 120 and small. Diagnosis, ruptured left tubal pregnancy. Prepared patient for operation at once. On opening the abdomen it was found full of blood and clots. Pulled up the left tube and ovary. They were adherent to the intestines everywhere and the tube was ruptured and bleeding freely. The tube and broad ligament were tied off in sections and the adhesions broken up, then they were cut off with the ovary, and the stump was reinforced with a running suture and buried under the peritonæum. The right ovary was cystic, so, together with the tube and broad ligament, was removed. The abdominal cavity was flushed out with hot salt solution, an incision made through the posterior wall of the vagina into the cul de sac, and a gauze drain inserted. The abdominal cavity was then filled with hot salt solution, the peritonæum brought together with a running silk suture, the muscles with silkworm gut mattress suture, and the skin with a silkworm gut subcutaneous suture. Patient took the chloroform fairly well. Pulse 150 at close of operation. Gave her strychnine one thirtieth grain and morphine one quarter grain hypodermically, also one and half pints of hot salt solution per rectum. Elevated head of the bed fifteen inches. Patient was desperately ill for the first five days after the operation, then she gradually became convalescent and was discharged, well, February 26th. She drained very freely from the cul de sac up to February 24th and if the discharge checked at all she would have fever and pain. Suture removed from line of incision January 22d, and the scar found to be firm.

On Auxiliaries of Climatotherapy.—I. Benney Yeo, in the *Practitioner*, for December, 1904, refers to a previous statement by him that "care without climate is better than climate without care," and that "it is possible to make bad use of a good climate and good use of a bad one." In other words, something more than unaided change of climate is necessary in the treatment of tuberculosis and hence arose the method of treating this disease in sanatoria.

The care in such institutions means strict attention to the smallest details of a patient's life. This rigid care which is exercised over tuberculous patients ought also to be exerted over patients who are sent to sanatoria for the treatment of chronic gastric catarrh, early hepatic cirrhosis, diabetes, albuminuria, chronic rheumatism, chronic paludism, and many other forms of chronic disease. With suitable regulation of diet, baths, exercise, and amusements many troublesome cases that are now neglected might be cured.

REPORT OF A CASE OF FIBROMATA OF
THE VULVA.*

By THOMAS S. BURR, A. B., M. D.,

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I wish to report the case here cited, not because it offers any features of spectacular interest, or presents a solution of any surgical problem, but because the condition is one which but seldom comes to the attention of the profession. Benign neoplasms of the vulva are rarely encountered. In consulting the gynaecological records of the University Hospital, I have not found a recorded case of fibroma of the vulva among some 5,000 gynaecological conditions observed. Forty-two essays bearing upon this subject have been collected from the literature, and of these I have been able to study eighteen. The paucity of reported cases seems to bear me out in the statement that such growths are rare, though the fact that small tumors of the vulva are easily dealt with makes it possible that the condition is met with by the general practitioner more frequently than reported cases would lead us to believe.

Just why the vulva should be so exempt from the development of fibroma and other tumors, is not easily apparent. Certainly the tissues of the vulva are rich in mesoblastic elements. There is an abundance of connective tissue and smooth muscle fibres, and the structures are singularly liable to traumatism which in other localities are often sufficient to inaugurate cellular new growth. The life history of the labial tissues is in no essential different from that of similar tissues in other parts of the body. The same phenomena of development maturity and atrophy pertain here as elsewhere, and the same ætiological factors should be operative here as in other localities, where fibromata are more commonly found.

The tumors described by the writers to whose articles I have had access, range from small sessile circumscribed growths, in some cases partaking of the nature of elephantiasis, to very large pedunculated masses, reaching in one case (Holzman), from the right labium majus to the knee, and weighing 6,850 grammes. Most of the tumors reported, however, were small, ranging from the size of a walnut to that of a goose egg. In two cases the age of the patient ranged from 35 to 52

years; in three cases the age was from 22 to 28, and one case was reported in a girl of 18 years. With one exception the patients were married and had borne children. In six cases the growth originated from the right labium majus; in eight, from the left labium majus; in one, from the left labium minus; and in one, from the right labium minus. In two cases the location of the growth was not noted. In nine cases the tumors were pedunculated. The duration of the growth varied from ten months to nine years, all but one, however, having endured for more than four years. Pathologically there were 5 fibromata dura, 3 fibromata mollia, 6 fibromyomata, 2 fibromyxomata, and 2 cystofibromata. Of these two were so closely upon the border line of sarcoma, that the diagnosis was doubtful. In two of the cases reported, ulcerative changes had occurred in the skin.

The history of these cases had no apparent bearing upon the condition of which the patient complained. Surgical relief was sought because the growths were inconvenient by reason of their location. In several cases the history states that at the time of menstruation the growths became congested, and in some instances quite swollen and painful.

The case which I wish to report was admitted to the University Hospital August 25, 1902.

The patient was an American, 42 years old. She had been married twenty-one years, and had had four children and three induced abortions. Aside from the local trouble the history was otherwise negative. The patient first noticed a growth upon the vulva eighteen years ago. This growth, the size of a bean, was situated in the upper third of the left labium majus. The lump rapidly grew to the size of a walnut. It remained thus for six years when it was removed. Six years later the patient noticed another growth similar to the first one, but situated lower down in the lower portion of the left labium majus. Five years later, one year ago, two smaller growths appeared, one immediately above the one just described, and the other still higher up, in the upper portion of the labium majus, just to the left of the clitoris, in about the same position as the original growth which had been removed. These tumors gave no symptoms other than those of annoyance by reason of their position. The last two growths developed more rapidly than either of the others.

Examination showed the growths located as described. The upper, as large as a hickory nut, apparently developing from scar tissue, presented a median furrow and was fixed. The middle nodule, a little larger, was slightly movable, non-sensitive, and rather soft. It was smooth, well outlined, and seemed to be connected with

* Read before the Michigan State Medical Society, at Detroit, June 8, 1903.

the larger mass below. The third growth, the lowest, was the size of a large walnut. It was firm, somewhat bosselated, and non-sensitive. All three of these tumors seemed to have their origin in the tissues of the labium majus, but the lower two encroached somewhat upon the labium minus and the perinæum. The pelvic organs were practically normal.

The patient was operated upon August 26, 1902. The middle and lowest fibroids were enucleated through a median incision, shelling out very readily. The upper tumor was removed by an elliptical incision, which included the surrounding scar tissue. The wound was closed by sutures of silkworm gut, deeply placed so as to obliterate all spaces. The closed incision made a continuous linear wound, placed between the left labia majus and minus. The wound healed per primam, and the patient was discharged September 10th. Eighteen months later there had been no recurrence of the growths. The pathologist, Dr. Ralph Morse, reported the tumors to be fibromata mollia.

Although the number of cases reported is too small to serve as a basis for the establishment of hard and fast conclusions, still an analysis of them may be of interest. It will be seen that from the standpoint of ætiology, the age and social condition of the patient are of importance. In the majority of the cases cited, the tumors appeared from the thirty-fifth to the fifty-second year in women who were married and had borne children. Veit, in discussing the ætiology of fibromata of the vulva, lays considerable stress upon the irritation of the tissues due to coition, and the facts in the cases reported bear out his observations. Veit also states that in many cases the initial condition is one of elephantiasis, the connective tissue elements and muscle cells subsequently taking on more active growth, and the tumor resulting from this cell proliferation. The fact that wide lymphatic spaces, sometimes sufficiently extensive to be classed as cysts, are occasionally found in vulval fibromata forms the basis of this assertion. Fibromata may develop from the fascial structures, from the round ligaments, or from other connective tissue elements in this region. The left labium majus was most often the seat of development in the cases which I have reported, and the labia minora were less frequently involved. The tumors were pedunculated in 50 per cent. of the cases. In but one case, that of Kirchoff, were multiple growths reported.

The diagnosis of fibromata of the vulva should not be difficult. Small growths may be differentiated from elephantiasis by the fact that the fibroid is sharply outlined and more or less movable under the skin. Elephantiasis vulvæ is a condition of diffuse thickening due to inflamma-

tion and hypertrophy of the lymphatic channels. Cysts of Bartholin's glands are thin walled, globular shaped structures, and give the peculiar movable fluctuating feel characteristic of retention cysts. It is especially important to recognize carcinoma of the vulva, which is also a rare condition. Carcinoma is characterized by rapidity of growth, early infiltration of the surrounding tissue, tendency to early ulceration, and involvement of the neighboring lymphatics. Pain, a prominent symptom in carcinoma, is absent in these fibroid growths. Lipomata of the vulva are rather more common than fibromata. They are usually larger, softer, and are perhaps oftener pedunculated. From a clinical standpoint their differentiation is unimportant. Inguinal hernia descending into the labial structures may produce a mass resembling a new growth. It is to be differentiated by the history of the patient, by the possible presence of distensile expansion on coughing, by the percussion note if the hernial sac contains gut, and by its possible reducibility. The diagnosis between hernia and new growth may be difficult as in a case reported by Tuttle, in which incision for fibroid revealed a structure resembling a hernial sac. Careful investigation showed it to be a cystic fibroma, having its origin in the tissues of the round ligament. The importance of recognizing a hernia in this location is apparent. The diagnosis between fibroma molle and sarcoma, can usually be made only by the microscope, and in at least two of the cases studied even the microscope failed to make a satisfactory distinction. The border line between the two conditions is exceedingly shadowy.

The only treatment of fibromata of the vulva is surgical. Benign growths of the vulva are no menace to the life of the individual; but as malignant tumors and especially sarcoma in their early stages often simulate innocent growths, prompt removal of any neoplasm is indicated. Mesoblastic growths are easily enucleated. If a capsule is present it should be removed. Pedunculated growths are best dealt with by making an elliptical incision around the base of the mass, and ligating the pedicle with catgut. Hemorrhage is usually slight, but should be thoroughly controlled, especially in those tumors originating in the inguinal canal. Sutures should be deeply passed to close dead spaces. In every case the material removed should be submitted to the pathologist, and if the tissue is found to be malignant, radical measures should be instituted. The employment of the microscope in diagnosing these conditions cannot be too strongly urged.

In case of doubt, treat the patient for the more serious condition.

The case which I have reported is interesting from the fact that three distinct tumors were present, one of which occurred at the site of removal of a previous growth. The fact of recurrence, with the pathological evidence in the case, might lead to the suspicion that these growths were sarcomatous, but up to the present time there has been no recurrence.

A CASE OF MANIA A POTU AND EPILEPSY.

By HENRY F. COLLINS, M. D.,
FRANKLIN, ME.

The following case of a young unmarried woman, with a history of chronic alcoholism in the father, may prove of interest from the fact that mania a potu and epilepsy were coexistent and because of the manner in which the one morbid condition affected the other.

L. M., female, aged 29 years, height five feet, eight and one half inches, unmarried, and of robust and intelligent appearance. The patient gave the following family history: Remembered nothing of her grandparents on either side of the family; her father used alcoholic beverages "moderately," and died from "disease of the liver" at the age of forty-seven years. Her mother was still living and had had good health until two years previously, since which she had suffered from a heart lesion giving rise to attacks of faintness. She had three sisters, all of whom had "fits," such as she had, and a brother who had good health.

The subject did not remember of any illness during her childhood, but at about the age of fifteen years she began to have "fits." They usually occurred at the menstrual period, but not at every period. They became less frequent under treatment, and for about two years she was free from seizures. They returned, however, and though the menstrual function was normal, the attacks nearly always occurred a day or two before menstruation began.

About five or six years before, she began the use of alcoholic beverages, principally whiskey and mixed drinks. She had continued their use steadily, but seldom became drunk. Had at times drunk cologne and once about seven months ago had delirium tremens.

For two days before the present attack the patient presented symptoms of great mental depression and threatened suicide, apparently because of a great disappointment. She began drinking heavily, and in about twelve hours the first epileptic convulsion occurred. This was severe and when I arrived she was in coma, which lasted about fifty minutes, when she became restless, began muttering, and then talked incessantly of beautiful flowers, hideous faces, frogs, mice, snails, and finally of a deep pit into

which she thought she was falling. She begged piteously to be saved from the fall, then with the cry that she was going, another violent convulsion came on. The seizure lasted for about five minutes, followed by a period of coma of forty minutes, which in turn was followed by hallucinations. These epileptic seizures alternating with periods of mania recurred until she had had five attacks of *grand mal*, growing less violent and at longer intervals when she lapsed into coma with muttering and jactitation lasting for ten hours. She then became conscious, asked for water, recognized those around her, and then for a space of about fourteen hours was extremely restless and sleepless. During this time her temperature ranged from 101° to 102° F. Following this she lapsed into quiet slumber for several hours, and on awaking complained of heaviness and pain in the head, soreness and pain in the muscles, and great weakness. The tongue was badly bitten during the first seizure, and I may add that a silver tablespoon placed between her teeth during that first convulsion was pierced by one of her canine teeth. Afterward a piece of wood wrapped with gauze was used.

One interesting feature of the case was that the mania terminated each time in a convulsive seizure with a sensation of falling. The pulse was rapid and soft, except during the convulsions, when it was slower and full. The urine was voided involuntarily during the epileptic attacks.

Five weeks after this illness the patient moved to a distant place and was lost sight of, but during that time she had no more seizures and seemed to be in normal health.

The treatment consisted in the administration of sulphate of morphine hypodermically in $\frac{1}{4}$ grain doses, chloral in starch water per rectum, and the use of the ice cap and small amounts of liquid nourishment at frequent intervals.

How to Cook Rice.—Physicians and others who have eaten rice cooked by a Hindoo, a Chinaman, or a Southern dinky, must have remarked the difference between the results obtained by these artists and those of the benighted cooks of the North. We learn from an authoritative source that the secret lies in the following recipe: The rice should be carefully washed and placed in a kettle of boiling water, which should be set on the back of the range over a low fire, where the rice should simmer slowly until done. Stirring is not only useless but harmful. If there is any water left, it should be drained off carefully and the rice should then stand in a hot place for some time. Nothing should be added during the cooking; no salt, sugar, milk, or butter. If the cooking has been done properly, each grain of rice will stand out by itself, plump, dry, and beautiful. Served very hot at the table the rice should then be reverently treated with cayenne pepper and butter, after which will be revealed to the consumer one of the secrets of the success of the Japanese army.

REPORT OF A CASE IN WHICH A BULLET CAUSED NINE PERFORATIONS OF BOWELS: OPERATION AND RECOVERY.

By J. B. BOUCHER, M. D.,

HARTFORD, CONN.,

SURGEON TO ST. FRANCIS'S HOSPITAL.

July 4, 1904, I was called to see John R., aged 15 years, with the following history:

While celebrating the Fourth about 10 a. m. with a companion, the latter aimed at patient a revolver, supposed to contain a blank cartridge. The result was a perforating wound about two inches to the left of and below the umbilicus. The wound was large enough to admit a lead pencil, the skin being burnt and black in a circle about the wound.

I saw the patient about 4 p. m. He had then a temperature of 103, pulse 120, extreme pain in abdomen, and the appearance of a very sick boy.

I ordered his removal to St. Francis's Hospital for operation. At 6 p. m. same day, the patient, having been prepared, we dissected out the wound in the abdominal wall expecting to find the bullet. Removing the entire tract down to the peritonæum, we found a perforation of the latter, which was apparently not larger than a pin head. We then decided to enlarge the incision and investigate further.

When the abdomen was opened we found a perforation with black and burnt margins extending through the omentum. This would admit the little finger. The wound was carefully dissected, when we found the bullet had passed through the mesentery of the small bowel, about one eighth inch below its attachment to the gut.

We noticed the contents of the bowels free in abdominal cavity. Examination of the bowels revealed nine different perforations in the small intestines, three pairs where the bullet passed through both sides of the bowel and three single perforations, extending over a distance of several feet. These were repaired by turning in the bowel and using a double Lembert with silk. Several gallons of hot saline solution were used, washing out the cavity thoroughly. Gauze drainage was inserted and the wound closed.

The following day the temperature dropped to 100° and the second day to normal. The patient made an uninterrupted recovery and left the hospital in four weeks. He is now attending school and perfectly well.

One of the deceptive points about this case was the absence of perforation through the peritonæum. The small opening of which I wrote could not be detected until the peritonæum was raised with forceps and looked at from the side. Even then there was no indication of the burnt margin noticed in the other perforations. The bullet was not found.

25 CHARTER OAK AVENUE.

Therapeutical Notes.

Terpin Hydrate in Cough.—*Revue française de médecine et de chirurgie*, for December 12, 1904, gives the following formulæ for the administration of terpin:

- B Terpin hydrate.....5 centigrammes ($\frac{3}{4}$ grain); Venice turpentine.....enough to make one pill.
- M. Two to six pills daily.
- B Terpin hydrate / of each.....5 centigrammes
Sodium benzoate / ($\frac{3}{4}$ grain);
Extract of aconite.....1 milligramme ($\frac{1}{100}$ grain).
- M. Two to six pills daily.

Treatment of Warts.—Kaposi is cited in *Nouveaux remèdes*, for January 24, 1905, as advising:

- B Mercury bichloride.....1 gramme (15 grains); Flexible collodion......30 grammes (1 ounce).
- M. Paint the warts once daily.

Mercurial Treatment of Leprosy.—De Luca, in the *Revue de thérapie*, for October 1, 1904, states that he has investigated in seven cases of tuberculous, nervous, and mixed leprosy the action of mercury employed as intramuscular injections of calomel and intravenous injections of sublimate. The ulcers healed rapidly under this treatment, but leprous nodules which were not ulcerated were not affected. A certain amount of improvement occurred in two cases of nerve leprosy. Injections of calomel especially had a rapid action on the cicatrization of ulcerations, but the effect was not permanent. The author attributes this to interruption of treatment, and proposes to continue these for longer periods.

Influence of Cold on the Heart.—In *Berliner klinische Wochenschrift*, for April 28, 1904, is an article by Dr. W. Krebs, on The Influence of Local Applications of Cold on the Force of the Heart. As the result of a series of observations, the author arrives at the conclusion that: (1) In many cases in which weakness of the heart is present, whether this be of nervous or organic origin, the local application of cold acts favorably. This favorable influence is manifested by an improvement in quality of the pulse, by elevation of arterial pressure, and regularity of pulse frequency; (2) the best results are obtained when the apparatus for the local applications of cold is made use of in conjunction with strict repose on the part of the patient; (3) in other cases, beyond a certain subjective influence, no objective action results; (4) but the results obtained by this mode of treatment cannot be compared with those due to the action of digitalis.

Removal of the Crystalline Lens in Myopia.—H. Dickson Bruns is cited in *Médecine orientale*, for September 25, 1904, as stating that this operation is contraindicated in young myopes where there is no pathological change of the fundus, and even in young and middle aged myopes with considerable lesions. It is valuable only in selected cases of very advanced myopia in subjects from ten to thirty-five years of age, and should be performed on one eye first. The result should be carefully noted before operating on the other eye.

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CIVIL SERVICE EXAMINATION AND MUNICIPAL
MEDICAL SERVICE.

The city of New York has had some recent experience which, it seems to us, ought to have some effect on those of its citizens who have thus far been able to see nothing but unalloyed benefit in the civil service examination system. It is but a few months since the board of trustees of the Bellevue and Allied Hospitals were balked by the system in an attempt to place an important executive office in the hands of a certain gentleman whom we all know to be peculiarly qualified for the efficient performance of its duties. Not long thereafter we were informed that the city Health Department was "up against" the same obstacle in its very laudable purpose of giving some pecuniary compensation to a special advisory board consisting of a number of eminent physicians, because some of them, not being residents of New York, were giving a portion of their valuable time in visits to the city incident to the high functions that they had generously consented to assume. And now comes the information that Health Commissioner Darlington is encountering the same impediment in his policy of going beyond the civil service list in quest of a desirable person to appoint to a new office calling for exceptional qualities on the part of its incumbent.

Commissioner Darlington recently appeared

before the civil service commissioner to ask for the creation of an office that he wished to fill "without competition and practically at his own discretion." He stated specifically that he wished to appoint "a gentleman with whom he was intimately acquainted, in whose character and ability he had the greatest confidence, and who had for some years performed like duties in the Finance Department." He required a thoroughly trustworthy man, as the appointees furnished to the commissioner from the eligible list of the Civil Service Commission needed careful watching by some one in whom he had implicit personal confidence. Dr. Darlington stated that while the men recommended from the commission might be well fitted for the tasks to which they were assigned, those tasks were of such a character as to require more than an ordinary degree of confidence in the integrity, capacity, and tact of the appointees, and that the personal element was so large a factor in the fitness of the appointee that the restriction to the list furnished by the Civil Service Commission was a marked disadvantage to the department. Dr. Darlington was quoted as stating that he was unable to check many of the evils prevailing in his department which had grown up out of this limitation of his powers of selection.

In discussing this matter with a representative of the *New York Medical Journal*, Dr. Darlington said that he appreciated fully the able, honest, and efficient cooperation which he received from the professional members of his staff, and that he regretted that the newspaper reports might tend to create an impression that he was in antagonism to these men, to whom the department was so greatly indebted, but notwithstanding the efficiency of these professional assistants, Dr. Darlington was pronounced in his antagonism to the present method of selection which was imposed upon him by the Civil Service Commission. The *New York Times*, in commenting on this incident, says: "As to the exemption from competition of the inspector whom Dr. Darlington desires, it would seem that the doctor's friend ought to be able with his ability, training, and experience to get to the head of any reasonable eligible list." Whatever saving grace there may be in the word

"reasonable," we doubt if the admirable Crichton himself could get to the head of such a list; moreover, we hope never to see the day when a man whose services are sought for will so far lower himself as to submit to a competitive examination at the hands of a civil service commission.

STERILITY AND THE X RAY.

It would have been amazing if there had not come up something more serious than burns to check what may be called the triumphal progress of the Röntgen rays in medicine. That something seems at last to have been encountered, at least if there is final truth in what has recently been put forward concerning the influence of the rays upon the sexual glands. They are said to destroy the power of the testicles to elaborate potent spermatozooids and that of the ovaries to produce ovules susceptible of fertilization. In other words, they blot out the reproductive power in an individual, male or female, whose sexual glands come under their influence. Whether this blasting effect is lasting or only temporary does not appear to have been settled as yet, even if we may set it down as absolutely established that it occurs at all in the great majority of cases.

At all events the impression that exposure of the testicles or ovaries to the action of the Röntgen rays is destructive of their procreative function has to a great extent taken possession of medical men, and it is sure to spread to the laity. What is to be the result? As regards the testicles, probably it will be of little consequence. In the case of the ovaries, however, fear of injuring their power of ovulation, both on the part of the physician and on that of the patient, seems likely to interfere materially with the availability of the rays for diagnostic purposes so far as the pelvic contents in women are concerned. Moreover, this dread may work moral disaster, for we fear it cannot be doubted that there is many a woman who would eagerly destroy within herself the potentiality of maternity if she thought she could accomplish her object by so simple an expedient as exposure to a subtle agency that would not give her pain or endanger her life or leave upon her a physical stigma that would lay her open to the suspicion of having resorted to such

an unworthy device. On these accounts it is to be hoped that our present impression of the danger to fertility of exposing the sexual glands to the action of the Röntgen rays may prove to have been hastily formed.

VARICOCELE IN SOLDIERS.

A discussion has arisen among some of the medical officers of the British army as to the extent to which varicocoele may properly be considered as a bar to the enlistment of an otherwise acceptable recruit. It seems that the regulations governing recruiting allow of the acceptance of a young man who is the subject of varicocoele, provided the varicose condition is of moderate (but not precisely indicated) degree. Varicocoele is so common in young men, so rarely gives rise to serious trouble, and not infrequently becomes so unproductive of symptoms as middle age is approached that a priori we should be inclined to regard its existence in a healthy young man as constituting at most no more than a minimum objection to the man as a recruit.

One of the contributors to the discussion, as it has thus far been published in the *Journal of the Royal Army Medical Corps* for February, is Captain Robert J. Blackham, who may be presumed to have considered the disease with exceptional carefulness, as he states that his own admission into the army was made conditional on his undergoing an operation for its cure; and it seems to us that the conclusions he has arrived at with regard to its being a bar to military service are mainly such as are supported by general observation. Varicocoele, says Captain Blackham, works a disability from which the patient may recover spontaneously, but it generally becomes aggravated until middle age is reached. It is often the cause of intense neuralgia, and sometimes produces profound depression of spirits and other nervous symptoms. Therefore it is right to look upon it as a bar to enlistment, though it is almost always curable by means of a simple operation. Illogical as it may seem, his implied advice to accept the subjects of varicocoele for enlistment and then submit them to a curative operation in a military hospital—illogical, that is to say, on the ground that a technically unallowable enlistment must be allowed before recourse to the

military hospital becomes possible—seems worthy of being followed. "Likely recruits," he says, "whose only bar to enlistment is a moderate degree of varicocele might be passed into the service on the understanding that they submit to an operation as soon as possible after enlistment." If such an understanding is susceptible of enforcement, we see no objection to it.

THE TEACHING OF THE HISTORY OF MEDICINE.

It will, I believe, be admitted that the average physician of to-day, although he knows much more about disease and is far better equipped to treat human maladies, is possessed of much less culture and refinement, and occupies a position much lower in the regard and esteem of his fellow citizens, than the physician of fifty or a hundred years ago. This condition of affairs is largely due to the tendencies of modern education. There is a very general movement toward abbreviating the so called undergraduate studies of students who seek a medical education, in order that more and more time may be given to strictly professional work. It seems to be taken for granted by those in charge of general educational affairs that it is important to make it easier for a young man to acquire a medical education, and the natural result of this will be that more and more of the young men of the future will take up the study of medicine. Were there a dearth of physicians in our communities there might be some reason for encouraging young men to study medicine, but there being, as is well known, many more physicians in nearly all of our communities than are needed, it seems to me that a medical education should be made more difficult instead of easier to obtain. I believe, too, that we should have better physicians and that our profession would stand higher in the public esteem if more attention were given to the study of those subjects which make for the general culture of the individual, not only in undergraduate life, but during the years of professional training as well. It is true that the horizon of medicine is constantly widening and that the hours of medical study are lengthening and becoming more and more crowded with the new details of anatomy, pathology, diagnosis, and treatment which he must master. These facts, however, do not seem

to me to be good reasons for shortening either the term of preliminary education or the term of medical education, but rather, in view of all the facts, I should consider them good reasons for lengthening both terms. True, if we make it more expensive and more difficult to obtain a medical education, we shall have fewer aspirants for the medical degree. This, it seems to me, would be a more desirable condition of affairs than exists at the present time. We need to educate fewer physicians and we need to educate them more broadly and better. It is not sufficient for our medical schools to turn out men who are masters of the human machine, as a machine, but we need cultured, educated physicians with a breadth of mind which will make them students of human nature as long as they live and which will enable them to stand as leaders among men. Men so educated should have a knowledge, not only of the medicine of to-day with some foresight into the medicine of the future, but also a knowledge of the medicine of the past and of the lives and struggles of those who have made the medicine of to-day what it is. Therefore I would have the history of medicine taught as a part of the curriculum of all of our medical schools.

There is no department of education which does so much to broaden the individual and give character to culture as the study of history, and no branch of human knowledge can be mastered in the broadest sense of the word without studying the history of the lives and struggles of those who have previously labored as pioneers in the same field. As a profession we do not cherish and honor as we should the heroes of medicine, and if we ourselves are ignorant of the traditions and history of our science and pay little heed to them, is it any wonder that others not of our profession should have little knowledge of them? The names of those who have achieved great deeds in other walks of life are sung by the poet, written by the story teller, or recorded with reverence by the historian, and their names are writ high upon the tablets of the Halls of Fame. Why should the names of the masters of medicine be forgotten and neglected? It is because we neglect them ourselves. Students of medicine are elaborately instructed concerning all the special branches of medicine and surgery, but they gain no knowledge as to who were the pioneers along the

special lines they are studying, as to who first recognized and described certain diseases, who first devised and performed certain surgical operations, or who first discovered and accurately described the structure and functions of certain organs. Names, to be sure, are often used, but more as adjectives than as proper nouns, since many diseases, surgical operations, and anatomical structures have been given the names of those who first described them, but nothing is taught as to who these persons were, when or where they lived, or what their influence was upon the science of medicine. Those who have not had their taste stimulated by at least a brief sketch of the wonderfully fascinating story of the history of medicine are deprived of a very great pleasure, the pleasure of knowing where to look and how to look and of wanting to look for more knowledge about the early history of some special department of medicine in which they are especially interested.

I am not advocating an exhaustive and elaborate course of study on the history of medicine, such as is given in our universities on general history, but it is rather a brief account of the different periods of medical history, with sketches of the lives of the leading men in each period, and a more or less detailed description of the great discoveries which have made epochs in the history of medicine, which should form a part of the broad education of every physician. Open the volume here and there and give the student a taste of its interesting contents, and he will eagerly turn to the pages himself in later life with ever increasing pleasure and profit. There has been of late years an awakening of interest in the subject of medical history, but as yet it has not reached our medical schools, except here and there, and so far as I know there are but two regular courses of lectures given upon this subject in the United States. I feel sure, however, that the time is not far distant when the importance of broader medical education, an education which will tend to produce medical men of deeper learning, of more culture, and of greater refinement, will be recognized, and when in the broader curriculum of the future there will be included a systematic course of teaching on the history of medicine.

BURNSIDE FOSTER.

ANOTHER UNIVERSAL LANGUAGE.

We have received from A. Maloine, of Paris, a volume containing a grammar, exercises, and a dictionary of Spokil,¹ another of the fashionable "universal" languages. We have little faith in any attempt to impose upon the world, even the credulous scientific part of it, a hastily manufactured language, and Spokil seems to us, if anything, a trifle more barbarous than its congeners, resembling nothing in the heavens above, the earth beneath, or the waters under the earth. If people wish to study other languages than their own, why not undertake one that possesses a literature to reward the pains taken? Mediæval Latin and modern Greek seem to have qualifications as a universal language that none of these hastily compacted makeshifts can ever acquire.

THE POSSIBLE PERIL OF STATING A SCIENTIFIC FACT.

We learn from the *Progrès médical* for January 28th that a widow lately brought a suit for damages against the publisher of a graduation thesis entitled *De l'imprégnation de la mère*. It seems that the thesis presented the subject of indirect atavism, and that the widow's fiancé, horrified at the idea, derived from reading it, that his future progeny might inherit the traits of the woman's deceased husband, broke the engagement. We fancy she will not recover damages.

THE HATFIELD PRIZE.

We would particularly call our readers' attention to the notice, published in our news columns, of the Nathan Lewis Hatfield prize for original research in medicine, to be awarded by the College of Physicians of Philadelphia. The subject announced, The Clinical and Pathological Diagnosis of Sarcoma, is one that may well interest clinical and laboratory investigators, and the amount to be awarded is large enough to repay a man for extensive research.

THE MEDICAL GEWALT.

This amusing annual, supposed to have some occult connection with the alumni of Mt. Sinai Hospital, has recently been received at this office. We are lampooned in it, in company with several others of the editorial guild, but its sallies are so good-natured that we have derived the usual pleasure from their perusal.

¹ *Spokil, langue internationale*. Par le Dr. Ad. Nicolas, médecin consultant à la Bourboule. Paris: A. Maloine, éditeur.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 20th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, February 21st.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, February 22nd.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, February 23rd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, February 24th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, February 25th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 11, 1905:

	February 11.		February 4.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	201	3	185	8
Diphtheria and croup.....	275	42	311	49
Scarlet fever.....	246	14	233	15
Smallpox	3	1	1	1
Chickenpox	101	..	135	..
Tuberculosis	368	181	343	180
Typhoid fever.....	28	4	32	10
Cerebrospinal meningitis.....	..	29	..	33
	1,222	274	1,240	296

A Mistake Regarding the Site of a Fire.—We are requested to state that the William Street fire of February 11th did not affect the Empire State Engraving Company, which has much of this *Journal's* half tone work on hand, but a firm of somewhat similar name.

Cerebrospinal Meningitis has gained such prevalence during the last month, especially among children of this city, that a return of the epidemic which swept over the city a year ago and which was checked only after hundreds of deaths had been recorded, is feared. Three boys died on February 10th in Bellevue Hospital from the disease, a record which the worst days of a year ago did not equal.

The New York Skin and Cancer Hospital.—The governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will give a special course of four lectures on *The Relation of Diseases of the Skin to Internal Dis-*

orders in the out patient hall of the hospital on Wednesdays at 4.15 p. m., commencing March 1, 1905. The course will be free to the medical profession. William C. Witter, chairman of executive committee.

The Medical Library and Historical Journal, of 1313 Bedford Avenue, Brooklyn, N. Y., owing to the almost total destruction by fire of the establishment of its printers on February 13th, begs to ask the kind indulgence of its subscribers and advertisers for delayed publication of the January, 1905, number. Fortunately, duplicate copies of all important communications were made before sending them to the printer, so the heavy loss incurred by the *Journal* will not be shared by its contributors or readers. The editor desires to announce that immediate steps have been taken for the making of new plates and duplicating the entire number which was in press, and that this issue will be published at the earliest possible date.

The Oppenheimer Institute.—We have been requested to publish the following announcement:

The undersigned, who have hitherto allowed their names to be used as approving of the Oppenheimer Institute, are constrained hereby to withdraw their endorsement. While there is much of which they approve in the method of the Oppenheimer treatment, the character of the advertisements used, based as are some of them on unproved assertions and especially the exploiting of a philanthropic as a commercial enterprise; the unusual means that have been employed in the issue of stock; all make them unwilling that their names should longer appear as endorsing an enterprise for which they are unable to assume any responsibility.

HENRY C. POTTER,
C. H. PARKHURST,
ROBERT COLLYER,
L. D. KENNEDY.

New York, February 15, 1905.

The New York State Medical Association, New York County.—A stated meeting of this association will be held on Monday, February 20th, at 8 p. m. Programme: Presentation of clinical cases or reports, pathological specimens, new instruments, etc.; A Memorial to Dr. M. L. Maduro, by Emil Mayer, M. D.; "Symposium" on Alcohol; Alcohol in Health, by Professor Russell H. Chittenden, of Yale University, New Haven, Conn.; Alcohol in Disease, by George L. Peabody, M. D.; Wood Alcohol, by Mr. J. P. Atchinson, chemist to the New York Board of Health; Legislative Aspects of Alcohol, by the Honorable Maynard Y. Clement, New York State Deputy Commissioner of Excise; Substitutes for Alcohol, by Charles B. Fitzpatrick, M. D.; discussion by Professor Graham Lusk, Dr. Crothers, the Honorable De Lancey Nicoll, Dr. Mason, and others.

Brooklyn Branch of the Board of Health.—Health Commissioner Darlington and Dr. T. L. Fogarty, the assistant sanitary superintendent for the borough of Brooklyn, are now actively engaged in looking for a site on which to build headquarters for the board of health in that borough. When such a site is secured the board of estimate will be asked for \$100,000 for the erection of a modern building. The officials have been driven to activity by the unsanitary and rundown condition of the quarters in Clinton Street that are

now used by the department. They were condemned by the last grand jury. Commissioner Darlington has several sites in mind, but it is said that he favors one that will be more centrally situated than the downtown section of the borough.

Academy of Medicine.—The section in ophthalmology will meet on Monday, February 20th, at 8.15 p. m. Order: Presentation of Patients; (a) Wood Solinter Ten Weeks in the Anterior Chamber, with Encapsulation and Accompanying Iritis, and Consequent Removal, by A. Wiener, M. D.; (b) Case of Retraction Movement of the Eyeball, by A. Schapring, M. D.; (c) Epithelioma of the Conjunctiva and Cornea, by the chairman. Presentation of New Instruments: Model of a New Bifocal Glass, by George S. Dixon, M. D. Reports of Cases: A Clinical and Pathological Report of a Case of Annular Scleritis, by Edward L. Oatman, M. D. Paper, The Advantages of Röntgen Ray Diagnosis in Ocular Injuries from Foreign Bodies, with Demonstration of Method of Localization, by William M. Sweet, M. D., of Philadelphia; discussion by Dr. C. T. Kipp, Dr. T. R. Pooley, Dr. E. Gruening, Dr. P. A. Callan, Dr. F. M. Wilson, and others; paper, Unilateral and Other Unusual Forms of Nyctagmus, by Alexander Duane, M. D. Wilbur B. Marple, M. D., chairman; Herbert W. Wootton, M. D., secretary, 35 West Forty-fifth Street.

The section in medicine will meet on Tuesday, February 21st, at 8.15 p. m. Order: Presentation of Cases and Specimens; Clinical Reports: An Unusual Case of Chorea, by William B. Noyes, M. D.; papers with discussions, (a) Contribution to the Alcohol Question, by S. T. Beebe, Ph. D.; (b) The Treatment of Renal Inadequacy Complicated by an Apparent Nephritis, by W. J. Pulley, M. D. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

The section in laryngology and rhinology will meet on Wednesday, February 22nd, at 8.15 p. m. Order: Presentation of Cases; (a) Adenocarcinoma of Nose; Radical Operation, by J. J. McCoy, M. D.; (b) Peculiar Laryngeal Cough (barking) in a Young Girl, by George B. McAuliffe, M. D.; (c) Melanosarcoma with Local Manifestations in the Upper Air Passages, by Wendell C. Phillips, M. D. Paper, (a) Report on the Use of Stovaine, by C. G. Coakley, M. D. Discussion of the Forms, Pathology, Diagnosis, and Treatment of Non-Malignant Growths of the Larynx, to be opened by Dr. C. H. Knight, Dr. D. Bryson Delavan, Dr. C. C. Rice, and Dr. W. Kelly Simpson. (Members having cases of this class are requested to present them at this meeting.) Specimens and New Instruments: (a) A Chair for Rhinologists and Laryngologists; (b) A Nasal Septometer, by Henry Wallace, M. D. Lewis A. Coffin, M. D., chairman; Lee Maidment Hurd, M. D., secretary, 15 East Forty-eighth Street.

The section in obstetrics and gynecology will meet on Thursday, February 23rd, at 8.15 p. m. Order: Presentation of Specimens. Paper, Is Craniotomy on the Living Child Ever Justifiable, by Simon Marx, M. D.; discussion will be opened

by Dr. E. H. Grandin, and continued by Dr. E. A. Ayers, Dr. M. McLean, Dr. Austin Flint, Jr., Dr. J. O. Polak, Dr. J. D. Voorhees, and others. Charles F. Adams, M. D., chairman; Arnold Sturmdorf, M. D., secretary, 51 West Seventy-fourth Street.

PHILADELPHIA.

American Oncologic Hospital.—At a meeting of the trustees, held last month, Dr. G. Oram Ring was elected consulting ophthalmic surgeon to this hospital.

Personal.—Dr. Alfred Gordon has been appointed chief of the clinic of nervous and mental disease at Jefferson Medical College and examiner of the insane at the Philadelphia General Hospital.

The Ladies' Auxiliary of the Mount Sinai Hospital opened a bazaar at 507 South Eighth Street on the evening of February 10th. The proceeds will be devoted to the needs of the hospital, which is to be dedicated in the near future.

License of a Lying-in Establishment Revoked.—On February 2nd the board of health revoked the license of Mrs. Matilda Hughes for the maintenance of a lying-in establishment at 503 North Sixth Street, because of irregularities which were reported to the board by the coroner.

Appointed to the State Board of Medical Examiners.—The Governor of Pennsylvania sent to the Senate on February 1st the names of W. D. Hanaker, of Meadville, and M. P. Dickson, of Glen Riddle, as his appointees on the Pennsylvania State Board of Medical Examiners for three years.

Annual Dinner at Southern Dispensary.—The directors of the Southern Dispensary, 318 Bainbridge Street, held their annual dinner at the hospital, at which they entertained the twenty-five members of the staff. The directors are: John Thompson, Charles Thompson, John Middleton, Dr. William H. Hickman, and Paul J. Fields.

German Hospital Trustees Organize.—The trustees of the German Hospital organized for the year on January 31st with the election of the following officers: President, Hermann Hessenbrück; vice-president, M. Richards Muckle; secretary, Reverend F. Wischan; treasurer, Edmund R. Teubner; solicitor, Joseph G. Rosengarten.

Concert for the Benefit of the University Hospital.—On Thursday afternoon, February 9th, the Philadelphia Orchestra gave a concert of popular music in Horticultural Hall for the benefit of the men's medical ward of the hospital of the University of Pennsylvania. Refreshments were served during the concert, which lasted from 3.30 to 6.

Infallible Cure for Tuberculosis.—At the meeting of the Philadelphia County Medical Society on January 25th, Dr. Henry N. Fisher complained that two licensed practitioners of medicine were obtaining money from poor Italians in the south-eastern part of the city by professing to have an infallible cure for consumption. The matter was referred to the censors.

Officers of the Neurological Society.—The following officers were elected at the meeting of the Philadelphia Neurological Society on December 24, 1904: President, Dr. Joseph Sailer; vice-presidents, Dr. Charles S. Potts and Dr. William Pickett; secretary, Theodore H. Weisenburg; treasurer, Dr. J. H. W. Rhein; council, Dr. Charles K. Mills, Dr. William G. Spiller, Dr. D. J. McCarthy.

State Hospital for Tuberculosis.—In the State legislature, Representative Hutt, of Philadelphia, introduced a bill on February 1st, for the selection of a site and the erection of a State hospital for the treatment of incipient tuberculosis. The institution is to be located within the limits of the State forestry reservation in Franklin county, of which from 500 to 1,000 acres are set aside, and an appropriation of \$200,000 is provided by the bill for the accomplishment of its provisions.

Polyclinic Hospital.—The following is a statement of the work done at the Polyclinic Hospital and College for graduates in medicine during January, 1905: Patients admitted to house, 124; patients discharged, 104; new patients treated in dispensary, 1,597; total visits to dispensary, 7,513; accident ward, 593. The week beginning February 6th was devoted to special clinics, lectures, and demonstrations of diseases of the ear, nose, and throat.

Publishers Fined.—Judge McPherson, in the United States Circuit Court, fined the Historical Publishing Company \$10.00 and costs for sending by express a medical book containing an immoral paragraph. The book was one of the class of family medical works, known as "medicology," of which the company claims to have sold 400,000 copies. The paragraph, which caused the prosecution and which is said to have been written by a reputable medical man, dealt with the prevention of pregnancy. The objectionable paragraph has been expunged from the book.

Scientific Society Meetings for the Week Ending February 25, 1905.—Monday, February 20th, Medical Jurisprudence Society; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, February 21st, Section in Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences. Wednesday, February 22nd, Philadelphia County Medical Society. Thursday, February 23rd, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, February 24th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

The Nathan Lewis Hatfield Prize for Original Research in Medicine, Awarded by the College of Physicians of Philadelphia.—Five hundred dollars will be awarded to the author of the best essay submitted in competition on or before March 1, 1906, on the subject of The Clinical and Pathological Diagnosis of Sarcoma. Essays must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device and containing the name and address of the author. They must embody original observations and researches. The com-

mittee reserve the right to make no award if none of the essays submitted is considered worthy of the prize. For further information address Francis R. Packard, M. D., chairman, College of Physicians, 219 South Thirteenth Street, Philadelphia, Pa.

Deaths.—Dr. Michael O'Hara died at his home, 227 South Twentieth Street, on January 31st, aged 72 years. Dr. O'Hara graduated from the medical department of the University of Pennsylvania in 1852, so that in 1902 he was able to celebrate the fiftieth anniversary of his entrance into the profession. Dr. O'Hara's preliminary education was obtained in the public schools of Philadelphia. During the Civil War he was assistant surgeon in the United States Navy and later surgeon of the One Hundred and Fiftieth Regiment of Pennsylvania Volunteers. Dr. O'Hara was visiting physician to St. Mary's Hospital and to the House of the Good Shepherd for many years; he was medical director of St. Agnes's Hospital from 1894 to 1898. Dr. O'Hara was a member of the Medical Society of the State of Pennsylvania, of the Philadelphia County Medical Society, and of numerous other scientific bodies.

Changes of Address.—Dr. B. T. R. Clark, to Bala, Pa.; Dr. J. Coles Brick, to 1210 Spruce Street; Dr. S. W. Latta, to 223 South Fourth Street; Dr. E. L. Graf, to 5214 Spruce Street; Dr. J. Howe Adams, to Paoli, Pa.; Dr. E. E. Keiser, to 6933 Tulip Street; Dr. Joseph M. Asher, to 1355 North Broad Street; Dr. Clifford B. Farr, to 326 South Seventeenth Street; Dr. J. Eugene Fahy, to 804 South Forty-ninth Street; Dr. T. Ridgway Barker, to 1703 Spruce Street; Dr. Rebecca Fleisher, to northwest corner Broad and Locust Streets; Dr. Charles S. Barnes, to 41 South Nineteenth Street; Dr. F. I. Hurlock, to 2831 Diamond Street; Dr. H. Brooker Mills, to 114 South Eighteenth Street; Dr. George D. Morton, to 139 South Fourth Street, room 202; Dr. Samuel McClary, 3d, to 308 South Fifty-second Street; Dr. Mazyck P. Ravenel, to 908 Pine Street; Dr. Harry W. Weyant, to 911 North Forty-first Street; Dr. F. H. Miliken, to 3708 Walnut Street; Dr. William A. Steel, to 2528 North Fifth Street; Dr. Charles C. Royce, to Ardmore, Pa.

For a Better Milk Supply.—The milk exchange adopted the following rules in January for the guidance of its members engaged in producing and distributing milk: First. Cows shall be healthy and free from any disease. Second. Milk from any cow suspected of being ill shall be discarded from the herd milk. Third. The dairyman and his household must be free from any contagious disease. Fourth. Milk pails used in milking should have a covered top, with a small opening, protected by wire sieve and cloth strainer. Fifth. All cans and dairy utensils shall be scrupulously clean before using. Sixth. No milk to be kept or sold from living rooms or any room connected with the stable. Seventh. Absolute cleanliness of bottles and bottling apparatus. Eighth. Clean room for filling bottles. Ninth. Clean boxes for storage of bottles or cans, with

drains connected to avoid sewer gas. Tenth. Delivery wagons to be thoroughly clean, both inside and outside. Dr. A. C. Abbott has suggested the following measures, which he hopes the milk exchange will adopt: First. That all milk cans be thoroughly washed before being returned to the farms or dairies. Second. That dairymen and milk dealers generally effectively screen all rooms in which milk is handled, so as to exclude flies.

The Health of the City.—During the week ending February 4th, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	76	7
Scarlet fever.....	56	3
Chickenpox.....	52	0
Diphtheria.....	56	9
Cerebrospinal meningitis.....	4	0
Measles.....	10	0
Whooping cough.....	3	3
Tuberculosis of the lungs.....	56	56
Pneumonia.....	84	82
Erysipelas.....	15	3
Anthrax.....	1	0

The total deaths for the week was 538, in an estimated population of 1,438,318, corresponding to an annual death rate of 19.45 per 1,000 population. The total infant mortality was 94; 75 under one year and 19 between one and two years. There were 45 still births; 28 males and 17 females. The following deaths from other transmissible diseases were reported: Tuberculosis other than tuberculosis of the lungs, 10; puerperal fever, 2; dysentery, 3; diarrhoea and enteritis under two years, 17. The temperatures were low, ranging from a minimum of 7° on the second to a maximum of 27° on the first. There were two snow flurries.

Medical Society Programmes.—The following was the programme of the Society of Normal and Pathological Physiology, University of Pennsylvania, at the meeting held February 6th: The Experimental Production of Monsters, by Professor E. G. Conklin; On the Action of Copper and Copper Salts Upon Bacteria in Water, by Dr. N. Gildersleeve; Studies on Cell Granula, by Professor Leo Loeb.

The meeting of the Philadelphia County Medical Society, held February 8th, was devoted to a "symposium" on Gastric Ulcer. The following papers were read: Dr. Joseph McFarland, *Ætiology and Pathology*; Dr. A. P. Francine, *Incidence in Philadelphia*; Dr. Campbell P. Howard, of Johns Hopkins Hospital, by invitation, *Symptomatology and Diagnosis*; Dr. Frederick P. Henry, *Medical Treatment*; Dr. W. L. Rodman, *Surgical Treatment*.

The following programme was offered at the meeting of the Pathological Society of Philadelphia, held February 9th: Dr. W. M. L. Coplin, *Specimens from a Case of Hæmorrhagic Pancreatitis*; Dr. A. O. J. Kelly, *Specimens from a Case of Hæmorrhagic Pancreatitis*; Dr. J. H. Musser (a), *Cancer of the Pancreas*; (b), *Duodenal Ulcer and Cirrhosis of the Liver*; (c), *Ulcerative Endocarditis*; (d), *Cancer of the Stomach and Peritonitis*; Dr. J. Funke and Dr. S. S. Cohen, *Syphilis of the Liver—Sclerogummatous*

Type; Dr. H. R. M. Landis, *Tuberculosis of the Liver*; Dr. D. J. McCarthy, *two card specimens*.

The following was the programme of the Northern Medical Association at its meeting, February 10th: *Ætiology and Pathology of Dilatation of the Stomach*, by Dr. E. B. Sharp, of Camden, N. J., by invitation; *Diagnosis and Prognosis of Dilatation of the Stomach*, by Dr. John H. Musser, by invitation; *Medical Treatment of Dilatation of the Stomach*, by Dr. Albert Bernheim; *Surgical Treatment of Dilatation of the Stomach*, by Dr. John B. Deaver. The discussion was opened by Dr. J. P. Strittmatter and Dr. Judson Daland, by invitation.

The following was the programme of the section in general medicine, College of Physicians, at its meeting, held February 13th: Dr. A. O. J. Kelly exhibited a patient recovered from Pyopneumothorax after Spontaneous Evacuation through a Bronchus and Subsequent Resection of a Rib; Dr. A. A. Eshner, *Universal Congenital Atichia*; Dr. Sailer, Dr. Geisler, and Dr. Welty, *Polycythæmia and Cyanosis*, with a Report of Two Cases; Dr. J. Norman Henry, *Paratyphoid Fever*, with a Report of Six Cases; Dr. T. L. Coley, *Diet in Typhoid Fever*.

The following was the programme of the Philadelphia Pediatric Society at its meeting, held February 14th: Dr. Robert S. McCombs exhibited an Infant with Nodding Spasm; Dr. William J. Taylor, *Case of Pseudomuscular Hypertrophy*; Dr. J. P. Crozer Griffith, *Case of Chronic Cerebrospinal Fever, slowly recovering*; Dr. George W. Norris, *Child with Multiple Exostoses*; Dr. J. P. Crozer Griffith, *Fatal Case of Chorea*.

GENERAL.

La Grippe in Springfield, O.—There are said to be over 2,500 cases of la grippe in Springfield, O.

Scarlet Fever in Syracuse, N. Y.—Eighty-three cases of scarlet fever are reported from Syracuse in private houses only.

Accident to a Hudson, N. Y., Physician.—Dr. H. N. Brown, of Hudson, was severely injured by a fall on the railroad track near Stockport Centre, on February 8th.

Ramsey County, Minn., Medical Society.—The Ramsey County Medical Association held their annual meeting and election of officers on January 30th. The following physicians were elected officers: President, Dr. A. W. Dunning; vice-president, Dr. Burnside Foster; secretary, Dr. E. S. Geer; treasurer, Dr. Frederick Leavitt; and necrologist, Dr. A. F. Whitman.

City Hospital, Louisville, Ky.—Dr. Clyde Brady, of Greenup, Ky., has been appointed by the faculty of the Kentucky School of Medicine as an interne at the City Hospital, to fill the unexpired term of Dr. William Fullbright, who resigned recently to accept a position as physician at the Texas Insane Asylum.

The Orange County, N. Y., Medical Society has elected officers as follows: President, Dr. E. D. Woodhull, of Monroe; first vice-president, Dr. F. W. Dennis, of Unionville; second vice-presi-

dent, Dr. John T. Howell, of Newburgh; secretary and Treasurer, Dr. L. G. Distler, of West-town.

The Columbia County, N. Y., Medical Society has elected the following officers: President, Dr. O. Howard Bradley; vice-president, Dr. Eloise Walker; secretary and treasurer, Dr. Hortense V. Bruce; fellow to State association meeting, Dr. T. Floyd Woodworth, of Kinderhook; alternate fellow, Dr. H. W. Johnson.

German Hospital, Newark.—During the past year nearly \$40,000 was spent on the German Hospital in Newark, N. J., in improvements. To assist in raising funds for the institution, singers from the Metropolitan Opera House, New York, will present the operas *Faust* and *Il Trovatore*, in Newark on March 6th and 7th.

Dinner to Dr. Rodman.—Dr. William L. Rodman, the Philadelphia surgeon and professor, as guest of honor, was entertained by Dr. Joseph Dudley Irwin with a theatre party in Louisville on January 26th, and a dinner at the Pendennis Club afterward. With him, as Dr. Irwin's guests, were some of the physicians of Louisville.

Franklin County, N. Y., Medical Society.—At the fiftieth annual meeting of this society, held on January 10th, the following officers were elected: President, Dr. C. C. Tremblay, of Saranac Lake; vice-president, Dr. W. A. Wardner, of St. Regis Falls; secretary and treasurer, Dr. George M. Abbott, of Saranac Lake; censor, Dr. George E. McClellan.

Teller County, Colo., Medical Society.—The following officers have been elected to serve during the coming six months: President, Dr. V. R. Pennock, of Cripple Creek; vice-presidents, Dr. T. M. Latimer, of Victor; Dr. B. F. Jones, of Goldfield, and Dr. J. A. McIntyre, of Florissant; treasurer, Dr. J. A. Dunwoody, of Cripple Creek; and secretary, Dr. H. G. Thomas, of Victor.

Cook County, Ill., Hospital.—A new medical ward, with 100 beds, will be opened at the Cook County Hospital as a result of action by the public service committee on January 20th. This committee concurred in the desire of the hospital committee that the old ward for contagious diseases at the county hospital be changed into a medical ward. The contagious disease patients are now taken to the new hospital for contagious diseases. The alterations will cost about \$4,000.

Nurses Graduated from the Denver County Hospital.—The following young women graduated from this institution on January 12th: Ida May Mercer, Elizabeth S. Belcher, Vida Matthews, Cynthia P. Dozier, Edna McHenry, Minnie J. McCrossen, Catherine E. Wilkin, Marie M. Farner, R. Virginia Bainard, Jessie B. Leckliter, Edith V. Orman, Clara A. Stevens, Margaret A. Wheatley, Carrie M. Richardson, Catherine B. Crockford, Margaret Fitzgerald, Mary C. Trafford, Christine A. Hammon, and Flora V. Plumley.

Cleveland City Hospital.—Dr. D. T. Hanson was elected president of the staff of physicians

of the Cleveland City Hospital at the annual meeting of the staff on January 17th. Dr. J. N. Lenker was elected vice-president, and Dr. C. C. Stewart was elected secretary. An elaborate medical library is being planned for the hospital. There is no large library of medical literature at the hospital at this time and the members of the staff have been quietly taking the matter up during the past year.

Samuel Merritt Hospital, Oakland, Cal.—Permission has been granted to the trustees of the Samuel Merritt Hospital fund to begin work on the big enterprise provided for by the will of the late Catherine Garcelon, who bequeathed property worth \$750,000 for the erection of a free hospital for incurables. Owing to complications and the fact that much of the property left by the deceased is real estate not readily disposed of, the project for which the means were left has been delayed since 1891.

Nurses Graduate at St. Luke's Hospital, St. Paul.—The annual commencement of the St. Luke's Hospital training school was held on January 17th, when eight nurses were graduated. The exercises were held in the guild hall of Christ Church, and the following received diplomas: Margaret Crowl, of Currie; Florence Grady, of Chippewa Falls; Etta Francis, of St. Paul; Beatrice Locke, of West Duluth; Della Sweeney, of Anoka; Cora Quinn, of Spring Valley; Frances Fawcett, of St. Paul; Margaret McGregor, of Hawley.

Chautauqua County, N. Y., Medical Association.—The election of officers of this association, held on January 24th, resulted as follows: President, Dr. V. D. Bozovsky, of Dunkirk; first vice-president, Dr. B. S. Swetland, of Brocton; second vice-president, Dr. Morris N. Bemus, of Jamestown; secretary and treasurer, Dr. H. A. Eastman, of Jamestown (reelected); trustees, Dr. H. F. Hunt, of Dewittville (reelected); fellows to the meeting of New York State Medical Association at New York in October, Dr. William M. Bemus, of Jamestown; Dr. George F. Smith, of Sinclairville; and Dr. J. A. Weidman, of Dunkirk.

Dr. Charles H. Herty, a graduate of the University of Georgia, has been elected professor of chemistry in the University of North Carolina. For the past year Dr. Herty has been in the service of the government in the forestry department. This position of professor of chemistry in the University of North Carolina was offered him a year since, but he was not in position to accept the place. The University of North Carolina was anxious to secure his services, however, and held the position open for a full year in order to get a favorable reply from Dr. Herty. Dr. Herty will take charge of his new work July 1st.

Civil Service Examinations for the State and County Service.—The State Civil Service Commission announces general examinations to be held March 11, 1905, including the following positions: Matron, State hospitals for the insane; orderly (male nurse), Erie County Hospital; stew-

ard (woman), institutions for women; veal inspector; woman physician. State hospitals and institutions. Applications for these examinations must be made on or before March 7th. Full particulars of the examination and blank applications may be obtained by addressing the Chief Examiner of the Commission at Albany.

Dr. Leonard J. Gordon, of Jersey City, died on January 18th, after a long illness, aged 62 years. He was a lieutenant during the Civil War and for ten years after its close was a Wall Street broker. He then studied medicine at Bellevue and practised for a time in Jersey City, later becoming chemist at Lorillard's tobacco plant, a position he retained until five years ago, when he resigned to become director of the Jersey City Public Library. Dr. Gordon was one of the best known and most public spirited citizens of Jersey City, and his benefactions were multitudinous. The city officials are preparing a great memorial service in memory of Dr. Gordon, and his bust will be placed in the Public Library.

Illinois State Board of Health.—The Illinois State Board of Health held its annual meeting on January 31st, in Springfield. The old officers were elected as follows: President, Dr. George W. Webster, of Chicago; secretary, Dr. J. A. Egan, of Springfield; treasurer, Dr. P. S. Wessel, of Moline. Plans for the board's crusade against tuberculosis were mapped out, and a bill recently introduced in the legislature providing for the establishment of a State hospital for consumptives was approved. In the report of William G. Laub, chief lodging house inspector in Chicago, it is stated that basement lodging houses and those formerly having "double deck" and "triple deck" beds, with small air space and poor ventilation, are no longer to be found in that city.

LeFlore County, Miss., Medical Society.—The LeFlore County Medical Society held its regular monthly meeting in Masonic Hall, Greenwood, on February 6th, Dr. Dickens presiding. President-elect Dr. S. A. Eggleston was installed as president; Dr. J. H. Lucas, vice-president; Dr. D. S. Humphreys, secretary and treasurer; and Dr. S. L. Brister, censor, were also installed. Dr. Eggleston's presidential address on The Prophylaxis of Consumption was read and discussed. Dr. S. L. Brister submitted his paper on Dysentery. Dr. J. M. Anderson was unavoidably detained from attending, so the society was denied the pleasure of hearing him. An attractive programme for the March meeting was arranged as follows: Hematuria, by Dr. J. W. Armistead, of Sidon; discussion, led by Dr. W. B. Dickens, of Greenwood; Pneumonia, by Dr. W. T. Matthews, of Greenwood; discussion, led by Dr. C. N. D. Campbell, of Greenwood. After some further routine business the society adjourned for luncheon.

Statement of Mortality in Chicago for the Week Ending February 11, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Feb. 11, 1905	Feb. 4, 1905	Feb. 13, 1904
Total deaths, all causes.....	554	530	961
Annual death rate per 1,000.....	14.50	13.88	17.88
By sexes—			
Males.....	310	297	379
Females.....	235	233	282
By ages—			
Under 1 year.....	123	114	118
Between 1 and 5 years.....	82	70	83
Over 60 years.....	105	104	144
Principal causes of death.....			
Acute intestinal diseases.....	20	23	14
Apoplexy.....	19	16	14
Bright's disease.....	32	36	40
Bronchitis.....	40	28	30
Consumption.....	68	67	71
Cancer.....	29	20	25
Convulsions.....	14	11	20
Diphtheria.....	11	13	11
Heart disease.....	37	33	36
Influenza.....	12	6	7
Measles.....	5	5	0
Nervous diseases.....	21	23	31
Pneumonia.....	118	115	175
Scarlet fever.....	1	1	5
Smallpox.....	2	6	0
Suicide.....	8	5	6
Typhoid fever.....	4	3	4
Violence other than suicide.....	20	31	33
Whooping cough.....	10	7	0
All other causes.....	84	85	139

Continued deficiency of sunshine is the probable cause of the increased mortality rate of the week—probable, because the increase is exclusively among the young, those under five years of age. It is this age period which is the most susceptible to climatic influences, and the increase of most of the contagious diseases of childhood may be fairly attributed to the lack of bactericidal action of sunshine during the past few weeks.

Advice to Patients With Venereal Disease.

The following instructions are printed by the Ohio State Board of Health and sent in circular form to practitioners for distribution among their patients suffering from venereal disease:

Circular of Information Adopted by the Conference of State and Provincial Boards of Health of North America.

Issued by the State Board of Health of Ohio.

We hand you this leaflet believing that you would not willingly communicate your disease to some innocent person.

Many fail to comprehend the exceedingly disastrous results that often follow these diseases. Many cases of blindness, complete disability, and not infrequently death result from them. Gonorrhea is one of the most frequent causes of diseases peculiar to women. So serious a menace have these diseases become to the public health that the medical profession and sanitarians in all countries have become alarmed, and are advocating measures for their prevention.

Syphilis (or pox) is especially a disease from which innocent persons may suffer, as it usually produces sores in the mouth or on the lips, hence may be conveyed by kissing, drinking from the same cup, or using anything which has been put to the lips or into the mouth of one affected by the disease.

These diseases are often communicated when the patient thinks he has recovered. Hence marriages contracted at this time of the disease result in much unhappiness, and often in the death of the wife. To protect yourself and others, we earnestly advise the following in the interest of prevention of your disease:

Follow strictly the advice of your doctor, and use no other treatment.

Remember that it takes a long time to recover entirely.

Carefully wash your hands with soap and hot water whenever you handle the private parts.

Do not have intercourse and avoid all sexual excitement until your physician says you are completely cured. Be especially careful not to rub your eyes with your fingers.

Do not allow any person to use any cup, glass, spoon, fork, or anything that you have put in your mouth.

Do not kiss any one or wipe the face of a child with a handkerchief you have used. Always use a separate towel. Burn all cloths or cotton soiled by discharges.

Pith of Current Literature

PRESSE MEDICALE.

January 11, 1905.

1. Traumatic Rupture of the Spleen and Resection of the Cartilaginous Border of the Thorax,

By MAURICE AUVRAY.

2. The Abdominal Cutaneous Reflex in Typhoid Fever and in Appendicitis in Children,

By J. A. SICARD.

1. **Traumatic Rupture of the Spleen.**—AUVRAY considers the location of the abdominal incision to be of great importance in the operation for removal of a ruptured spleen. In order to reach the injured viscus through an incision made in the location of his choice he finds it necessary to resect the cartilaginous ends of the ribs, beginning with the ninth.

2. **Abdominal Cutaneous Reflex.**—SICARD observed this reflex in 26 cases of typhoid in children, and in 22 found it either absent or greatly diminished on each side. In 2 cases the change was very transient, and in 2 cases no change whatever was observed. In appendicitis he found the reflex absent on the right side, normal on the left.

January 14, 1905.

1. Phagetic Ulcers of Hot Countries and Their Treatment,

By M. FONTOYNONT and E. JOURDRAN.

2. Non-Specific Serums in the Treatment of Tumors,

By TH. TUFFIER.

1. **Ulcers of Hot Countries.**—Fontoynont and Jourdan describe the ulcers of the foot and leg met with in Madagascar, called by them "l'ulcère malgache." The treatment employed was to paint the ulcerated surfaces each morning with a watery solution of eserine, 5 to 100, and expose them all day to the rays of the sun. During the night a protective dressing, either moist or dry, was applied.

2. **Serums and Tumors.**—Tuffier believes that the same effects are to be obtained from the injection of non-specific serums into tumors as from the injection of Loeffler's serum.

January 18, 1905.

Convulsions and Sleep,

By R. CRUCHET.

Convulsions and Sleep.—Cruchet reports two cases of convulsions of functional origin which occurred or persisted during sleep.

SEMAINE MEDICALE.

January 4, 1905.

How to Apply Dressings in Pott's Disease, By Dr. CALOT.

How to Apply Dressings in Pott's Disease.—Calot describes at length and with ample illustrations the method of making extension and of applying a plaster jacket in disease of the vertebrae.

January 11, 1905.

1. Nephritis from Sublimite Poisoning,

By M. A. CHAUFFARD.

2. The Mortality of General Anæsthesia with Scopolamine-Morphine.

1. **Nephritis from Sublimite Poisoning.**—Chauffard describes a severe attack of nephritis

caused by the ingestion of a solution of corrosive sublimate, in which there was complete suppression of urine for five days.

2. **General Anæsthesia With Scopolamine-Morphine.**—In an unsigned article it is stated that this method of general anæsthesia, which was introduced by Schneiderlein in 1900, has a mortality of about 1 per cent. In 1897 the mortality from chloroform anæsthesia was given as 1 in 2,075, that from ether 1 in 5,112.

January 18, 1905.

Operative Intervention in Chronic Arthritis Deformans,
By F. LEJARS.

Operative Intervention in Arthritis Deformans.—Lejars discusses the various operations which have been undertaken for the relief of this condition, and they vary from simple arthrotomy to resection of the hip joint, and finally concludes that operative intervention has not been of great service in this disease.

LYON MEDICAL.

January 15, 1905.

1. Paraplegia with Muscular Flaccidity, Exaggeration of the Patellar Reflex and Epileptoid Trepidation,

By M. LANNOIS and A. POROT.

2. A Case of Embolism of the Superior Mesenteric Artery,

By F. LECLERC and CH. BEUTTER.

1. **Paraplegia.**—Lannois and Porot describe a case of paraplegia with complete relaxation and atony of the muscles, epileptoid paroxysms of violent tremulous movements of the feet, complete anæsthesia, and retention of urine and fæces. On autopsy the seventh cervical, the first, second, and third dorsal vertebrae were found to be carious. The subjacent spinal cord was removed for histological examination, which revealed the presence of an intense, diffuse, transverse myelitis with ascending and descending degeneration of the cord.

2. **Embolism of the Superior Mesenteric Artery.**—Leclerc and Beutter report a case in which a tentative diagnosis of embolism of a mesenteric artery was confirmed at autopsy.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 2, 1905.

1. Emphysema of the Lungs,

By J. ORTH.

2. The Function of the Labyrinth (*To be concluded*),

By PASSOW.

3. On Urticaria,

By J. BAUM.

4. Objective, Demonstrable Cardiac Changes, Especially in Pericarditis After Attacks of Angina Pectoris,

By W. KERNIG.

5. The Therapeutic Value of Griserin,

By SCHOMBURG.

6. Scurvy Among Nurslings in Berlin,

By H. NEUMANN.

7. Adrenalin in Surgical Practice,

By HILDEBRANDT.

3. **Urticaria.**—Baum has observed that a wheal can be produced upon the skin by slight traumatism induced by ethylene glycol. He has examined microscopically the lesions thus produced. There is no exudation of white or red cells and the veins show no circulatory disturbance. Before the wheal arises, there is a dilatation of the capillaries.

4. Objective Changes in the Heart.—Kernig says that after severe attacks of angina pectoris, a rise of temperature is often seen which can be attributed to changes in the myocardium. In other cases objective changes in the heart may be observed in which there is a dilatation of one of the chambers of the heart. The author reports a case in which the left auricle became dilated. Another group of cases shows the evidence of a pericarditis with or without the formation of a transudate. The practical deduction is to keep patients after an attack of angina pectoris in bed for weeks or months to prevent sudden death. Kernig believes that the essential element of anginal attacks lies in the closure of the coronary arteries or their branches with the resultant symptoms.

5. Griserin.—Schomburg has tried this drug on twelve cases of tuberculosis. He says it exerts no influence upon the disease or upon the appetite and not infrequently causes irritation of the gastrointestinal tract.

6. Scurvy Among Nurslings.—Neumann says scurvy can follow the ingestion of raw milk heated no higher than 70° C., although a tendency of the children affected seems to exist. The author has seen fifty-nine cases since 1897, mostly among children who received milk from a certain dairy. It is important for parents to know whether or not the milk received has been previously warmed.

January 9, 1905.

1. Observations on the Cholera Epidemic in Southern Russia and Russian Middle Asia, By H. HAHN.
2. Nervous and Mental Diseases After Electrical Injuries (*To be concluded*), By A. EULENBURG.
3. Examination of Children in Connection with Behring's Theory of Tuberculosis Infection, By H. BEITZKE.
4. Aplastic, Lymphatic Leucæmia and Remissions in Leucæmia, By A. WOLFF.
5. The Function of the Labyrinth of the Ear (*Concluded*), By PASSOW.

4. Aplastic Leucæmia.—Wolff maintains that the leucocyte count in leucæmia is not as important a diagnostic factor as formerly. He says that the prognosis of a small leucocyte count is had when it is a sign of aplasia of the hæmatopoietic system. He claims that aplastic lymphatic leucæmia, a new clinical picture, is recognizable in life. In leucæmias, there are pseudoremissions characterized by lytic processes in the especially sensitive atypical young forms of leucocytes. Wolff reports a case of lymphatic leucæmia without an increase in leucocytes with an actual remission at present six weeks in duration.

5. Labyrinthine Functions.—Passow says that many of the symptoms accompanying labyrinthine disease are difficult to determine. Among these are the absence of the physiological nystagmus in turning movements, the absence of vertigo and the diminution of muscular tone. In the past year the author has seen a number of cases of middle ear disease with labyrinthine fistule, in eight of which he could demonstrate unilateral necrosis of the labyrinth.

6. Internal Treatment of Bladder Catarrh.—Posner says that in acute gonorrhœal inflammation of the bladder, local treatment is not indicated, and that the balsams are most helpful. Urotropin is most useful in catarrhs of non-tuberculous and non-gonorrhœal character, and the drugs proposed as substitutes for it, have no especial advantages. Turpentine often acts well in chronic cases.

ZENTRALBLATT FUER GYNAEKOLOGIE.

December 31, 1904.

1. A New Cystoscope Stand, By O. POLANO.
2. Total Inversion of the Uterus, By R. WANNER.
3. Histology and Pathogenesis of Chorioepithelioma Malignum, By T. BURDZINSKY.
4. A New Theory of Pelvimetry, By S. VON GASZYRSKI.

1. New Cystoscope Stand.—Polano describes a stand for the use of the cystoscope which has proved useful in the Würzburg clinic. The vesical picture can be fixed so that the observer has an opportunity of seeing it for as long a period of time as he desires.

2. Inversion of the Uterus.—Wanner reports two cases of total inversion of the uterus which were cured by extirpation. The first case developed while straining at stool fifteen days post partum. There was also a complete tear of the perinæum. In the second instance, an elderly woman sustained a prolapse while lifting a heavy load, the cause of the prolapse being a large sized pedunculated myoma.

3. Chorioepithelioma.—Burdzinsky has examined six cases of chorioepithelioma. His conclusions, much condensed, are that the neoplasm arises from the epithelial elements of the coverings of the chorionic villi and that the growth therefore always contains representatives of the two typical elements thereof. He found many mitoses in transition forms, in syncytial masses and in polynuclear protoplasmic masses, and concludes therefrom that the syncytium in chorioepithelioma is capable of dividing itself directly and indirectly. From other observations, he is convinced that the cells of Langhans arise from the syncytium, representing a later stage of development. The author also propounds a theory for the formation of metastases which is too lengthy to permit of abstraction.

January 14, 1905.

1. A Case of Primary Sarcoma of the Pelvic Cellular Tissue, By D. PULVERMACHER.
2. The Suboccipitofrontal Head Measurement, By J. KOCKS.
3. Stypticin in Uterine Hæmorrhages, By M. FREUND.
4. Anæmia and Local Anæsthesia, By B. MÜLLER.

1. Primary Sarcoma of Pelvic Cellular Tissue.—Pulvermacher reports the case of a woman with a tumor of the pelvis which proved, on laparotomy, to be a primary sarcoma of the pelvic cellular tissue. The patient succumbed, five months later, to a recurrence. The growth appeared to have started in the right broad ligament and was of the large, spindle celled variety. There were many metastases.

3. **Stypticin.**—Freund, who is responsible for the introduction of stypticin as a therapeutic measure, finds no advantage for the recently presented and similar preparation, styptol.

ZENTRALBLATT FUER INNERE MEDIZIN.

January 7, 1905.

1. Action of Subcutaneous Infusions of Sodium Chloride in Nephritis and a Consideration of the Newer Theories as to the Value of This Salt in Renal Diseases,

By LUIGI FERRANNINI.

1. **Sodium Chloride in Renal Diseases.**—Ferrannini concludes that the subcutaneous injection of sodium chloride in cases of nephritis, causes a temporary increase in albuminuria and in the renal elements found in the sediment. This increase is at once followed by a diminution with a limited, but certain, improvement in the general condition and the renal function. Even during a uræmic attack, copious subcutaneous and rectal injections of salt solution are not harmful, but are even beneficial, since they may aid the kidneys in their functions. On account, however, of their limited use and of the dangers of constant injections, salt solutions cannot be advised as a therapeutic measure. The injections may be of service, however, in emergency, as they have always been used.

ZENTRALBLATT FUER CHIRURGIE.

December 10, 1904.

1. Treatment of Tuberculous Ascites, By SCHOEMANN.
2. The Ambulant Treatment of Fractures of the Thigh, By S. KOFMANN.

1. **Tuberculous Ascites.**—Schoemann has used for some years the following treatment: He aspirates the abdomen with a trochar and a cannula of moderate size, allowing all the fluid possible to escape. He then injects into the abdominal cavity a sterilized emulsion of iodoform of a strength varying from 1 to 5 to 100 of glycerin. He begins with from 1 to 2 centigrammes of the one per cent. emulsion, and in from four to eight days he increases the strength. He found 3 or 4 injections sufficient to effect a cure. In 7 adults, a cure was brought about in from three to ten weeks, and in the cases of 2 children, the transudate ceased to form after the second injection. The author advises this method especially with patients in poor condition upon whom a laparotomy cannot be performed, and it can also be carried out on ambulant patients.

2. **Fractures of the Thigh.**—Kofmann advises the same method of treatment as Lorenz advocates after his method of reduction of congenital dislocation of the hip. Lorenz's pelvic support and a number of iron supports are necessary. The fracture is reduced under anaesthesia, a tricot covering is placed over the leg, and the whole extremity is abducted and rotated outwards. The crests of the ilium, the tuberosities of the ischium, and the patella are inclosed in plaster of Paris, the iron support for walking being included. Walking is allowed the next day and the author states that there are constant good results. To prevent injury to the soft parts at the site of the fracture, a window is left in the bandage.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

December 11, 1904.

1. A Case of Abdominal Aortitis, By ERCOLE GALVAGNI.
2. Amyloid Degeneration of the Kidneys and Spleen in a Case of Pharyngeal Diphtheria, By F. BELLINATO.
3. On the Origin of Cytoses, By C. MOLON.
4. Injections of Liquid Phenol in Anthrax, By DOMENICO SASSI.

By TITO DI GIUSEPPE.

4. **Treatment of Anthrax.**—The ordinary treatment of anthrax pustules which Sassi uses, is to make a crucial incision and to apply the thermocautery. This method has the approval of a great many surgeons. In some cases, however, the pustule does not yield to this treatment, and in such instances the method of Maffucci is usually tried—the injection of a two per cent. solution of carbolic acid into the carbuncle. Aside from being painful this method requires time and patience, and frequent repetition. Thus, one author reports that he made 108 injections within three days in a single case of anthrax. The author, therefore, prefers to use pure liquid carbolic acid which is always accessible, unlike the specific serum made by Selavo, which cannot be had everywhere when it is needed in a hurry. Injections of a strong solution of mercuric chloride have been used, but as yet their value has not been sufficiently well proved, and the pure carbolic acid is more convenient. The only possible drawback to the use of pure carbolic acid is the occasional occurrence of phenol poisoning. It is fortunate, however, that the organism which is infected with anthrax seems to offer a special resisting power against the toxic effects of carbolic acid, and therefore cases of phenol poisoning in such patients are very rare. The method employed by the author consists simply in the injection of five drops of carbolic acid into three parts of the carbuncles—i. e., fifteen drops in all, at one dose. This dose may be repeated again during the same day. In the case reported these two injections sufficed to lower the temperature and to bring about recovery within a short time.

December 18, 1904.

1. Contribution to the Study of Myoclonus, By NAPOLEONE SOMA.
2. A Case of Cyst of the Cervix Uteri, By CARMELO FERLITO.
3. Some Considerations on the Radical Cure of Inguinal Hernia, By TESEO CALDESI VALERI.
4. Contribution to the Surgical Treatment of Retrodisplacements of the Uterus, By FRANCESCO ORTA.
5. Herniae of the Falloppian Tubes, By CARLO CLERICI.

4. **Operative Treatment for Uterine Retrodisplacements.**—Orta reports successes with Foschi's operation of uterofixation. The technics employed is as follows: The patient being placed in the Trendelenburg position, a median incision is made suprapubically. The edges of the peritoneum are sutured to the skin on either side by a single stitch, the intestines are protected by means of pads, and the fundus is seized with two Museaux forceps. Buttonholes are next made in each rectus muscle about three quarters of a cm. away from the median line. These buttonholes pass through the entire thickness of the abdom-

inal wall, except the skin, and loops from the round ligaments are passed into them. These loops are held in place by means of forceps, while the peritonæum and the muscular layers of the abdomen are closed. The round ligaments having next been sufficiently drawn upon to secure the uterus in place, the loops are sutured into the buttonholes in the recti, the suture on each side passing through both edges of the buttonhole and through the two bends of the loop. The portions of the loop which then remain above the aponeurosis of the muscles are then freshened by scraping, and sutured directly upon the aponeurosis. The skin wound is finally closed. The buttonholes are best made by blunt dissection with the end of an artery forceps.

ROUSSKY VRATCH.

December 25, 1904.

- i. The Investigation of Illumination in Schools and the Use of Wingen's Photometer, By M. I. REICH.

1. **Illumination of Classrooms.**—Reich calls attention to the frequent deficiency in illumination which is still found in classrooms in the best schools of the large Russian cities. Accurate measurements of the illumination of these rooms and of the amount of light which falls on each pupil's desk are imperative, in order to satisfy the requirements of hygiene. The best instrument for this purpose which has thus far been devised is the photometer of Wingen, which recently received the approval of the Prussian Governments as a means of measuring the illumination of classrooms in that country. This instrument is simple in its method of employment, and is inexpensive, the price being only \$8.00, so that every school can afford one. The author describes in detail the method of using this new photometer. The standard illumination for a classroom should be fifty metrocandles, or "lucres." Anything below ten lucres, cannot be tolerated, but an illumination of from 30 to 40 lucres is still good. Direct daylight at a window measures a much larger amount, and even on cloudy days the photometer records 1,200 lucres sometimes. The amount of light in any part of a room diminishes very rapidly indeed with the distance from the windows.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 11, 1905.

1. Symptomatology, Pathology, and Treatment of Choreiform Movements, By WILLIAM G. SPILLER.
2. Convulsive Tic, By HUGH T. PATRICK.
3. Hysterical Movements, By HOWELL T. PERSHING.
4. The Radical Operation for Empyema of the Frontal Sinus, By W. FREUDENTHAL.
5. The Present Status of Antituberculosis Work in the United States. Suggestions for a More Effectual Cooperation of Authorities, Philanthropists, Physicians, and Laymen, By S. A. KNOPF.
6. The Association of Optic Neuritis and Facial Paralysis, By EDWARD A. SHUMWAY.
7. A Bacteriological Study of the Blank Cartridge, By DAVID H. DOLLEY.
8. The Present Status of Surgical Intervention in Retro-deviations of the Uterus, By LUCY WAITE.

9. Bloodless Perineal Prostatectomy Under Local Anæsthesia, By MARTIN B. TINKER.
10. Immunity. Chapters III and IV.

1, 2, and 3.—See this *Journal*, Vol. LXXIX, page 1256.

4. **Chronic Frontal Sinus Disease.**—Freudenthal devotes his paper almost exclusively to the consideration of chronic frontal sinus disease. By far the greatest number of patients suffering from this affection improve under intranasal treatment. A certain number of patients, however, are best treated by radical surgical methods. It is to this type of cases that the author devotes most of his space. The paper ends with the following general conclusions: "(1) Regarding the conservative treatment of these cases, the remarks made by A. Kuttner, of Berlin, are much to the point. Every one of us ought to try to live up to this conservatism as much as feasible. (2) In those cases in which we have to operate, Killian's method seems at present to give the best results. (3) The first opening into the frontal sinus must always be made below the outlined bridge, and only after exploring the sinus should another above it be made. (4) In the latter case we leave a bony bridge which helps toward improving the cosmetic effect. (5) Closing of the external wound immediately after the operation is by far preferable for such cosmetic effect."

5. **Tuberculosis.**—Knopf gives a bird's eye view of the work that has been done in the past two years for the control of tuberculosis in the United States and Canada. The paper contains a large amount of information that will prove valuable for reference. There are lists of societies and committees for the prevention of tuberculosis, of State commissions, of sanatoria, of special hospitals, and camps for the treatment of pulmonary tuberculosis and of dispensaries and clinics for the special treatment of this disease. The information is classified according to States. The paper closes with a strong plea for a more effectual cooperation between the existing institutions and for the formation of a United States Board of Health.

6. **Optic Neuritis.**—Shumway concludes: (1) Optic neuritis is occasionally associated with facial paralysis, either alone or as part of a multiple neuritis; the ætiological factor may be rheumatism, but at times appears to be an infection, the nature of which is as yet undetermined. The optic neuritis is usually of the retrobulbar type, but a decided papillitis may be present, and be followed by more or less marked atrophy. In cases of multiple neuritis, of the cranial nerves, the eyegrounds should be examined for possible optic nerve complication. (2) In facial paralysis, flattening of the face and enophthalmus may appear, and are to be considered as due to a neuritis of the fifth nerve, and not to involvement of possible sensory fibres in the facial nerve.

7. **The Bacteriology of Blank Cartridges.**—Dolley has studied blank cartridges of a number of the principal manufacturers to determine the

kind of bacteria they may contain. His conclusions follow: "(1) *aerogenes capsulatus* (Welch) was present in a large proportion of the wads of the three makes of cartridges examined. (2) The wads of the Peters Company, inoculated in rats, guinea pigs, and rabbits, produced characteristic symptoms of tetanus. (3) The powder of the three varieties of cartridges examined was negative for *B. tetani* and *B. aerogenes capsulatus*. (4) My efforts at isolation of *B. tetani* from the wads have so far been unsuccessful. (5) There is abundant evidence, from clinical observations and animal experiments, that the wads of certain blank cartridges contain *B. tetani*. Dr. Welch told me that he considered it diagnostic to see an animal in convulsions."

8. Surgical Intervention in Retrodeviations of the Uterus.—Waite condemns without reservation any and all operations for retrodisplacement of the uterus. The author states that such operations are unnecessary, unsafe, and have not had successful results sufficiently often to warrant their continued use.

9. Perineal Prostatectomy.—Tinker reports one case of perineal prostatectomy performed under local anesthesia. The patient recovered and suffered not at all. At one point of the operation he received a little ether. The author describes in detail his technics.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 9, 1905.

1. A Case of Chylous Cyst of the Abdomen,
By MAURICE H. RICHARDSON.
2. The Active Treatment of Gonorrhœa in Its Early Stages,
By FREDERIC J. COTTON.
3. Glycosuria in Pregnancy,
By JAMES MARSH JACKSON and JAMES R. TORBERT.
4. I. K. I. Method of Sterilizing Catgut,
By F. W. JOHNSON.

1. Chylous Cyst.—Richardson's case simulated clinically tuberculous peritonitis. At operation a retroperitoneal chylous cyst was found, and it was removed without much difficulty. An anatomical explanation for the occurrence of the cyst could not be determined. The case is interesting from two points of view: (1) On account of the rarity of the condition; (2) on account of the original mistaken diagnosis. The author emphasizes the fact that human judgment is fallible and that while it is true that exploratory operation for the sake of diagnosis should not be resorted to, yet it is not safe to condemn a patient on the strength of a simple opinion that his condition is necessarily fatal.

2. Gonorrhœa.—Cotton believes that all cases of early acute gonorrhœa except in the presence of some contraindication (such as phimosis or acute folliculitis) do better under active irrigation which in itself much reduces the severity of the disease, and that the "organic" silver preparations in combination with profuse bland irrigations accomplish definite results by germicidal action. By following out a routine based on this, varied to suit varying cases, we can effect a very

rapid cure in a certain proportion of cases, a very considerable diminution of time of treatment required in the other cases, a very comfortable condition as to symptoms during the course of treatment and, by no means least, the most efficient limitation as yet possible of the area involved as well as of the duration, and hence the best chance for avoidance of complications and chronic processes.

3. Glycosuria in Pregnancy.—Jackson and Torbert, through the courtesy of colleagues, are able to report three cases of glycosuria which occurred during pregnancy. Two of the patients were sugar free after delivery. One died a few hours after her child was born. Temporary glycosuria is not infrequent during the last months of pregnancy. The specific gravity of the urine is not necessarily high under such conditions. If the glycosuric pregnant woman shows other signs of diabetes the uterus should be promptly emptied. However, on account of the liability of sudden collapse, the use of anesthetics should be avoided as far as possible.

4. Claudius Catgut.—Johnson has used iodine catgut for the past year, and is enthusiastic as to its good qualities. It should not be used in the vagina, as it is too irritating for mucous membranes. The author reports a number of laboratory tests which go to show that when catgut is properly prepared by this method it is not only aseptic, but markedly antiseptic.

MEDICAL RECORD.

February 11, 1905.

1. The Attractive Features of Graduated Tenotomies Upon the Eye Muscles,
By AMBROSE L. RANNEY.
2. On Some Relations of Medicine and Surgery to Jurisprudence,
By CARL BECK.
3. Choice of a General Anæsthetic and Selection of Method of Administration,
By VICTOR C. PEDERSEN.
4. Cryoscopy of Cerebrospinal Fluid in Epidemic Cerebrospinal Meningitis,
By JOHN H. BAILEY.
5. Foreign Body in the Bronchus; Removal with the Aid of the Bronchoscope; Recovery,
By SIDNEY YANKAUER.
6. A Spindle Cell Sarcoma of the Bowels Operated on Successfully,
By J. B. BOUCHER.

1. Graduated Tenotomies.—Ranney asserts that the clinical histories of the twenty selected cases which he now reports demonstrate beyond cavil or dispute that rapid and permanent cures of many forms of nervous derangements which had no apparent connection with eye strain and which had proven to be incurable by drugs have been effected through the surgical relief of eye strain. A list of the cases cured by the author by means of graduated tenotomies follows: Asthenopia; epiphora; extreme deformity from wry neck; insanity; chorea, followed by paralysis; progressive atrophy of muscles in both hands with partial loss of the use of the right hand and diabetes of some years' standing; complete loss of intellectual faculties; uncontrollable attacks of vomiting, loss of power and sensation in both arms, and suspected tuberculosis; of each one case; nervous prostration, two cases; sleepless-

ness and nervous prostration, two cases; uncontrollable neuralgia, three cases; epilepsy, five cases. The paper ends with twenty-one formal conclusions.

4. **Cryoscopy.**—Bailey's study of the cerebrospinal fluid in meningitis by the aid of cryoscopy has not been productive of any results available at present for positive practical purposes. The data he has accumulated are published, on account of their possible future value.

5. **Bronchoscopy.**—Yankauer reports this case: Child, ten months old, suffering from an orange pit lodged in right bronchus. Low tracheotomy and bronchoscopy through the opening, and removal of the pit by long forceps. Recovery.

6. **Sarcoma of the Bowel.**—Boucher reports this case: Woman, aged thirty-eight years. Sarcoma of cæcal end of small bowel and of ascending colon. Resection of six inches of small intestine, of all the ascending colon and of half of the transverse. Lateral anastomosis. Recovery. Patient living one year after operation with apparently no recurrence of the sarcoma.

MEDICAL NEWS.

February 11, 1905.

1. Report of a Sporadic Outbreak of Typhoid Fever at Lawrence, N. Y., Due to Oysters,
By GEORGE A. SOPER.
2. Hæmaturia as a Symptom of Hydronephrosis. Nephrectomy. Cure,
By L. BOLTON BANGS.
3. Two Cases of Tracheal Stenosis from New Growth,
By GEORGE EMERSON BREWER.
4. The Management of Acute General Peritonitis,
By J. GARLAND SHERRILL.
5. The Clinical Manifestations of Uterine Fibroids as Indications for Early Operative Intervention,
By ARNOLD STURMDORF.

1. **Typhoid Due to Oysters.**—Soper's paper is the formal report he presented to the Board of Health of the village of Lawrence, N. Y., after his investigation of an outbreak of typhoid which occurred during the past summer and fall. In all, thirty-one patients acquired typhoid. Of these cases twenty-five are, according to the author, directly traceable either to infected oysters and clams, to contact with typhoid patients or to bathing in the water near the oyster floats. Six cases acquired the disease in some unknown way. The author notes that the special importance of his observations is due to the fact that it has been denied, on reputable authority, that oysters are capable of transmitting typhoid fever.

2. **Hæmaturia in Hydronephrosis.**—Bangs reports in great detail a case of hydronephrosis which presented hæmaturia as one of its symptoms. An exhaustive search of recent medical literature shows that the occurrence is rare. Thirteen similar cases have been reported, nine of them by Israel.

3. **Tracheal Stenosis.**—Brewer reports in detail the two following cases: (1) Papilloma of the trachea following tracheotomy for the relief of

papillomatous degeneration of the laryngeal mucous membrane. (2) Adenocarcinoma of an accessory thyreoid gland causing marked tracheal stenosis.

4. **Acute General Peritonitis.**—Sherrill divides acute general peritonitis into (1) acute septic and (2) acute suppurative. The former is generally fatal whatever treatment is employed. Yet a certain number of cases recover. At times medicinal treatment will give the best results, at times surgical intervention is advisable. Each case must be treated on its merits and general rules cannot be laid down. The bulk of the paper is devoted to the treatment of acute suppurative peritonitis. If the patient refuses surgical intervention or if the patient's condition does not warrant an operation, three methods of treatment may be adopted: (a) The opium treatment as advocated by Alonzo Clark; (b) the treatment by salines (Tait); (3) the rest treatment (Ochsner). It is an open question which of these methods is the best. If operation is resorted to the special measures to be taken will depend on the nature of the disease giving rise to the suppuration. So far as the general peritoneal cavity is concerned there are three plans of treatment: (a) Simple drainage; (b) wiping the cavity as clean as possible; (c) irrigation. The author adopts the last plan.

5. **Uterine Fibroids.**—Sturmdorf reviews the clinical history of uterine fibroids, and concludes that excision is the only rational mode of treatment.

AMERICAN MEDICINE.

February 11, 1905.

1. Some Forms of Insanity Due to Alcohol, Especially in Their Medicolegal Relations, By CHARLES K. MILLS.
2. The History and Development of Surgery During the Past Century (*To be concluded*),
By FREDERIC S. DENNIS.
3. A Short Note on Subcutaneous Alimentation,
By ARTHUR E. BARKER.
4. Bezold's Variety of Mastoid Disease, Complicating Diabetes Mellitus,
By S. MACCUEEN SMITH.
5. Pneumonia and Pregnancy. By ROBERT C. RAMSDALL.
6. Typhoid Coxitis, with Report of a Case,
By JOHN L. PORTER.

3. **Subcutaneous Alimentation.**—Barker has used subcutaneous alimentation for a number of years and, in suitable cases, has found it of considerable service. His experience has been chiefly with surgical cases. At present this method of administering nourishment is still in its infancy. His experience has been chiefly with isotonic salt and sugar solutions and with olive oil. With the latter substance his experience has been very limited. (1) Normal salt solution. This is used mostly for furnishing fluid to the tissues. A nine tenths of one per cent. solution is advised. It may be given either subcutaneously or intravenously. (2) Isotonic sugar solution. This is given for its food value. A five per cent. solution is isotonic to the blood. It should be given subcutaneously, best, at the inner side of the arm near the axilla. The total quantity to be used

at each injection is not given. (3) Sterile olive oil, while theoretically of high potential food value, is probably not very efficacious, as it is absorbed very slowly.

4. **Mastoid Disease.**—Smith summarizes his conclusions thus: "(1) Aural complications of diabetes mellitus may originate primarily in the mastoid cells. (2) The process may be manifested by the classic mastoid symptoms without involving the tympanic cavity. (3) This condition is peculiar to diabetes mellitus. (4) The term 'diabetic ear' should be limited to those cases in which the disease begins as a primary osteitis of the mastoid, or in which primary tympanic involvement and rapid mastoid complications seem simultaneous. (5) It is advisable to reduce the amount of sugar when possible before operating in those cases showing an excessive glycosuria, unless the urgency of the local symptoms demand immediate operation."

5. **Pneumonia and Pregnancy.**—Ramsdell summarizes his observations as to the influence of pregnancy on pneumonia thus: (1) The death rate is appreciably higher in the pregnant woman than in the ordinary patient. (2) Abortion takes place in more than half the patients. (3) The mortality is much higher when abortion takes place than when the uterus does not empty itself. (4) The mortality is higher in the last three months of pregnancy. (5) The causes of death can be attributed to: (a) Diminution in hemoglobin; (b) degenerative changes in heart muscle; (c) overloading of the right heart and pulmonary circulation after birth. (6) The high percentage of abortions is due to accumulation of carbonic acid in the blood.

6. **Typhoid Coxitis.**—Porter reports a case of double coxitis due to typhoid. The symptomatology of the condition is briefly reviewed and the tendency to spontaneous dislocation noted. In the case reported spontaneous evacuation of the joint occurred on one side. This side did not become dislocated, and when recovery finally occurred there was little impairment of motion. The opposite joint suffered considerable destruction, and ultimate deformity was so great that operation had to be resorted to to straighten the leg. Very limited motion now exists in this joint. The moral would seem to be that incision and drainage are the proper treatment for typhoid coxitis.

BRITISH MEDICAL JOURNAL.

January 28, 1905.

1. Dysphagia, By M. COLLIER.
2. Suppurative Frontal Sinusitis: Its Surgical Treatment, Based on an Analysis of Forty Cases, By W. MILLIGAN.
3. The Causes, Symptoms, and Complications of the Diseases of the Nasal Accessory Sinuses in Their Relation to General Diseases, Ophthalmology, and Neurology, By S. MORITZ.
4. Diseases of the Nose in Their Relationship to Pathological Conditions of Other Organs, By A. BRONNER.

5. Nasal Disease as a Cause of Headache, By A. L. WHITEHEAD.
6. A Note on Rhinitis Caseosa, By A. EDMUNDS.
7. Chronic Suppurative Otitis Media: the Necessity for Early, Systematic, and Energetic Treatment, By H. SMURTEWAITE.
8. The Treatment of Postnasal Adenoids, By J. W. COUSINS.

1. **Dysphagia.**—Collier reports a case of oesophageal stricture with dysphagia and discusses the condition. Diagnosis. Dysphagia is not always due to stricture of the oesophagus, and before passing a bougie the following conditions should be sought for and eliminated: 1. Morbid conditions of the mouth or pharynx. (a) Bad teeth. (b) Tumors, abscess, or other affections of the tonsils. (c) Tumors or cysts of the urula, pharynx, or postnasal spaces. (d) Postdiphtherial paralysis of palate or pharynx. (e) Glosso-labiopharyngeal palsy. 2. Morbid conditions of the larynx. Tuberculous or malignant disease of the larynx, or oedema of the glottis, may produce marked and profound dysphagia. 3. Tumors in the neck outside the oesophagus. A cyst or tumor of the thyroid gland may cause dysphagia by pressure. 4. Aneurysm may give rise to dysphagia by pressing on the oesophagus. The accompanying dyspnoea may arise from direct pressure on the trachea, pressure on the bronchus, the lung, the recurrent laryngeal nerve, or the pulmonary vein. 5. Intrathoracic tumors, such as enlarged tuberculous glands, cancerous and other tumors, or abscesses in the posterior mediastinum, may compress the oesophagus: the same is true of local empyemata. 6. Dislocation of the sternal end of the clavicle backwards may be a cause of dysphagia. 7. Impaction of a foreign body in the gullet. When these conditions have been excluded the bougie may be passed. An anæsthetic is often desirable in these cases. If there be a stricture, if syphilis, traumatism, and corrosive poisons can be excluded, and if there has been wasting, the diagnosis of malignant disease is justified. The best operation in these cases is Albert's modification of gastrostomy, by which a conical diverticulum of the stomach is made to open above the front and on the level of the costal cartilages. Around the base of the diverticulum are sutured the parietal peritoneum and the posterior layer of the sheath of the rectus. As a result the diverticulum is drawn upwards; its base is gripped by the muscular fibres of the rectus, while a short upward directed subcutaneous oesophagus is also formed. All escape of fluid is thus prevented, and the patient can be safely fed at once.

3, 4, 5. **Nasal Disease.**—Moritz discusses the diseases of the nasal accessory ("adnasal") cavities, and their relation to general diseases. Syphilis is a frequent cause of such diseases, while tuberculosis is rare. Acute coryza and influenza, due to infectious organisms, are the most frequent causes, the infection being carried directly from the mucous membrane of the nose. Croupous pneumonia, and the exanthemata also give rise to diseases of the adnasal cavities. In cerebrospinal

meningitis the meningococcus is present in the adnasal cavities in every case. The adnasal cavities may also be invaded by tumors, or inflamed as a result of traumatism. The most frequent symptom is headache: this may be neuralgic, diffuse, or hemicranic in character, and is usually relieved by phenacetin. An irregular fever occurs, due to absorption or retention of pus. Neurasthenic symptoms, such as flushing, lassitude, etc., are not at all rare. The author does not think that there is any very intimate connection between adnasal disease and asthma. Gastric symptoms, due to swallowing of pus, are common. The diagnosis can only be established by a thorough rhinoscopic examination, including anterior and posterior rhinoscopy, and if necessary, the use of the probe, aspiratory trocar, transillumination, Röntgen ray examination, etc. The eye symptoms most frequently connected with adnasal diseases are obstruction of the lacrymal duct with epiphora, conjunctivitis, and œdema or inflammatory swelling of the eyelids. Empyemata of the frontal and ethmoid sinus occasionally perforate towards the orbit. Sudden loss of vision through compression of the optic nerve in the foramen opticum or by perineuritis, or exophthalmos through serous or purulent infiltration. The exophthalmos comes and goes and is usually combined with some paralysis of the eyeball muscles. Meningitis, cerebral abscess, and sinus thrombosis are happily rare.

Bronner's subject is the same as that of Moritz. He is strongly opposed to indiscriminate removal of sœptum spurs and deviations. But he does think that the nares should be most carefully examined, and if necessary treated, in all cases of asthma, hay fever, laryngitis, bronchitis, deafness, headache, gastritis, nasal obstruction, or nasal discharge.

Whitehead considers the subject of headache in connection with nasal disease. His conclusions are: 1. Nasal disease is undoubtedly the cause of headaches in a certain number of cases; but only where there is discharge or abnormal nasal respiration. 2. In all cases of persistent headache examination of the nose should be a routine practice. 3. Suppuration in the accessory sinuses and marked nasal obstruction should be thoroughly treated. 4. Small spurs and deviations should be left alone. 5. If the middle turbinates are enlarged and pressing upon the sœptum, especially upon the tubercle, and if all other possible causes of headache have been eliminated, partial removal of the hypertrophied bone should be advised, since in many such cases complete relief is given.

6. Rhinitis Caseosa.—Edmunds reports a case of this interesting condition, in which the material removed was a putty-like material with a very offensive faecal smell. It was yellowish in color, but contained practically no fat. The microscope showed it to consist of crystals of calcium phosphate imbedded in a granular mass of detritus. The author suggests that its formation is similar to that of the calculi containing calcium compounds and cholesterol found in chronic catarrh of the gall bladder.

LANCET.

January 28, 1905.

1. Richter's Hernia, By V. W. LOW.
2. Myelopathic Albumosuria, By C. W. P. MOFFATT.
3. A Case of Encysted Cerebral Abscess, By P. PATERSON.
4. Researches Into the Ætiology of Carcinoma: on the Presence of Plasmodiophoræ in Carcinomatous Tumors and the Successful Culture of the Parasites, By W. F. ROBERTSON and H. WADE.
5. The Results of Two Cases of Injection of Paraffin, By F. C. WALLIS.
6. On the Relation Between Various Atmospheric Conditions and the Occurrence of Cerebral Hæmorrhage, By J. W. RUSSELL.
7. The Ovarian Ligament and Its Relation to Pregnancy Occurring After Ablation of the Ovaries, By J. H. DAUBER.
8. A Case of Septate Uterus and Vagina; Pregnancy in the Right Half; Delivery, By C. A. LANE.
9. Army Medical Organization in Bavaria, By F. HOWARD.

1. Richter's Hernia.—Low reports four cases of Richter's hernia, which consists in a strangulation of part only of the circumference of the gut wall, the area involved varying from a quarter, or even less, up to two thirds or three quarters of the circumference. Where the larger portion of the wall is involved the remainder of the lumen is usually occluded by the kinking of the coil of intestine. It is almost invariably the small intestine which is involved, generally the ileum, and the area of gut wall strangulated is that opposite the mesenteric border. It occurs more frequently in women and in femoral herniæ; it only occurs in adults and is more common on the right side. All of the four cases here reported were women with right sided femoral herniæ. The symptoms are at first milder than in ordinary strangulated hernia, the vomiting being less severe and rarely faecal, and the bowels may be open throughout, diarrhoea being sometimes present. The hernial protrusion may escape notice, and gangrene of the strangulated area is common. Cases of spontaneous cure occasionally occur with the formation of a faecal fistula which later closes of itself. Of the author's four patients all were operated upon, two dying. Early and correct diagnosis is imperative. The protrusion is frequently mistaken for an inflamed gland. The operation is merely that for any other strangulated hernia. In the event of perforation or gangrene the intestine falls back into the abdominal cavity and general peritonitis ensues.

2. Myelopathic Albumosuria.—Moffatt reports a case of this rare affection, and gives a general account of the disease. It is characterized by the presence in the urine of a peculiar proteid body associated with pathological changes in the bone marrow. So far thirty-nine cases have been reported, Bence Jones being the first to do so. Naturally it has been asked whether this disease and multiple myeloma are causally related: the author holds that multiple myeloma occurs without even intermittent Bence Jones albumosuria, but that the albumosuria is always associated

with disease of the bone marrow. The appearance of albumose in the urine is always of fatal import. The symptoms of myelopathic albumosuria are general pains, increasing weakness, and anæmia, and progression to a fatal end. Spontaneous fractures of the ribs, and bony tumors and deformities are often noted. Nothing is known as to its ætiology. Most of the cases prove fatal within a year, death being due to exhaustion, pneumonia, etc. There is no treatment. The pathological changes are practically confined to the skeleton, the ribs, sternum, and vertebral bodies being always affected. The new growth is gelatinous, soft, and vascular, and is composed chiefly of round cells with little intercellular substance, being apparently closely allied to sarcoma. *Urine.* The only constant peculiarity is the presence of albumose. This proteid coagulates at 58° C., much lower than serum albumin. On further heating to boiling the precipitate dissolves, to reappear on cooling. If albumose is abundant a dense precipitate is obtained with strong hydrochloric acid: the "ring" method may be used where the quantity is small. Albumose is also precipitated by strong nitric acid and by ferrocyanide of potassium and acetic acid. In conclusion, the author gives a careful report of his own case.

4. **Parasite of Carcinoma.**—Robertson and Wade have investigated the validity of the hypothesis that carcinoma is dependent upon the growth of a parasite of the same class as the plasmiodiophora brassicæ which is known to cause tumor growths in various members of the crucifera, as well as in other plants. They claim to have succeeded in demonstrating the presence in carcinomatous tumors of bodies corresponding in form and reaction to a special method to fourteen phases in the developmental cycle of the plasmiodiophora brassicæ, and also in growing from such tumors an organism which accurately represents several successive phases of a parasite of this class. The staining process used is the ammoniosilver method: the tissues after being hardened in formalin are impregnated with silver, and the sections are toned with gold, platinum, and palladium. The technics of cultivating the organism consists in placing pieces of the fresh tissue upon the dry surface of an agar medium; the surface must be quite dry, and the tissue fresh and unchilled.

5. **Paraffin Injection.**—Wallis reports two cases illustrating the possible aftereffects of paraffin injection. In one case the injection had been made into the broad ligament two years previously for prolapse of the uterus. At the operation an abscess was found to have formed and forty ounces of inodorous pus, together with lumps and masses of paraffin removed. In the second case injection had been performed for prolapse of the rectum: six weeks later a sudden discharge of paraffin occurred, and a sinus set up.

6. **Cerebral Hæmorrhage.**—Russell has studied the relation between various atmospheric conditions and the occurrence of cerebral hæmorrhage. He concludes that there seems to be a

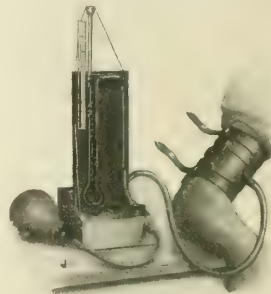
slight tendency towards the occurrence of cerebral hæmorrhage on days of high atmospheric pressure and also on days of rising pressure, the former being probably the important factor. There is a very marked tendency on days of low wind pressure and the combination of a low wind pressure with a high barometric pressure is the condition under which the largest number of cases took place. Apart from season, temperature in itself has not been shown to exert any influence, though a small excess of cases has been noted on days with a rising thermometer and also with a combined rise of atmospheric pressure and temperature.

New Inventions.

DR. JANEWAY'S PORTABLE SPHYGMOMANOMETER.

The value of an accurate knowledge of the blood pressure of the patient can hardly be overestimated in studying the various forms of heart disease, pneumonia, Bright's disease, tuberculosis, emphysema, typhoid fever, diabetes, etc. By use of the apparatus invented by Dr. Theodore C. Janeway it is possible for the physician to determine readily both the systolic and diastolic pressure.

This form of sphygmomanometer, which is illustrated herewith, is of special value on account



Dr. Janeway's sphygmomanometer.

of its portability, the ease with which it is applied, and the accuracy with which observations may be made by its use.

Dr. Janeway states¹ that he was driven to the construction of this apparatus by the fact that he could not obtain a sphygmomanometer which combined all the features of the instrument as perfected by him in a portable form. It is highly essential that the calibre of the tubing be large enough to allow satisfactory transmission of the pulse wave and the estimation of diastolic pressure.

The accompanying illustration gives a fair idea of the device as made under the direction of Dr. Janeway, by Charles E. Dressler & Brother, 143 East Twenty-third Street, New York, to whom he acknowledges his indebtedness in overcoming the mechanical difficulties presented in the manu-

¹ *Medical News*, August 27, 1904.

facture of the apparatus. The instrument is not only ingenious in design, but is well made and very durable, and its applications are made perfectly clear by means of explanatory circulars furnished with the apparatus.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from February 3 to February 11, 1905:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington.	Jan. 28-Feb. 4.	1	1
Georgia—Macon.	Jan. 21-28.	3	1
Illinois—Chicago.	Jan. 28-Feb. 4.	13	6
Illinois—Galesburg.	Jan. 28-Feb. 4.	1	1
Kansas—Topeka.	Jan. 28-Feb. 4.	1	1
Louisiana—New Orleans.	Jan. 21-Feb. 4.	23	1
		9 cases imported.	
Maine—Perry.	Feb. 1.	1	1
Michigan—Detroit.	Jan. 28-Feb. 4.	3	1
Missouri—St. Louis.	Jan. 28-Feb. 4.	38	1
New York—New York.	Jan. 21-Feb. 4.	9	1
Ohio—Toledo.	Jan. 28-Feb. 4.	5	5
South Carolina—Charleston.	Jan. 28-Feb. 4.	1	1
Tennessee—Memphis.	Jan. 28-Feb. 4.	14	6
Tennessee—Nashville.	Jan. 28-Feb. 4.	8	8

Smallpox—Insular.

Philippine Islands—Manila.	Dec. 10-24.	2	
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Smallpox—Foreign.

Bosnia and Herzegovina.	Nov. 1-30.	22	3
Brazil—Pernambuco.	Dec. 15-31.	116	116
Brazil—Rio de Janeiro.	Jan. 1-8.	45	15
Ecuador—Guayaquil.	Jan. 4-18.	3	3
Ecuador—Manabi Province.	Jan. 4-18.	Present.	
France—Paris.	Jan. 14-21.	17	3
Germany—Bremen.	Jan. 28-Feb. 4.	1	1
Great Britain—Glasgow.	Jan. 20-27.	1	1
Great Britain—Hull.	Jan. 14-21.	4	
Great Britain—Liverpool.	Jan. 14-21.	1	
Great Britain—London.	Jan. 7-21.	8	1
Gt. Britain—Newcastle-on-Tyne.	Jan. 14-21.	11	1
Great Britain—South Shields.	Jan. 14-21.	11	1
India—Bombay.	Dec. 20-Jan. 10.	102	102
India—Calcutta.	Dec. 17-Jan. 7.	2	2
India—Karachi.	Dec. 24-Jan. 8.	6	1
India—Madras.	Dec. 17-Jan. 6.	5	5
Italy—Catania.	Jan. 12-26.	3	4
Italy—Palermo.	Dec. 11-26.	43	9
Luxemburg.	Dec. 11-26.	8	8
Mexico—Mexico.	Dec. 17-Jan. 7.	4	4
Netherlands—Rotterdam.	Jan. 21-28.	2	2
Russia—Odessa.	Jan. 7-14.	1	1
Russia—St. Petersburg.	Jan. 7-14.	2	3
Russia—Warsaw.	Nov. 26-Dec. 3.	3	3
Spain—Barcelona.	Jan. 10-20.	12	12
Straits Settlements—Singapore.	Dec. 17-Jan. 7.	17	17
Turkey—Constantinople.	Jan. 15-22.	1	1
Venezuela—La Guaira.	Jan. 21.	Epidemic.	

Yellow Fever.

Brazil—Rio de Janeiro.	Jan. 1-8.	1	1
Mexico—Coatzacoalcas.	Jan. 21-28.	1	1
Mexico—Merida.	Jan. 22-28.	1	1
Panama—Colon.	Jan. 28.	1	1

Case probably imported.

Plague—Insular.

Philippine Islands—Manila.	Dec. 8.	1	
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Plague—Foreign.

Africa—Cape Colony (East London).	Dec. 25.	1	1
Arabia—Aden.	Dec. 31-Jan. 14.	161	116
Brazil—Guaratigueta.	Nov. 30-Dec. 18.	11	11
Brazil—Rio de Janeiro.	Jan. 1-8.	22	11
Egypt—Suez.	Dec. 31-Jan. 7.	2	3
Egypt—Tulk.	Jan. 31-Jan. 7.	1	1
India—Bombay.	Dec. 20-Jan. 10.	1	374
India—Calcutta.	Dec. 15-Jan. 7.	67	67
India—Karachi.	Dec. 25-Jan. 8.	120	105
Siam—Bangkok.	Dec. 17-24.	Present.	
Siberia—Sibodskoi and Viatka districts.	Oct. 18-Dec. 14.	227	

Cholera.

India—Bombay.	Dec. 20-Jan. 10.	1	
India—Calcutta.	Dec. 15-Jan. 7.	304	
India—Atrachal.	Dec. 15-Jan. 7.	1	
Russia—Baku Province and city.	Dec. 7-14.	459	355
Russia—Erivan Province and city.	Dec. 7-14.	1,506	1,265
Russia—Samara.	Dec. 7-14.	17	
Russia—Saratov.	Dec. 7-14.	10	
Russia—Trans-Caspian Province.	Dec. 7-14.	40	
Turkey in Asia.	Jan.-Dec. 26.	10,468	9,192

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 8, 1905:

BELL, J. M., Pharmacist. Upon being relieved from duty at St. Louis, Mo., by Pharmacist G. A. Morris, to proceed to Fort Stanton, N. M., and report to the Medical Officer in Command for duty and assignment to quarters. February 4, 1905.

DUFFY, F., Acting Assistant Surgeon. Granted leave of absence for seven days from February 8th.

FRANCIS, EDWARD, Assistant Surgeon. Granted leave of absence for seven days from February 2, 1905, under paragraph 191 of the regulations. Granted extension of leave of absence for twenty-three days from February 9th.

GASSAWAY, J. M., Surgeon. Granted leave of absence for ten days from February 9th.

HARGIS, J. W., Acting Assistant Surgeon. Granted leave of absence for twenty days from February 8th.

LINLEY, W. J., Acting Assistant Surgeon. Granted leave of absence for thirty days from February 13th.

MCCONNELL, E. F., Acting Assistant Surgeon. Granted leave of absence for thirty days from February 1st.

MORRIS, G. A., Pharmacist. Relieved from duty at Fort Stanton, N. M., and directed to proceed to St. Louis, Mo., and report to the Medical Officer in Command for duty and assignment to quarters, relieving Pharmacist J. M. Bell. February 4, 1905.

RICHARDSON, T. F., Passed Assistant Surgeon. To proceed to Savannah Quarantine and assume temporary charge of the service during the absence, on leave, of Acting Assistant Surgeon W. J. Linley. February 2, 1905.

WILSON, R. L., Passed Assistant Surgeon. Granted leave of absence for one month from March 1st.

Board Convened.

Board convened to meet at the Marine Hospital, Baltimore, Md., February 3, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon C. W. WILLE, chairman. Acting Assistant Surgeon G. H. STEUART, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 11, 1905:

BAKER, DAVID, First Lieutenant and Assistant Surgeon. Ordered to accompany the Sixth Infantry from Fort Leavenworth, Kan., to San Francisco, Cal.

BANISTER, WILLIAM B., Major and Surgeon. Ordered to accompany the Second Squadron, Eighth Cavalry, from Jefferson Barracks, Mo., to San Francisco, Cal., and then return to proper station.

BUCK, CARROLL D., First Lieutenant and Assistant Surgeon. Ordered to accompany the Sixth Infantry from Fort Leavenworth, Kan., to San Francisco, Cal.

JEAN, GEORGE W., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

LITTLE, WILLIAM L., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Oglethorpe, Ga., to Jackson Barracks, La., for duty.

MATHEWS, GEORGE W., First Lieutenant and Assistant Surgeon. Retired as captain, to date from February 2, 1905.

SMART, ROBERT, First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Du Pont, Del., to Fort Myer, Va., for duty.

THOMASON, HENRY D., First Lieutenant and Assistant Surgeon. Ordered to report to Lieutenant Colonel George H. Torney, Deputy Surgeon General, General Hospital, Presidio of San Francisco, Cal., for examination for promotion, not later than March 3, 1905.

THORNBURGH, R. M., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence, to date from February 7, 1905.

TORNEY, GEORGE H., Lieutenant Colonel and Deputy Surgeon General. Reports in temporary charge of the Chief Surgeon's Office, Department of California.

WILSON, JAMES S., Captain and Assistant Surgeon. Ordered to proceed from Fort Myer, Va., to Fort Oglethorpe, Ga., for duty.

WINN, ROBERT N., First Lieutenant and Assistant Surgeon. Ordered to report to Lieutenant Colonel George H. Torney, Deputy Surgeon General, General Hospital, Presidio of San Francisco, Cal., for examination for promotion, not later than March 3, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 11, 1905:

BARBER, G. H., Surgeon. Detached from the Naval Training Station, Newport, R. I., and ordered to the *Ohio* on February 25, 1905.

BISHOP, L. W., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to continue duties at the Navy Yard, New York, N. Y.

BLUE, J. H., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from January 16, 1905.

DE VALIN, C. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from January 31, 1905.

DRAKE, N. H., Medical Inspector. Commissioned a medical inspector, with the rank of captain, from January 1, 1905.

ELMORE, B., Acting Assistant Surgeon. Ordered to the Navy Yard, Washington, D. C., for duty at the Naval Hospital.

FOSTER, T. G., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from January 16, 1905.

GRUNWELL, A. G., Surgeon. When discharged from treatment at the Naval Hospital, New York, N. Y., ordered to duty at that hospital.

GUEST, M. S., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from January 20, 1905.

HARMON, G. E. H., Medical Director. Commissioned a medical director, with the rank of captain, from December 15, 1904.

HIBBETT, C. H., Medical Inspector. Commissioned a medical inspector, with the rank of commander, from December 15, 1904.

HIGH, W. E. G., Assistant Surgeon. Detached from duty with the Marine Detachment, Midway Island, and ordered to the Naval Training Station, San Francisco, Cal.

ODELL, H. E., Passed Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the *Galveston*.

PLUMMER, R. W., Passed Assistant Surgeon. Ordered to the Navy Yard, Charleston, S. C.

STIEPP, J., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from June 7, 1904.

TYREE, F. W., Acting Assistant Surgeon. Detached from the Navy Yard, Charleston, S. C., and ordered to duty with the Marine Detachment on Midway Island.

VON WEDEKIND, L. L., Surgeon. Ordered to the Naval Training Station, Newport, R. I., with additional duty on board the *Constellation*.

WELLS, H., Medical Director. Commissioned a medical director, with the rank of captain, from January 1, 1905.

Births, Marriages and Deaths.

Married.

COLLINS—DAVIS.—In London, England, on Wednesday, February 8th, Dr. Joseph Collins, of New York, and Miss Edith Davies, daughter of Dr. W. M. Davies.

HARVEY—GALLATIN.—In San Francisco, California, on Wednesday, February 1st, Dr. William P. Harvey and Miss Lita Gallatin.

KENNER—FEREBEE.—In Oxford, North Carolina, on Wednesday, February 1st, Dr. Beverley Randolph Kenner and Miss Ruth Alexander Ferebee, daughter of Dr. N. McP. Ferebee, United States Navy.

KORNDORFER—JONES.—In Philadelphia, on Wednesday, February 1st, Dr. Augustus Korndorfer and Miss Mary M. Jones.

PALMER—McCANN.—In Louisville, Kentucky, on Monday, February 6th, Dr. E. R. Palmer and Miss Mary McCann.

WENDELBOE—SCHRAM.—In Rome, N. Y., on Thursday, February 9th, Dr. L. Thomas Wendelboe and Miss Viola Ella Schram.

Died.

ASKEW.—In Harrellsville, North Carolina, on Wednesday, February 1st, Dr. A. H. Askew, in the sixty-second year of his age.

BARTLETT.—In Thomasville, Georgia, on Friday, February 3rd, Dr. Homer L. Bartlett, of Brooklyn, N. Y., in the seventy-fifth year of his age.

DONLAN.—In Fitchburg, Massachusetts, on Thursday, January 26th, Dr. John M. Donlan, in the thirtieth year of his age.

FAUGHT.—In Philadelphia, on Thursday, January 26th, Dr. George C. Faught, in the forty-third year of his age.

FREER.—In Washington, D. C., on Monday, February 6th, Dr. James A. Freer, in the forty-seventh year of his age.

HALL.—In Granville, N. Y., on Friday, January 13th, Dr. Storrs Hall, in the ninety-first year of his age.

HENDRIX.—In St. Louis, Missouri, on Saturday, January 28th, Dr. Henry F. Hendrix, in the sixty-third year of his age.

JEFFERSON.—In Goldenpond, Kentucky, on Thursday, January 26th, Dr. Thomas B. Jefferson.

JOHNSTON.—In St. Louis, Missouri, on Tuesday, January 31st, Dr. William Johnston, in the ninety-second year of his age.

JONES.—In Brooklyn, Michigan, on Monday, January 30th, Dr. L. M. Jones, in the eighty-third year of his age.

PRESTON.—In Buffalo, N. Y., on Saturday, February 4th, Dr. Joseph Beach Preston, in the sixty-first year of his age.

RISK.—In Summit, New Jersey, on Tuesday, February 7th, Dr. William H. Risk, in the sixty-third year of his age.

SHORE.—In St. Louis, Missouri, on Monday, January 30th, Dr. John Shore, in the eighty-sixth year of his age.

SMITH.—In St. Louis, Missouri on Friday, February 3rd, Dr. Augusta Smith, in the seventy-fourth year of her age.

SPOONER.—In Utica, N. Y., on Monday, January 30th, Dr. Fred Spooner, of Sherburne, in the thirty-ninth year of his age.

STIGLEMAN.—In Floyd, Virginia, on Tuesday, January 31st, Dr. C. M. Stigleman, in the seventy-fifth year of his age.

STRONG.—In Fishkill Landing, N. Y., on Thursday, January 26th, Dr. Walter Day Otis Kellogg Strong, in the eighty-second year of his age.

THAYER.—In Hamilton, Massachusetts, on Sunday, February 5th, Dr. Samuel E. Thayer, in the sixty-third year of his age.

WILSON.—In Glenarm, Maryland, on Thursday, February 2nd, Dr. William W. Wilson, in the seventy-ninth year of his age.

YOUNG.—In Buffalo, N. Y., on Monday, February 6th, Dr. Edson H. Young, in the forty-fifth year of his age.

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A Weekly Review of Medicine

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SATURDAY, FEBRUARY 25, 1905

WHOLE No. 1369.

Original Communications.

RESECTION OF TWENTY-THREE INCHES OF GANGRENOUS INTESTINE DUE TO A VOLVULUS FOLLOWING A SECOND ATTACK OF APPENDICITIS. REPORT OF THIRTY-THREE CASES OF INTESTINAL OBSTRUCTION CAUSED BY UNOPERATED APPENDICITIS.*

By CLARENCE A. McWILLIAMS, M. D.,
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TRINITY HOSPITAL; ASSISTANT SURGEON TO THE
PRESBYTERIAN HOSPITAL.

In the *Medical News* of September 3 and 10, 1904, I published a report of eighty-six cases of intestinal obstruction subsequent to operations for appendicitis. I wish now to supplement that article by reporting cases of obstruction which follow attacks of appendicitis which had not been operated upon, believing that this condition is not fully recognized as it should be by the general practitioner, who is the one to see these cases first, and upon whose right judgment the future well being and life of the patient absolutely depend. As the following cases will amply testify, in the majority the right diagnosis has not been made sufficiently early to offer to the patient the prospects of a successful outcome to an operative procedure, which in itself alone could bring recovery. The surgeon is thereby much handicapped and surgery is brought into disrepute.

The cases may be divided into acute and chronic, and these terms refer to the suddenness and rapidity with which the normal circulation is impeded. I shall use the terms intestinal obstruction, occlusion, and ileus as synonymous. Their symptoms are as follows:

1. Acute cases. There may be an antecedent history of one or more attacks of acute appendicitis, or "peritonitis," of greater or less severity, or there may have been mild attacks of simple dis-

comfort in the lower abdomen with intestinal disturbances, not sufficient to incapacitate, and not pronounced enough to be absolutely diagnosed as appendicitis, yet which may make us suspicious of chronic appendicitis, or there may have been a history of previous colitis, in which we know that the appendix has a great tendency to become involved, although it may not be recognized as such. Succeeding an attack, or attacks, of any of the above types, after an interval varying from months to many years, there suddenly develops, either without any known reason, or following some indigestible meal, or abdominal blow, or over-exercise, an attack which at first looks like simple intestinal colic. Unlike this, however, it does not yield to any treatment; pressure on the abdomen cannot be borne as is the case in simple colic. There is intractable vomiting, which is an early and constant symptom in all acute obstructions. This vomiting begins with eructations of gas and mucus, followed later by stomach contents mixed with bile, then pure bile, which is succeeded by a brownish, and finally a fecal vomitus. The higher the obstruction in the bowel, the more violent is the vomiting, and the earlier it makes its appearance. When the obstruction is in the jejunum, or upper part of the ileum, the vomitus is never really fecal. True fecal vomiting can come only from an obstruction to the lower ileum or colon. The vomiting is intensified by anything which increases peristalsis, such as food or cathartics, and yields to no treatment. A striking peculiarity is that when vomiting once begins it usually continues to the last. It is at first violent with exhausting retching, but later each act is marked by temporary relief.

Pain is a constant and early symptom, being at first paroxysmal, corresponding to the violent attempts of the intestine to force its contents by the obstruction. The pain soon becomes continuous, although there are periods of partial relief. The more absolute the obstruction, the less intermittency there is to the pain. Pressure on the abdomen increases it. The site of the pain,

* Read before the Medical Association of the Greater City of New York.

in the beginning, is usually at the umbilicus, since it is referred to the solar plexus, from which it is reflected to the umbilical region, hence the seat of pain in the beginning is no guide to the location of the obstruction. It is intensified by anything which increases peristalsis, such as food or purgatives. Later, as the obstructed intestine becomes distended with gas and decomposing fluids, and the peritonæum becomes inflamed and swollen, the pain is constant and severe, and is localized about the affected region. The supervention of gangrene in the obstructed bowel is marked by diminution in the pain, provided peritonitis has not already arisen. Obstruction in the large bowel excites but slight pain, due to the fact that peristalsis in the large intestine is normally much less active than in the small.

Constipation becomes more and more complete as the case progresses. Enemata at first may cause the escape per rectum of the gas and the feces which are in the intestines below the point of constriction, which fact may mislead, and cause precious time to be lost in vain attempts to open the bowel. Cathartics likewise tend greatly to exhaust the patient because of the increased violence of peristalsis caused thereby, with its consequent greater pain and expenditure of nervous energy.

Distention gradually increases in the intestines above the occluded point. In intestinal obstruction resulting from appendicitis, the site of obstruction is always in the small intestine, and most frequently in its lower region. Meteorism is most prominent in the mid part of the abdomen, and, in the acute cases, not usually so sufficiently localized as to be perceptible by palpation, or inspection, as confined to a definite loop. Distention in this variety of obstruction is rarely conspicuous until peritonitis supervenes, because the constant vomiting and eructations of gas serve to relieve the accumulation. Later on, distention, due to the peritonitis with its consequent paralysis of the intestines, even without perforation, may become very diffuse and general, and embarrass the heart and lungs by pressure. Perforation may occur, and give the signs of free air and fluid in the peritoneal cavity. The higher up the obstruction is situated, the less is the distention.

Abdominal rigidity and tenderness at first are very slight, and limited to the portion of the abdomen in front of the constricting point. There may be some general cutaneous hyperæsthesia. Later on, as the peritonæum becomes involved, the rigidity and tenderness both are marked, at first localized, then becoming more and more general as the peritonitis spreads. The intestine at

the constricted point may become so distended with fluid as to give rise to a localized area of dullness.

A mass is usually not palpable in the case of an obstruction by a simple band. A volvulus or hernia may give the sensation of an indefinite mass, but this is the exception.

The pulse at the outset may be rapid and feeble, from sudden shock to the abdominal sympathetic. In this it differs from simple intestinal colic, in which the pulse remains full and not rapid. As the shock is recovered from, the pulse approaches somewhat the normal, or may be even slower than normal. Later it becomes rapid and feeble as the peritonitis spreads, or the poisonous intestinal contents are absorbed.

The leucocyte count is usually of little help. In the first case to be reported, with 23 inches of gangrenous gut, it was a trifle above the normal. Harvey Cushing, in 1898, concluded that a leucocytosis of 18,000 to 20,000, in patients presenting symptoms of obstruction, was pathognomic, and sufficient to form a rational basis for operative interference. Bloodgood has recently expressed very similar conclusions, and affirms "that in the majority of instances the leucocyte count is from 15,000 to 20,000: higher counts, 25,000 to 35,000, are usually associated with gangrene or peritonitis." This question of the value of the leucocyte count in abdominal diseases is a much vexed one at the present time, and a satisfactory interpretation of the varying counts has not yet been arrived at. The earlier promises that this examination held out have not as yet been fulfilled, for many of us have learned by sad experience not to place a great deal of dependence upon it. It is only of value when considered in conjunction with all the other signs. A low count, with the other cardinal symptoms well developed, should be left out of consideration when debating the pros and cons of an operative procedure, since we have often found that there may be a normal leucocyte count with the abdomen full of pus. This low count simply means that the system is too overwhelmed and depressed to manufacture sufficient leucocytes to combat the sepsis. A high count would mean that some grave condition was present, such as gangrene or perforation, and it would simply strengthen our view that some operative interference was urgently required. It is also of interest to note that as soon as symptoms of general septicæmia are present, bacilli coli communes may be found both in the urine and blood (Gallazzi).

The condition of the urine in patients with ileus

has received much study. It is usually scanty in amount. Carter called attention to the presence of indican. According to the experiments of Taffen, Orthweiler, and Nothnagel, increased indigo secretion requires the presence of sufficient albuminoid material in the state of intense putridity, and the absorption of formed indol. The results of these experiments in occlusions of the small bowel showed that the formation of indican began after twenty-four hours, and reached its maximum on the third day. It is absent, or present in very small quantities, in occlusions of the large bowel. In diffuse peritonitis it is generally present in large quantities, as is also the case in typhoid fever, intestinal tuberculosis, empyema, putrid bronchitis, etc. "Diagnostically the appearance of abnormally large quantities of indican in the urine indicates merely that there is abnormal putrefaction of albumin somewhere in the body. Farther than this we can rarely go, and it is a precarious matter to make a special diagnosis on the basis of increased indicanuria, for we must never forget that simple coprostasis may lead to a great increase of the urinary indican" (*Ref. Handbook of the Med. Sciences*, Vol. VIII, page 45).

The patient with acute intestinal obstruction is early much prostrated, and the physiognomy is characteristic of grave nerve depression. The face becomes drawn and anxious, the eyes sunken, beads of perspiration stand out upon the forehead, the extremities are cold, and the respirations are shallow and hurried. There are great thirst and at first restlessness which later changes into apathy. The higher the lesion, the greater is the shock, owing to the more intimate association of the upper part of the bowel with the sympathetic nervous system. Shock and later collapse are due partly to nervous disturbance, partly to the absorption of toxic materials, and partly to the withdrawal of fluid from the body, as a result of the vomiting; the portal area is also much engorged, and this adds to the want of fluid in the systemic circulation.

The stethoscope, applied to the abdomen, will enable one to hear at first very violent peristaltic sounds, possibly heard with greatest intensity over some one portion of the abdomen, which later may be found to correspond with the anatomical position of the obstruction. It is of particular diagnostic worth if there is at the same time a local distention of the abdomen. Later, as the peritonitis advances and the intestines become paralyzed, peristaltic sounds are fainter and fainter.

There may be free fluid appreciable in the ab-

domen early in the disease. This is comparable in its genesis to the fluid found in the sac of a strangulated hernia, and occurs sometimes before meteorism becomes at all marked, which renders its detection easy: if the patient be examined frequently its increase hour by hour may often be noted.

It must be remembered that the early symptoms of acute intestinal obstruction are caused by strangulation of the blood current, and not by mere obstruction to the faecal stream. The latter (obstruction to the faecal current) when present alone, as in cancer of the bowel wall, causes very slow and chronic symptoms.

Rectal and vaginal examinations should never be omitted, and the external hernial openings should be palpated for a possible strangulated hernia.

The pathology of the condition may be stated in a few words: as a result of peritoneal inflammation, two loops of intestine become adherent by their peritoneal coats, or a loop may become adherent to the parietal peritonæum. Subsequently, as the respective loop, or loops, drag on this point of adherence, the peritonæum becomes drawn out into a band of greater or less thickness and length. The inflammatory products in this band become organized into connective tissue and we have a permanent fibrous structure remaining, which has a great tendency to contract. The appendix itself may act precisely as a band, becoming adherent by its tip to the parietal peritonæum, to the mesentery, to the intestine, to the uterine annexæ, etc. In these 33 reported cases, the appendix was the obstructing band in eleven cases. In any case the band predisposes to a dangerous condition, for it may lead to any one of several occurrences. A band, attached to an intestinal loop, by its contraction may draw the intestine out into a spur, whose free peristaltic movements are lessened by the adhesion, both causes consequently placing an obstacle in the way of the circulation of faeces. As the stasis increases, the kink increases, until finally the obstruction is complete. Or, again, a band may become attached by its two extremities to a loop of intestine parallel to its long axis. Contraction of this band may produce either a kink or a torsion of the intermediate portion of bowel. Or a band may be formed in front of a piece of intestine which it compresses. An attack of acute indigestion may distend the intestine above the loop, and the increased distention and peristalsis may cause it to kink so as to obstruct its lumen, and cut off the circulation at this point; or a complete kink may be caused by some sudden blow

or exertion. A loop of intestine may force itself beneath this band, and, by the same causes acting as above, a twisting, or volvulus, be produced beyond the band, cutting off the circulation of blood and feces. Again, a band may form the partial boundary of an opening through which a loop of intestine may force itself and become strangulated, and we then have an internal, strangulated hernia. A loop of ileum may become attached to the small intestine in immediate proximity to the inflamed appendix. These two loops may suddenly become twisted about their points of attachment, so as to produce complete obstruction. There may also be formed true knots of the intestine. Unless each of these conditions is speedily relieved, gangrene of varying lengths of the intestine, from cutting off of the vascular circulation, may supervene, resulting in perforation and fatal general peritonitis. A localized abscess is rarely formed, because perforation is so rapid as to occur before protecting adhesions have a chance to form, which would wall in the abscess and thus prevent infection of the general peritoneal cavity.

Obstruction is not so apt to occur during the first attack of appendicitis as some time afterwards, since, during the first attack, the adhesions are soft and yielding, not yet having had time to organize.

Kocher (*Mittheil. aus den Grenzgeb. de Med. und Chir.*, 1898, page 227, Vol. IV) lays down in part the following propositions: 1. The chief danger in each case of ileus rests upon the disturbances in circulation in the bowel wall, and its consequences, namely, venous hyperemia leading to hæmorrhages, and infarcts, oedematous infiltration, and the collection of decomposing fluids in the intestine, injury and exfoliation of the epithelium, and the consequent permeability of the bowel wall for the passage of ferments, toxic substances, and bacteria. 2. This permeability leads, on the one hand, to general intoxication and infection, and, on the other hand, to local inflammations of the bowel walls, necrosis of the same with ulcerations, perforations, and peritonitis. 3. The circulatory disturbances in the intestinal walls are caused by pressure, first, from without upon circumscribed portions of the wall, and also by pressure upon the mesenteric vessels, due to strangulation by bands, internal herniæ, volvuli, invaginations, etc. Secondly, the disturbances in the circulation in the intestinal walls are caused by pressure from within by the stagnation of the intestinal contents, increased transudation, and secretion above the obstruction, and the consequent overstretching of the bowel walls.

As a result of the previous inflammations, we may find that the appendix itself is simply a band of connective tissue, its lumen having become obliterated by the antecedent inflammations.

2. The chronic types of intestinal obstruction, resulting from inflammations in and about the appendix, are rarer. Following the original appendicitis, there may be a longer or shorter period of perfect health. The patient then begins to complain of digestive disturbances, particularly from the side of the bowel activity. Constipation becomes more and more marked, relieved with greater and greater difficulty by cathartics and enemata. This constipation may alternate with occasional watery diarrhoea, due to catarrhal enteritis, caused by the irritation of retained, decomposing feces above the constricting point. There may be attacks of intestinal colics with nausea and vomiting, relieved by thorough evacuation of the bowels. These attacks recur at irregular intervals, and are due to temporary obstruction, above the constricting point, of a mass of undigested, impacted food or feces. A diagnosis may be made at this time, and that, too, much to the patient's advantage, for abdominal massage and electricity may so stretch the adhesions as to prevent their contraction, and thus ward off complete obstruction. Careful watching of a patient with a history of appendicitis, or one which makes us suspicious of a chronic appendicitis, and who has the above symptoms, will enable the right diagnosis to be made. Oftener, however, that of intestinal indigestion is made and the patient is plied with drugs, and placed upon a more and more rigid diet when the symptoms do not yield, with the result of causing loss of flesh and strength, at times of extreme degree. Chronic obstruction is caused by the gradual contraction of adhesions between two loops of bowel, or about a loop, or by the gradual or periodic forcing of a coil beneath a band, etc., resulting in the progressive diminution in the calibre of the bowel. Persistence of these symptoms urgently requires operative interference. Sudden complete obstruction may come on at any time without obvious cause, or determined by an overhearty meal (acute intestinal indigestion), violent exertion, or injury. The symptoms then of complete acute obstruction are in full evidence, requiring active operative treatment. The severest forms of ileus begin slowly. This fact I wish particularly to emphasize.

Diagnosis.—The all important point to determine is whether a true mechanical obstruction is present or not, irrespective of its ætiology. I shall not go into the various and numerous causes of

mechanical occlusion, many of which cannot be determined until the abdomen is opened. To delay because the exact cause is not apparent and in order to determine this cause, is a fatal mistake. In not a few cases we must ask with Weir, "not what the cause is, nor where the obstruction lies, but is there an obstruction?" The typical cases are usually plain enough as to diagnosis, it is the atypical ones which puzzle us, those which lie on the borderland between true mechanical obstruction and adynamic obstruction, in which symptoms of transient ileus lead us astray. The diagnosis of either of these conditions generally presents difficulties only in the beginning stages, but it is just at this time that in a correct diagnosis and proper treatment lies the patient's future welfare.

The investigation of a patient with a possible intestinal obstruction should proceed somewhat as follows:

1. The history of the patient for years previous should be carefully gone into, to find any trace of inflammation of the peritonæum, due to sepsis in the appendix, gall bladder, tubes, or resulting from leakage of an old perforating gastric or duodenal ulcer, causing adhesions. We may be able frequently from such data to make a provisionally correct diagnosis.

2. The history of the present attack should then be investigated, noting particularly the manner of onset, whether acute or gradual, the duration of the symptoms, and whether there have ever been previous subacute attacks. Careful inquiry should then be made as to the occurrence of vomiting and the character of the vomitus, onset, location, and severity of the pain, passage per rectum of flatus and fæces, character of the stools, if there have been any, the amount and position of the abdominal tenderness as noticed by the patient, and also the extent of the prostration.

3. A most careful, methodical, and painstaking examination of the patient should then be made. The physiognomy and the general condition, as well as the absence or not of signs of prostration, should be noted. The general attitude should be observed, whether the patient lies with knees drawn up, his ability to turn on the side, the amount of restlessness, the type of respiration, whether abdominal or thoracic, etc., etc.

4. Inspection should determine the amount of the general abdominal movements during respiration, whether there be any inequality in the amount of the movement in the various segments of the abdomen, also the presence of any prominence such as would be caused by an underlying tumor. The existence of visible peristalsis or en-

larged coils of intestine should be looked for; such are rarely seen in the acute types, but may be evident in the chronic ones. The amount and character of the distention are studied, and whether or not it is located in the centre of the abdomen, as when small intestines are involved, or in the flanks, as occurs when the obstruction is in the rectum or sigmoid.

5. Palpation should elicit a point or points of tenderness and their general and relative intensity, general or localized muscular rigidity, presence or absence of a tumor, and, if present, its size, shape, character, etc., presence of rigidity of one costal arch more than the other (Eliot), etc. All the normal and abnormal hernial openings are investigated, as are also the rectum and vagina. The heart and lungs are carefully gone over.

6. Percussion will reveal the presence or absence of free or encapsulated fluid, or free gas in the abdominal cavity. Local dullness may signify a loop of intestine distended with fluid.

7. Auscultation will enable us to determine by the peristaltic sounds the presence and amount of local or general intestinal paralysis, as well as any point of increased peristaltic movements, such as we find just above the constricting point in the early stages.

8. Changes in the temperature and the pulse are carefully and frequently noted, and interpreted accordingly. The urine is examined as usual and, in addition, the amount of the indican is determined. The blood is counted for the number of leucocytes, and the result interpreted in conjunction with the rest of the symptoms.

Some difficulty may be met with in distinguishing a true mechanical obstruction from the obstructive symptoms associated with localized enteritis, or peritonitis, such as occur in appendicitis when the intestinal walls are paralyzed. This pseudoileus is at times so pronounced as to lead to fæcal vomiting, but careful attention to the history, general symptoms, and condition of the patient will enable a correct diagnosis to be made. The following table (Rose and Carless) gives the chief diagnostic points:

	ACUTE INTERNAL STRANGULAR OBSTRUCTION.	ACUTE APPENDICITIS WITH PERITONITIS.
Onset.....	Abrupt.....	May be preceded by local pain.
Rigor.....	Absent.....	Often present.
Temperature..	Subnormal at first; rising at onset of peritonitis.....	High at first, falling later from exhaustion or toxæmia.
Pain.....	Severe; referred to the umbilicus.....	Severe, primarily referred to the right iliac fossa.
Tenderness....	Absent till peritonitis comes on.....	Present over cæcum even in early stages, and gradually spreading.
Vomiting.....	Early, marked, and soon fæcal.....	Less urgent and seldom fæcal, except as a late symptom.
Abdominal wall	Flaccid till peritonitis is present.....	Tense and rigid from the first.

Jennings (*Lancet*, March, 1904, page 793) says, "excluding external herniæ, internal strangulations are far the most important variety of obstruction to diagnosticate early, for 1, they are frequently of such a nature that the surgeon can completely relieve them; 2, unless relieved they will quickly kill; 3, they usually come in previously healthy adults in the prime of life; and, 4, there is usually no concomitant disease likely to kill the patient."

Treatment.—Prophylaxis consists in careful regulation of the diet of a patient who has had an attack of appendicitis, for from four to six weeks after such an attack, in order to avoid acute indigestion. Constipation should be guarded against, and attacks of gaseous indigestion with colicky pains should be carefully watched, and treated promptly and vigorously. It has occurred to me that it would be rational to employ gentle abdominal massage, either with the hand or the cannon ball, beginning four or five weeks after every acute appendicular inflammation, in order to stretch and loosen the adhesions.

Ileus occurring within four or five weeks after the original appendicitis, is more likely to yield to palliative treatment than that occurring after a greater lapse of time, for in the former case the adhesions are softer and more yielding. At the onset of the attack, while the diagnosis is as yet uncertain, an initial cathartic with repeated high enemata, gastric lavage, gentle abdominal massage with frequent changes in the position of the patient, together with electricity to the abdomen, are all in order. An initial dose of morphine is permissible, but none further should then be given, for the symptoms are thereby masked, and the diagnosis is obscured. The diagnosis should be made within the first twenty-four hours of the onset, when further palliative attempts to overcome the obstruction should be desisted from, since these simply exhaust the already prostrated patient. Fæcal vomiting should never be waited for! The treatment now is expressed in the one word, laparotomy, and that, too, at the earliest possible moment, for statistics show that the mortality of the operation rises appallingly with each hour of delay.

It is not my purpose at this time to go into the details of the operative technique to any great extent: suffice it to say, that there are two main objects to be accomplished: 1, to empty the distended bowel, since the patient is being slowly poisoned by the absorption of the septic contents; 2, to remove the cause of the obstruction. A general anæsthetic is to be preferred, except in most desperate cases, where cocaine may be used lo-

cally. To prevent the patient drowning himself with fæcal vomitus, it is advisable to wash out the stomach prior to the operation, and to have the head lower than the body during the operation. An incision in the median line below the umbilicus is made and search at once instituted for the cause of the obstruction. This may be difficult on account of the distended condition of the intestine. This latter may be partially overcome by aspirating the bowel, or better by opening it in one or more places, care being taken to prevent soiling of the peritonæum, the openings being subsequently closed by two rows of Lembert silk sutures. If the case be *in extremis*, an artificial anus may be at once established, leaving the obstructing cause to be removed later. Usually it will be possible to institute a methodical search for the cause of the obstruction. If this is not evident at once, a distended loop should be drawn into the wound, and followed along in the direction of increasing distention and tension until the occluded point is reached, which should then be treated as the individual conditions require; kinks, adhesions, herniæ, twistings, etc., are all freed, and the intestinal contents above the obstructing point massaged into the collapsed portion below. If the gut wall is so damaged as to threaten perforation, or if it is already gangrenous, we may proceed in two ways: 1, by resection of the damaged area with end to end anastomosis; or, 2, by the formation of an artificial anus. The former gives better results in the majority of cases, and is much to be preferred. Search should always be made for a second point of obstruction, since sufficient cases are already on record to show that surgeons have been satisfied to remove one obstruction without searching for a second, which autopsies have revealed to be present and fatal. Before leaving the table, the stomach should again be washed out.

The postoperative treatment should be conducted with great care. Frequent gastric lavage will relieve the vomiting. Cocaine hydrochloride, grain $\frac{1}{4}$ to $\frac{1}{20}$, may be given every four hours to allay the irritability of the stomach and to act as a stimulant. Morphine should be interdicted and its place taken by hypodermics of codeine, grain 1, every two or three hours if absolutely necessary. Pain after the operation is partially due to the stretching of newly formed adhesions or to solid material passing over the site of stricture. Stimulants, such as strychnine and adrenalin (15 minims every two hours) may be administered hypodermically, while atropine may be given in the same way to stimulate peri-

stalsis. High enemata are used every three hours until the bowels act. Thirst and the loss of the body fluids by vomiting, etc., are overcome by salt solution administered by rectum, or by hypodermoclysis, every four to six hours. To the salt solution are added adrenalin, or whiskey, as thought advisable. Small doses of calomel are given as soon as the stomach will tolerate them.

(To be concluded.)

MYOCARDIAL DEGENERATION.

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Contrary to general opinion, if we accept the statistics of Schott, we find that diseases of the myocardium are more frequent than those of the endocardium in the proportion of 505 to 245. Of these 505 cases intellectual excesses have been noted in 140 cases, and in 68 cases these have conjoined with physical strain, while 212 of these patients, out of the total of 750, declared a significant family history.

Arteriosclerosis must be accepted as an important factor in many, but not in all cases of cardiac degeneration. It is worthy of remembrance that at least partial occlusion of the coronary arteries due to this cause may be compensated through the vessels of Thebesius with avoidance of otherwise resulting damage. Much more often, however, as a result of the diminished blood supply, the parts undergo an anæmic necrosis with resulting change in the muscular fibres either in loss of their nuclei or as shown by J. Renaut (1889) fragmentation or fracture of the fibre itself. This, doubtless, is the cause of more sudden deaths than any one valvular lesion. If the development is a more gradual one the muscle fibres which have undergone this anæmic necrosis are replaced by fibrous tissue with resulting increase in the size of the heart and subsequent gradual or sudden dilatation of its walls.

Necessarily, syphilis, rheumatism, and gout are the important ætiological factors in this degenerative change. The first two diseases should give a positive history, but an important fact, which is not appreciated as much as it should be, is that true gouty subjects (rare in this country) are less apt to show myocardial change than those in whom the joints have never been inflamed, but who suffer from other irregular manifestations of the disease. This American gout or

lithæmia which is often difficult of recognition is doubtless in many instances an explanation of those cases in which an apparent ætiological factor could not be found.

Parenchymatous degeneration is a condition met with in infectious diseases, typhoid, typhus, smallpox, pyæmia, remittent fever, particularly when protracted and accompanied by high temperatures. However, fever is not always a necessary condition, as it is found in other diseases when such degeneration does not exist. It is characterized by a pale, turbid condition involving the entire cardiac muscle, and relaxed, soft, brittle walls.

Fatty heart includes fatty overgrowth, with often resulting fatty infiltration and fatty degeneration. The first is an abnormal development of adipose tissue on or between the muscular substance of the heart, often impairing the contractile power, and not infrequently resulting in actual fatty degeneration. Hereditary predisposition exercises a marked influence on the occurrence of obesity, and no doubt also on resulting fatty infiltration. The condition is more than twice as common in the male as in the female, and is generally found after middle life. Improper food, sedentary habits, alcoholism, particularly in the consumption of malt liquors, are important factors.

Fatty degeneration is a change in the muscular fibres, by which the transverse striæ disappear being replaced by granules and globules of fat; a condition of defective nutrition, and, therefore, the result of various causes, old age, perhaps, associated with fatty infiltration, anæmia, either primary or secondary to repeated hæmorrhages; of wasting diseases, phthisis, cancer, and chronic suppurating, prolonged fevers, chronic alterations of the blood, purpura, scurvy, hæmorrhagic diathesis, certain poisons, phosphorus, arsenious acid, lead, antimony, and, last but not least, alcohol. Local causes, such as pericarditis and hypertrophied ventricular walls, as well as disease of the coronary arteries, may bring it about. The distribution of this change varies. When secondary to acute diseases it is generally uniform, but in the majority of all cases the left ventricle is more affected than the right.

A point of importance, as shown when we entertain the question of diagnosis, is that in pure fatty degeneration the size of the heart is normal or only increased slightly by the occurrence of secondary dilatation, and, not rarely, it is diminished. This condition, however, may and often does occur in hearts previously enlarged. The predisposing causes as regards sex and age

are the same as in cases of fatty infiltration. Habits of life have probably less influence in fatty degeneration. I have not infrequently seen it in persons of temperate habits, but suffering from long continued mental strain.

Brown atrophy is a common degenerative change, particularly in that portion of the heart muscle secondary to valvular affections. In the old and those who have died from wasting diseases, it is generally present. I have in the past three years seen two marked post mortem evidences of this kind in patients who had suffered repeated and profuse hæmorrhages from uterine fibroids. In several other instances of a similar nature I have been so impressed by the physical signs and symptoms of a weak heart that I have enjoined particular caution in the administration of ether in those cases where operations were indicated.

Amyloid degeneration of the heart is rare and not often recognized macroscopically.

Hyaline degeneration is sometimes met with in prolonged fevers.

Calcareous degeneration may occur in the myocardium.

These last three forms possess no clinical interest.

The consequences of myocardial disease necessarily depend upon the degree and character of the affection, and to a certain extent upon the parts involved. In all cases, however, the result must be loss of contractile power and thus lead to imperfect filling of the arterial system and consequent visceral anæmia. This, it is to be noted, is much more marked than is the correlative venous distention, which is so prominent an effect of dilatation of the heart.

In the *fibroid heart*, hypertrophy and dilatation usually coexist and suggest at least recognition of the heart as the main issue involved. Dyspnoea and dropsy are sooner or later present and the symptoms resemble those of dilatation of the heart. The first sound is weak and toneless and has been noticed to be weaker over the left than over the right ventricle when the former was more affected. A mitral systolic murmur may be present, but perhaps recognized only in the recumbent posture. The pulse is weak, irregular on exertion, and may be as infrequent as 30 beats to the minute. Cardiac pain may be present, but rarely to a marked extent. In many instances, however, the symptoms have been remarkably latent and death may be sudden apart from rupture or even the existence of an aneurysm.

The diagnosis of many cases of fatty degeneration is to my mind even more difficult than that

of a fibroid heart, and I am positive that often cases of this disease are not recognized even after a physical examination. This is due largely to the fact that as the size of the heart in simple, fatty degeneration is little changed, the area of dullness presents no alteration. The slight dilatation rarely leads to signs of enlargement. It must be remembered, however, that in a certain number of cases fatty degeneration may follow preexisting hypertrophy and dilatation. Significant are evidences of diminished force of impulse, the area which remains normal: of course, if dilatation has occurred, the impulse is diffuse. Both sounds of the heart are weakened corresponding to the impulse, but necessarily the first sound shows the greater alteration on account of the muscular change: it is of less volume, shorter in duration, and higher in pitch, resembling the normal second sound, which is, of course, correspondingly diminished on account of the weakened distention. In some cases the second sound is alone discernible.

The first silence is longer than normal, on account of the shorter first sound. Thus the sounds resemble those of the fetal heart, particularly when the action is rapid. If on repeated examinations where the area is not increased, there is noticed a greater relative diminution of the aortic second sound than of the pulmonic, it is fair to assume that the left ventricle is chiefly affected and vice versa. The greater involvement of the left ventricle can thus be demonstrated in the parenchymatous change resulting from high temperature in typhoid and other fevers.

The rhythm varies greatly. The action of the heart may be regular and normal in frequency, particularly if dilatation is not marked. More significant, but more rare, is infrequency of pulse with or without low tension. In these cases the pulse may drop to 40, 30, or even 20, beats a minute. This condition, when observed after middle life is, to say the least, suggestive.

An active business man applied last winter for an increase of \$20,000 of insurance, which was granted. Some weeks afterward he called my attention to the fact of the lowering of his pulse rate to about 58 beats a minute. A careful examination revealed evidences of cardiac degeneration, and notwithstanding treatment he died in an attack of angina (the first) within three months of his insurance examination.

True anginal seizures are comparatively rare and pain itself is not a common symptom. More often is there a sense of weight or uneasiness in the cardiac region with some shortness of breath on exertion. Syncopal attacks are not uncommon and vary in intensity: the degree may be so

great as to simulate apoplexy without, of course, resulting paralysis. They may come on suddenly independent of exertion and resemble asthma or a continuous sense of suffocation, or, as already remarked, muscular exertion may be necessary to bring them into evidence.

Other symptoms are pale skin, mucous membranes bluish and extremities cold, morale often depressed. Symptoms of venous distention are rare, except slight œdema about the ankles; gastrointestinal symptoms and constipation are common, but dropsy is never present without dilatation. It is only when this is present that albumin may be found in the urine. A point, however, which I consider of particular importance in these cardiac degenerations is the diminished amount of urine, which is often only one fourth or even one half the normal amount. The amount passed should, therefore, be carefully measured in all doubtful cases. According to Bouchard, there is diminished toxicity of the urine.

Coexisting degeneration of other organs often modifies the general character of the symptoms of fatty degeneration, but neither the existence of arteriosclerosis nor of the yellow arcus is pertinent to the diagnosis.

Fatty overgrowth rarely gives rise to distinctive symptoms, unless infiltration or fatty degeneration has supervened. Necessarily the heart sounds are less clearly conveyed to the ear, but in these cases it has often seemed to me that after exercise the heart sounds become more distinct, which we would not expect to occur, at least to the same degree, in cases of the degenerative form.

Prognosis.—Many patients die suddenly when the symptoms are either absent or not considered of sufficient importance to merit treatment; but too many cases of so called heart failure with fatal termination are recorded in patients who have recently been under observation and in whom the condition was unrecognized. In most cases the outlook is most serious, but perfect recoveries of the parenchymatous and fatty types, after typhoid fever and diphtheria, respectively, are everyday occurrences. To a lesser extent may this be said to be true of the attacks in the cases accompanied by arteriosclerosis and dilatation.

Treatment.—In that important group of cases characterized by a heart of normal dimensions and absence of evidences of dilatation, but existence of cardiac weakness, rest in bed for a certain period of time is probably the first indication. Easily digested food, largely nitrogenous

in composition, and attention to the condition of the bowels are of importance. The regular use of an after dinner pill or an occasional mercurial purge, alternating from time to time with high rectal irrigation, should be borne in mind. The importance of maintaining the digestive functions in as good condition as possible should not be forgotten, as an attack of indigestion may be followed by dangerous consequences. Strychnine, arsenic, and iron are the drugs which are of most use. The digitalis group is, as a rule, to be avoided, and in some cases I am satisfied that it is productive of harm. I am in the habit of making regular use of oxygen, two or three times daily for periods of ten to twenty minutes, and have continued this for weeks at a time with satisfactory results. In cases where there are evidences of increased arterial tension, the nitrites are of benefit. When the contrary is the case small doses of atropine may be tried with good results. Aromatic stimulants are, as a rule, better suited for syncopal attacks than whiskey or brandy, but the use of light wines is often beneficial. The patient is sensitive even to proper clothing and warm water for bathing. For restlessness, small doses of heroine guarded by atropine are useful. In Cheyne-Stokes breathing, strychnine, hypodermically, and oxygen may be administered. In attacks of angina, nitrite of amyl and nitroglycerin may be given hypodermically. As the patient improves, graduated exercise, either by the Oertel or Schott treatment, should be instigated. I am aware that there is, at least in this country, some doubt among the profession as to the propriety of using these methods in cases of fatty degeneration of the heart. Certain it is that the results are more uniform and satisfactory in cases of fatty overgrowth, but those of you who have examined and noted the at times excellent results obtained in the first group by these treatments, cannot but become partizans of the same. The group of cases attended with dilatation (generally the fibroid) must be given the treatment for that affection. In cases with a syphilitic history, the usage of potassium iodide for long periods should be carried out as some brilliant results have been reported.

2112 PINE STREET.

Gift to the Postgraduate School.—Announcement has been made that the New York Postgraduate Medical School and Hospital, Second Avenue and Twentieth Street, has received a gift of \$7,500 from Mrs. Richard T. Auchmuty, of No. 101 University Place.

COTARNINE HYDROCHLORIDE IN
UTERINE BLEEDING.*

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Having made use of cotarnine hydrochloride (or stypticin, the name applied to it by its discoverer, Professor Martin Freund, of Frankfurt-am-Main) for the past seven years, to control bleeding from the uterus, I feel that my opinion of its therapeutic value has been established with exactness. Having now passed the experimental stage in the employment of the remedy, I am able to supplement my former report on the same subject, published in the *Medical News*, April 8, 1899, with the present contribution.

The drug is a fractionation product of the oxidation of narcotine, an alkaloid obtained from opium, and is a microcrystalline, yellow powder, soluble in water. It has an intensely bitter taste. Narcotine, under the influence of oxidizing agents, can be separated into an acid, opianic acid, and a base, cotarnine. It can then readily be converted into the hydrochloride of cotarnine. Chemically it differs from hydrastinine only in the substitution of the methoxyl group OCH_3 for one atom of displaced hydrogen.

The following is a résumé of the conclusions concerning its physiological action, the experiments having been conducted in the Pharmacological Institute of Berlin by Edmund Falk (*Therapeutische Monatsschrift*, Vol. IX, No. 12).

1. In cold and warm blooded animals it produces paralysis by its action on the motor sphere of the spinal cord. In the warm blooded animals a complete paralysis occurs late, usually only shortly before death.
2. A mild narcotic state, but neither sleep nor complete narcosis, is produced in warm blooded animals by its action on the cerebrum.
3. In rabbits and dogs by both internal and subcutaneous administration, it is productive of intestinal paralysis and fecal evacuations.
4. It has no direct primary influence in warm blooded animals on the heart, circulatory system, or blood pressure. The effects on the heart, pulse, and blood pressure are of secondary nature, through the influence of cotarnine on respiration; only in very large doses, and with long continued artificial respiration is a weakened heart action produced.
5. Its action on the respiratory centre after transitory irritation is paralytic; respiration is, therefore, increased at first, but subsequently rapidly sinks to a quietus.
6. Fatal termination is produced by paralysis of the

respiratory centre, but can at any time be kept in abeyance by artificial respiration.

There is a similarity in the therapeutic action of cotarnine hydrochloride and hydrastinine, which is explained by Rousse and Walton on the theory that both drugs augment cardiac activity, and possess oxytocic properties. According to these observers, the difference between hydrastinine and cotarnine hydrochloride is that the former causes circulatory modifications more rapidly, acting on the heart and abdominal vessels at the same time, while the action of the latter seems limited to the heart and is slower.

They also find that cotarnine hydrochloride slows the action of the heart in the frog and rabbit, whereas it exerts an accelerating influence in the dog; hence they utilized the latter animal in their later experiments. They find, contrary to the opinion of Falk and Marfori, that it exerts a tonic action on the circulatory system. Comparing it again with hydrastinine, they find the latter acts as a stimulant on the heart, like camphor and ether, whereas cotarnine hydrochloride can be compared, in its action on the heart, to digitalis; hence the difference in their indication when these drugs are to be used in the control of hæmorrhage. All observers agree that cotarnine hydrochloride causes fatal termination by its paralyzing effect on the respiratory centre.

The credit of making the first clinical observations belongs to Sigismund Gottschalk, of Berlin. Since then numerous clinicians in Europe have made careful observations and almost uniformly report most excellent results; not only in bleeding from the female genitalia, but also in instances of pulmonary bleeding, dental hæmorrhage, hæmaturia, and intestinal bleeding.

The cases for which it was used by me were 35 cases of fibromyomata. Eleven were more or less benefited by its administration, and twenty-four were not benefited at all. Its uselessness was most marked in instances of submucous tumors. I quote one example in which relief was very marked:

1. *Interstitial Fibroid*.—Mrs. R. S., aged 40 years; interstitial fibroid extending 4 inches above the symphysis; menstruation regular but very profuse, and from eight to ten days' duration. One week before the expected flow, 1 grain was administered three times daily; with the onset of the flow the dose was increased to $2\frac{1}{2}$ grains every three hours. The flow has been diminished to three days and is of only moderate quantity. This patient is still under observation. She has positively declined surgical intervention. (If the drug is not taken during a flow, the bleeding is more profuse.)

2. *Hæmorrhage from Uterine Cancer*.—There were nine patients with hæmorrhage due to cancer of the uterus. The result was negative in each instance.

* Read at the Southern Surgical and Gynecological Society, Birmingham, Ala.

3. *Postpuerperal bleeding* after removal of retained placenta particles or decidua. There were five such instances: the patients had had the remnants of conception removed by their family physicians, but still some atypical bleeding persisted. In all these patients complete cure followed in from two to six days. The following is an illustration: Mrs. W., 24 years old, was delivered of her first child six weeks before consultation; manual detachment of the placenta was undertaken; three days later her accoucheur curetted the uterus and removed the placental remnants. Some bleeding, however, continued up to the time when I was requested to see her in consultation, with a view of sanctioning another curetting. Not finding any indication that such procedure was necessary, I advised subcutaneous injection of a solution containing five grains of cotarnine hydrochloride, the injection to be repeated every eight hours until the flow ceased. The bleeding diminished after the first dose and ceased entirely after the sixth injection.

4. *Hyperplastic Endometritis*.—Out of 13 patients benefit was derived in 3 instances. All were subsequently curetted, but in eight patients even then the menorrhagia was not markedly diminished. Seven of this number were then cured with cotarnine hydrochloride, and one was not at all benefited. In the glandular form of endometritis the results were entirely negative.

5. *Retroversio-flexio with Endometritis*.—There were five instances of this class, but in only one patient was the menorrhagia relieved without resorting to surgical intervention, viz., R. T., aged 29 years, two children and one abortion at the second month, nine months before coming under observation. Menstruation during the last three months, profuse and of six to eight days' duration, which weakened the patient very much. The menorrhagia was the only symptom of which the woman complained. Inasmuch as the period always recurred regularly, the administration of cotarnine hydrochloride was begun in 1 grain doses two days before the next expected period, and as soon as the flow showed itself, $2\frac{1}{2}$ grains were ordered every three hours, this treatment to be continued throughout the period. The first time the flow was shortened to five days, and was of smaller quantity; the second month, to four days and was of moderate quantity, and the third month it was normal and of only three days' duration. The woman did not again report. The remaining patients not being markedly benefited were subsequently operated upon.

6. *Chronic Metroendometritis*.—Out of nine such patients, five were more or less benefited by the administration of the drug, and in four the result was negative.

7. *Various forms of non-suppurative pelvic inflammation*, the uterus itself not being markedly affected. Twenty-three patients. The pathological bleeding was subdued in 8 instances; was markedly improved in 9 cases; was somewhat improved in 3; and had a negative result 3 times. The following narrations may serve as illustrations: M. J., aged 28 years, married eight years, never pregnant. Menstruation regular, of three days' duration, but very painful. Amount of blood lost, small. Her physician dilated the cervix and curetted four

months previously. She was ill three weeks as the result of that interference. On examination the pelvis was found to be filled with an exudate which prevented mobility of the uterus. The para and perimetritis was diagnosed to be non-suppurative. The patient had atypical bleeding at varying intervals, from two to four weeks, and each bleeding was profuse, and from seven to ten days in duration. The remedy was ordered in doses of 1 grain three times daily when not bleeding, and as soon as blood showed itself $2\frac{1}{2}$ grains were ordered to be taken every two to three hours. The effect was marked; the amount of blood lost began to lessen from the beginning, and after three months of administration in the manner described, menstruation began to be regular, although considerable exudate was still present.

Chronic tuboovarian inflammation. A. G., 27 years old, one child three years previous to consultation. During the preceding two years the woman had been bleeding from eight to twelve days, losing a large quantity of blood at each period; prior to this the menstrual period continued but two to three days and the blood lost was moderate in quantity. She was ordered to begin with the drug three days before the expected flow, in 1 grain doses, and, on the appearance of bleeding, increasing it to $2\frac{1}{2}$ grains every two to three hours, according to the severity of the bleeding. The patient had been curetted three times; and it had been proposed to remove her slightly thickened and (as was shown on examination) sensitive Fallopian tubes and somewhat enlarged ovaries, yet four months of treatment with cotarnine hydrochloride as described, sufficed to rid her of the menorrhagia.

8. *Bleeding During Pregnancy*.—Patients who have slight irregular bleeding during pregnancy are greatly benefited by letting them take cotarnine hydrochloride. Usually these patients are much alarmed so long as such bleeding continues, and in my experience it ceases after a few doses have been taken. There has been no unfavorable symptom caused by its administration. In all there were eleven such instances.

9. *Profuse menstruation in virgins* without detectable changes being found in pelvic organs on rectoabdominal examination. There were seventeen such patients, and in only five was the result entirely negative. In one of these hydrastinine gave the desired relief. Five of the patients had dysmenorrhoea as a complication, and in two instances this was diminished by the drug. One illustration may suffice. E. L., aged 23 years. Menses began at 12 years, the flow being at irregular intervals of from six weeks to two months during the first eighteen months; then the flow was of moderate quantity and of two to three days' duration; painless. From the second year after the beginning of menstruation the flow gradually increased in quantity and duration, and was associated with much pain, so that at the time when the patient came under observation the flow was of from eight to ten days' duration, exceedingly copious, and associated with such severe cramp like pain that the young woman had to spend from three to four days in bed. Ordered cotarnine hydrochloride, 4 grammes, divided into 40 capsules, one capsule to be taken every six hours, beginning three days before ex-

pected flow; on the appearance of the flow and during it, one capsule every two hours; if the flow was not diminished in twenty-four hours then two capsules were to be taken every two hours. In three months this patient had the bleeding decreased to four days' duration and the dysmenorrhea was so much improved that she did not find it necessary to go to bed during the period.

10. *Atypical Bleeding During the Climacteric Period.*—If there was no pathological cause found for the occurrence of this symptom, the result has usually been satisfactory. It is necessary, however, to give it on the first sign of bleeding. The remedy has also been used in a few instances of uterine bleeding in patients in whom no cause at all could be found for the occurrence of the hæmorrhage, and in these instances, too, the result was fairly satisfactory.

It must of course not be expected that cotarnine hydrochloride is a panacea for all cases of uterine bleeding, but it has been found to answer better than any other remedy that I have used. If no effect at all is produced after three large doses (from $2\frac{1}{2}$ to 5 grains) have been given, it is useless to continue with the drug. In the cancer cases it was tried as a palliative measure prior to the palliative operation, but, as has been noted, without effect. It is likewise not recommended to continue its use in instances of fibroid if two hypodermic injections of 5 grains each at intervals of four to twelve hours do not cause a diminution of the hæmorrhage. One should resort to surgical intervention when necessary. It is intended here merely to call attention to a very valuable remedy for the relief of a symptom often met with by physicians; a remedy that may be advantageously tried with patients who decline immediate surgical intervention, or who are not in proper physical condition to risk such intervention. I do not coincide with those of my confrères who look upon gynaecology only from a surgical side.

It is reasonable to expect that one is in a position to make practical deductions after having used a therapeutic agent as extensively as I have employed that under consideration. While I am not as enthusiastic about its general use as a remedy to control uterine bleeding, yet there can be no question about its utility in many properly selected cases. In fact, in some instances it has practically served as a specific. Further, and this is important, no harmful action has been observed even when it has been administered in such large doses as five grains every three hours. Neither was it noticed in the employment of such large doses that it had a hypnotic effect as was maintained by Gottschalk, who attributed this action to the drug because it is a derivative of opium. The only semblance that I have observed, that might be construed into the supposition that cotarnine hydrochloride acts like a hypnotic in medicinal doses is that in some instances it also

relieved the various patients of pain associated with the profuse bleeding, and hence induced a restful condition. That its therapeutic value is not due to its possessing oxytocic properties, as has been stated by some writers, is best proved by the fact that in no instance of slight bleeding during pregnancy, in which the drug was administered, were uterine contractions produced, although the bleeding usually ceased. Further, Gaertig, in the lying in asylum with which he is connected, experimented with the remedy in instances of premature labor and in atony of the uterus, without observing any uterine contractions as the result of its administration.

It has been found that in instances of too profuse menstruation, the best plan is to begin with 1 grain doses three times daily about one week before the expected flow, and as soon as the flow begins to let the patient take $2\frac{1}{2}$ grains every three hours to be continued during the entire period. In instances of metrorrhagia, from $2\frac{1}{2}$ to 5 grains may be given at intervals of from two to three hours until the bleeding is lessened, then the dose may be decreased to from 1 grain to $2\frac{1}{2}$ grains at intervals of three to four hours. If a quick result is important, it is best to give 3 to 5 grains in a 10 per cent. solution subcutaneously into the buttocks, using the customary antiseptic precautions. The small doses recommended by our German confrères did not give me a sufficiently satisfactory result often. Because of the disagreeable taste of cotarnine hydrochloride, it is best administered in the form of capsules, ordering the pharmacist to put the powder dry into the capsules. It may, however, also be given in tablet form.

39 EAST SIXTY-FIRST STREET.

Philadelphia College of Physicians.—At the meeting of the College of Physicians, held February 1st, Dr. Charles Lester Leonard read a paper entitled *Recent Advances in the Technique of Röntgen Therapy*. Dr. Russell H. Boggs, of Pittsburgh, by invitation, read a paper entitled *The Treatment of Some Non-Malignant Diseases by the Röntgen Ray*. Dr. Enion G. Williams, of Richmond, Va., by invitation, read a paper entitled *The Treatment of Malignant Disease by the Röntgen Ray*. The discussion was opened by Dr. George C. Johnston, of Pittsburgh, by invitation. The honorary librarian announced the addition of forty-four volumes to the library during January. Dr. Ward Brinton was elected curator of the Mutter Museum. The president announced the following appointive committees: Finance committee, Dr. John B. Roberts, Dr. G. Fales Baker, and Dr. Samuel J. Dixon; entertainment committee, Dr. George E. de Schweinitz, Dr. Charles H. Frazier, Dr. J. Alison Scott, and Dr. George B. Wood; Alvarenga prize committee, Dr. Elliston J. Morris, Dr. John M. Swan, Dr. Stricker Coles, Dr. Alfred Hand, and Dr. Joseph M. Spellissy.

A BRIEF REVIEW OF THE TREATMENT OF PREPUERPERAL AND PUERPERAL HÆMORRHAGES.*

By CHARLES J. C. O. HASTINGS, M. D. C. M., L. R. C. P. I., L. M. K. Q. C. P. I.,

TORONTO, CANADA.

In view of the fact that a large number of the Fellows of this society are not engaged in obstetrical practice, I presume I should offer some apology for bringing this subject before you. The facts, however, of the cases being, fortunately, of rare occurrence and the results depending on the judicious and prompt action of the attendant, justify, if they do not in fact make it obligatory on our part, to have an occasional rehearsal as regards the best line of treatment in order that we may be well equipped for prompt action, as we can only hope successfully to meet an emergency by being prepared for it.

Wellington said that his greatest victories were achieved before the battles were fought. Napoleon maintained that he had conquered the greater part of Europe because the enemy didn't know the value of five minutes. Now if we hope to attain similar laurels in the field of labor we must keep our powder dry and know how to appreciate the value of every minute, for in these cases we are confronted by a formidable enemy which will promptly conquer if not conquered. My experience in private practice extending over nearly nineteen years is limited to two cases of unavoidable, two of accidental, and one of post partum hæmorrhage. From my personal experience and observations, the successful handling of these cases depends largely on the ability of the physician to properly classify them, as no method of treatment can be suggested that would be suitable for all cases. The advances in treatment of these cases, if they are an advancement, have been with the object of diminishing the infant mortality. If this can be accomplished without diminishing in the slightest degree the chances of the mother, then they may well be considered advancements.

If the child is viable, or if a severe hæmorrhage has occurred, labor should be induced at once. If on the other hand the child is not viable and there have been but slight hæmorrhages and the patient can be kept in the recumbent posture in a hospital, or otherwise carefully guarded, I think one is justified in temporizing, providing that the patient's friends, when advised of the nature of the case, are satisfied or desirous that such a course should be pursued.

Now, assuming that the child is viable or that a severe hæmorrhage has occurred, what is the best method of inducing labor and emptying the uterus?

If the patient is a primipara and the cervix will admit only one finger, and the os is rigid, the cervix should be drawn down with a strong tenaculum and held while the cervix and vagina are gently but firmly packed with iodoform gauze. If properly done this will usually stimulate uterine contractions and satisfactorily control the hæmorrhage, and when the packing is removed in a few hours, in a vast majority of cases the os will be sufficiently dilated to admit of digital dilatation by Harris's method. If, however, the pains have become strong and regular, the hæmorrhage is not severe, the head or buttocks are engaged, we may safely watch and wait, never leaving the bedside of the patient. Should there be any increase of hæmorrhage the membranes should be ruptured at once, so that the placenta may retract with the uterocervical walls and at the same time allow the presenting part to press down firmly on the bleeding surfaces. If this is not effectual in controlling the hæmorrhage, no time should be lost in bringing down a foot, but this must always be done very gently so as to disturb the placenta as little as possible and produce the least possible shock to the mother. I would like to emphasize here the fact that there is no means known to the profession to compare with the bringing down of a foot to control hæmorrhage in these cases. The means for its execution are always at hand and can be applied without the loss of one minute. This method has been in use now for about a hundred and thirty years, and as a safeguard to the mother has to my mind no peer as yet.

The condition, however, that we most frequently encounter when called to these cases is rather extensive hæmorrhage or evidence that severe hæmorrhage has occurred with the cervix fairly well dilated. Version should be performed by the Buxton Hicks's method and the membranes should be ruptured at once and a foot brought down. Once this is accomplished, if the patient is not already exsanguinated or suffering from shock, we can practically rest easy, using gentle, intermittent traction, not exceeding two pounds. Should, however, either of the aforesaid conditions exist, restoratives should be used at once, such as normal saline solution, morphine, strychnine, digitalin, or an ether or a whiskey hypodermic. For obvious reasons the normal saline solution cannot be given per rectum in these cases. No condition of the patient would justify a rapid dilatation or rapid emptying of the uterus, as even a slight laceration in these cases might open a large vessel at the placental site, resulting in a profuse and probably uncontrollable hæmorrhage, while the shock of rapidly emptying the uterus would be almost certain to be disastrous to the patient. I want to emphasize this here, as we all know what a temptation it is, especially in one's earlier years, in

* Read before the Toronto Clinical Society, May 4, 1904.

practice, to use considerable traction in either a foot or breech presentation. In addition to the danger of laceration, hæmorrhage, and shock, there is the difficulty of delivering the aftercoming head, if the cervix is not well dilated before the body is delivered.

After the child is delivered, the placenta and membranes should be removed at once and if the hæmorrhage continues, only one line of treatment should be adopted, as there is no time for uncertainties. The uterus should be well drawn down with a strong volsella forceps. This traction alone often controls the hæmorrhage. The entire uterine cavity, cervix, and vagina should be firmly packed with sterilized gauze. While I thoroughly appreciate the hæmostatic properties of hot water, yet the difficulty of having it at just the right temperature, in private practice, is likely to result in loss of time, for, if it is not hot enough it will rather favor hæmorrhage, while if it is too hot it will paralyze the muscles. I am convinced that if this method of treating these cases was carefully carried out, leaving the case almost entirely to nature after a foot had been brought down, or with just such light traction as might or may be necessary to control the hæmorrhage, the maternal mortality would be reduced almost to a minimum.

Now as regards the hydrostatic and pneumatic methods of dilatation, which have been so extolled by Maurer and Duhrssen, of Germany, and DeLee, of Chicago, of which the Champetier de Ribes balloon and Carl Braun's colpeurynter are probably the best, I feel that their field of usefulness is for obvious reasons practically limited to hospital practice. The only advantage claimed for them is a probable reduction in infant mortality. The same can be said of Cæsarean section either vaginal or abdominal, only the cases requiring such a formidable procedure will be very few indeed.

As regards Bossi's dilator, I mention it only for the purpose of strongly condemning its use in placenta præviæ as being most dangerous. The same is true of any metal dilator. Notwithstanding this, De Paoli records 19 cases treated by Bossi's method in which the time occupied in emptying the uterus varied from five to fifteen minutes, with a loss of one mother and three children, and he asserts that in some instances there was no dilatation at the commencement of the operation. Now, how a uterus could be competently dilated and emptied in that time with safety to a mother is, to my mind, an obstetrical mystery. Even though it were possible fully to dilate the cervix in these cases in so short a time with safety to the mother, I cannot conceive of a condition that would warrant one in rapidly emptying the uterus unless, perhaps, alarming hæmorrhage, and even that would not justify

the procedure, as the additional shock of rapidly emptying the uterus of an already exsanguinated patient would almost positively turn the tide to a fatal issue. I am sure there is no other known means by which this could be safely accomplished.

Schroeder's assertion that the physician who has least regard for the life of the child in these cases, will have the smallest maternal death rate, cannot, to my mind, be too strongly impressed on the mind, of the young obstetrician especially.

Accidental Hæmorrhage.—Here we have quite a different condition of affairs to that in placenta præviæ, for if the hæmorrhage is severe the only treatment that offers any degree of safety to the mother is a rapid dilatation and emptying of the uterus by whatever means may be at hand; having previously applied a firm binder over the abdomen, and the cervix being well dilated, ergot should be administered in full doses hypodermically, and the attendant should have everything in readiness to pack the uterus after it is emptied, providing there is post partum hæmorrhage, as there is likely to be, on account of the atonic condition of the previously overdistended uterine walls. The placenta and membranes should be removed immediately after the delivery of the child (which should be as rapid as possible). While I have never had occasion to use Bossi's dilator, yet in careful hands I could understand its being a valuable means of dilating in these cases and possessing the advantage over the various bags and balloons that it is always in working order when required.

In all these cases the patient's strength must be constantly sustained by the usual restoratives. The subsequent treatment will be that for acute anæmia and probably shock, namely, saline transfusion, lowering of the head, raising of the foot of the bed, hypodermics of strychnine, morphine, and digitalin, also hypodermics of ergot to favor uterine contraction and, if needs be, autotransfusion.

In the milder revealed cases we may safely temporize by putting the patient to bed, administering full doses of morphine, and keeping her absolutely quiet for some time after all symptoms have subsided.

Post Partum Hæmorrhage.—Speigelberg was not far astray when he said that grave post partum hæmorrhage is almost without exception the fault of the medical attendant. I think if we exclude the cases of hæmorrhagic diathesis and those from laceration, we can all pretty well endorse this assertion. The treatment, therefore, is largely preventive. However, I shall only deal with the active treatment, and this depends on whether the placenta has been expelled or not. If the placenta is still in the uterine cavity, the hæmorrhage has been extensive, and the uterus is not contracting satisfactorily, the hand should be promptly but gently introduced, gloved

of course, the placenta carefully separated, and the whole of the interior of the uterus palpated, the hand being kept in the uterine cavity until expelled with the placenta and membranes by the contractions of the uterus. This will usually control the hæmorrhage.

If on the other hand the uterus is empty when the hæmorrhage occurs, only two methods of treatment should be considered: a hot douche at 120°, or the same with acetic acid 3 per cent., or say 4 ounces to the gallon; secondly, packing with sterilized gauze. In packing, the method recommended by Henkel and Peretti should first be adopted of catching both anterior and posterior lips with volsella forceps and drawing the uterus well down as for vaginal hysterectomy. Holding it in this position will alone frequently control the hæmorrhage. If not, we have the uterus in the proper position for douching or packing.

The after-treatment is the same as recommended for the other cases of acute anæmia and shock.

The points I wish to particularly emphasize are:

First.—That in order to satisfactorily cope with any of the aforesaid conditions we must have our line of action positively decided on before we meet the case, and then make the best use of every minute, as the loss of one minute may turn the tide against us. There is no time for uncertain methods.

Second.—I have limited myself in most cases to one method of treatment, and in no case to more than two. I cannot understand our text books and obstetric teachers persisting in burdening the young practitioner with half a dozen or more methods of meeting these emergencies. It is most perplexing to the attendant, and valuable minutes are lost in uncertain methods and, I have no doubt, frequently valuable lives.

Third.—No condition of the patient in placenta prævia will justify rapid dilatation or rapid emptying of the uterus. Should evidence of shock or collapse occur, all operations should be abandoned and restoratives applied.

Fourth.—The sustaining of the patient's strength at all stages of the operation, the physician never leaving the patient till she is out of danger and always securing the assistance of one of his colleagues.

Fifth.—That morphine and strychnine hypodermically is, *par excellence*, the best possible means of combating or controlling shock in these cases.

Sixth.—To adopt no method of treatment that we are not positive will not diminish the mother's chances in the slightest degree. While I would not like to be the last to lay down the old, yet I do not want to be the first to take up the new. Unfortunately there seems to be an uncontrollable desire in a large number of members of the profession to be constantly looking for something new, and when

they get it they think they are inspired and that all other treatment has been a mistake. Would it not be more to our credit to be slow to abandon the old and to take up the new, but to rather follow Paul's advice to the Thessalonians, to prove all things and hold fast that which is good?

WELLESLEY STREET AND ROSE AVENUE.

INTESTINAL PERFORATION IN TYPHOID FEVER.

By HUGH M. TAYLOR, M. D.,

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Within the past two months I have been called on to operate in two cases of typhoid perforation, and to see one case of intestinal hæmorrhage, which was at first thought to be a case of perforation. It is rarely that I am able to discuss this subject with medical colleagues who cannot recall deaths in their practice, from suspected perforations which were not operated upon, and even in the newspapers we not infrequently see notices of deaths from peritonitis and perforation complicating typhoid fever. An occasional epidemic of cholera, yellow fever, or bubonic plague, that killed 50,000 people in the United States each year, would create widespread terror in medical circles and in the civic government. Every year more than 50,000 representatives of the young manhood, womanhood, and childhood of the United States alone die from typhoid fever. The United States Marine Hospital Service Report (page 1008, 1896) estimates that there are 500,000 cases yearly and 50,000 deaths. Victor Vaughan, in a recent address, says there die in this country every year from typhoid fever alone not less than 50,000 people. These reports are made up from the reports of the larger towns and cities in which mortality rates are compiled. They do not include the thousands of cases which occur in the country, of which no report is made. Many more than 500,000 deaths, obviously, occur from typhoid fever in the United States each year and, assuming a death rate of ten per cent., many more than 50,000 deaths ensue. Preventive medicine has accomplished much in the field of typhoid fever; it has yet much to accomplish. It is stated that three per cent. of typhoid fever patients die from intestinal perforation; three per cent. of 500,000 is 15,000; more than 15,000 deaths from typhoid perforation in the United States each year! Some writers have estimated that not more than ninety-five per cent. of typhoid perforations will die without operation; others place the death rate at ninety-nine per cent. Possibly a perforated cæcum or appendix from a typhoid ulcer, may result in a circumscribed abscess; in

fact, this is not infrequently the case. More than eighty per cent. of complete perforations occur in the last eighteen inches of the ileum, and I fully agree with those who think that in such cases we may expect a mortality of one hundred per cent. This being true, more than 15,000 cases of typhoid perforation should be operated in each year in the United States. In 1900, Dr. Keen could tabulate only the reports of 158 cases operated in. In April, 1903, Frank reports but 352 cases operated in the world over. Of course, there are unreported cases operated in, but they are comparatively few in number. Contrast this statement with the plea that more than 15,000 cases should be operated in every year in the United States alone, and you have my excuse for persistently bringing this subject before you for discussion. As a matter of fact it embarrasses me to bring my statistics before you; they compare so unfavorably with the achievements of other surgeons in this field, some of which I shall present to you to sustain the claims for operative intervention in all cases of typhoid perforation. I am optimistic to an extreme as to the value of surgical aid in typhoid perforation, not from my own experience, but from a study of the opinions and the results of others. My cases include seven operations for complete perforation of the lower portion of the ileum, with but one recovery. It is not a difficult matter to explain my high death rate. My medical friends have not solved the problem of how to make an early diagnosis of perforation. With but two exceptions, my cases were eleventh hour cases, and several of the patients were practically moribund when operated upon. I feel it my duty, as I think it is the duty of every surgeon, to give even these forlorn cases the only chance left. Greig Smith, in discussing this question, pertinently asks: Who can always tell when a patient is moribund? In all but two of my cases I was not called upon to operate until after the first twenty-four hours, and in all, widespread, so called general, peritonitis was conspicuously present.

What has surgery accomplished in the treatment of typhoid perforation? "Twenty years ago," says Dr. Osler, "we would fold our hands and murmur that all was over," when we were brought face to face with a case of typhoid perforation. Recently, Dr. R. G. Le Conte reports three consecutive successful cases. Dr. W. D. Haggard, Jr., reports three cases and three recoveries; one hundred per cent. What a stimulus! And more than 15,000 cases in the United States to operate on each year! Certainly the profession at large did not appreciate the importance of this subject until the advent of Dr. Keen's well known

paper in 1901, in which he showed in 158 cases a mortality of twenty-three and four tenths per cent., and this in spite of the fact that it included late operations in many instances, and those by inexperienced operators in not a few. Since 1900, our confidence in operative intervention has, with cause, steadily grown; due notably to statistics from Dr. Warren and Dr. Cobb, twenty-five per cent.; Dr. Osler, thirty-seven and five tenths per cent.; Dr. Cushing, forty-one and six tenths per cent.; Dr. Armstrong, thirty-seven and five tenths per cent. One operator, Eschner, has had the proud distinction of saving fifty per cent.; fourteen cases with seven recoveries. More than one series of forty per cent. of recoveries has been reported, and it is confidently predicted that early diagnosis and operation, to prevent septic peritonitis, will result in the saving of from fifty per cent. upwards; fifty per cent. of more than 15,000 cases is an indication of the possibilities of surgery in this field, in the United States alone.

By far the most important phase of this subject is the early diagnosis, as it implies preventive surgery. How to make an early diagnosis, and how to treat the late sequences of typhoid perforation may well set the limits to this paper. The former, the early diagnosis, is the more important, for a greater number of early diagnoses means fewer late cases, with gross intraperitoneal lesions, to operate in. The diagnosis of the late cases is easily made; we have the usual symptoms of general suppurative peritonitis. The answer to the first question must be solved to a large extent by the general practitioner. As a rule, only the family physician has the opportunity to study the initial symptoms of perforation. Certainly, my experience sustains the assertion that a surgeon is very frequently not called in to see the case until the gross consequences of perforation are pronounced. I cannot too emphatically agree with those who have urged cooperative study in all suspicious cases by the general practitioner and the surgeon. A greater number of cases is undoubtedly being recognized, but a vast number is not recognized. If we keep in mind that in three per cent. of all cases of typhoid fever we are called upon to treat, perforation occurs, we shall watch more intently for the first symptoms. Some sage has remarked that the matter of diagnosis is largely guess work, but adds that the practitioner who is looking for a trouble and has its symptomatology uppermost in his mind will more frequently make the early and correct diagnosis.

In typhoid perforation, as in many intraperitoneal, morbid conditions, we may expect to meet with typical and atypical cases. In some, the clinical picture will be unmistakable. In others, it

will be blurred beyond recognition. If, when called to a case, we are told that it has run an uneventful course, that there have been no pronounced abdominal symptoms, no mental confusion, or delirium, to mask an expression of symptoms, that the patient was, up to a given time, comfortable, and, while having an action of the bowels, was taken with sharp continued pain, tenderness, and muscular rigidity; perhaps with chill, reduced temperature, increased pulse rate, and vomiting, symptoms of shock; we have a chain of evidence pointing to perforation, as closely linked as that upon which we commonly have to rely in most acute peritoneal infections. A large majority of the cases I have seen have presented a clinical history as clear as that indicated by the above described group of symptoms.

On the other hand, it is easy to see how such symptoms may be masked if the patient is delirious, if there is abdominal distention and gastroenteric disorder, and if there have been daily marked variations in pulse and temperature. Fortunately, in my experience, a large number of typhoid cases are atypical in type and the gross symptoms which would mask the symptoms of perforation are probably in the minority. It should be borne in mind that other conditions than perforation may, during the existence of typhoid fever, give rise to symptoms of local and general peritonitis. Incomplete perforation may, and I think often does, give rise to local peritonitis and adhesions. In one of my cases, a preperforative abscess formed with later rupture and flooded the peritoneal cavity with pus and intestinal debris. The lower portion of the ileum entered into the formation of the abscess wall, and in this portion of the ileum was a large perforation. I do not believe that adhesions occur after perforation of the small bowel, but I do think that it is not infrequent in the preperforative stage, and that it possibly saves many lives. It is also essential to take into consideration the occurrence of acute cholecystitis, appendicitis, and the infection, suppuration, and discharge of the mesenteric and other intraperitoneal glands, and also the possible thrombosis of intraperitoneal blood vessels. While these are possibilities relatively infrequent, perforative cholecystitis and thrombosed mesenteric vessels may give rise to acute symptoms of local and general peritonitis.

I have seen a number of cases of acute cholecystitis occurring during the course of typhoid fever. In several instances, I have mistaken typhoid fever in its incipency for appendicitis, and I have also seen the two conditions coexist. I have not, however, seen perforative peritonitis during typhoid fever due to any cause, except ty-

phoid perforation. Usually the differentiation has to be made only between typhoid fever and the conditions mentioned. In exceptional instances, an unrecognized, ambulatory case of typhoid fever may have perforation, and the only symptoms presented will be those of perforative peritonitis.

The symptoms of intestinal hæmorrhage may at first simulate those of perforation, and this is notably so when the conditions coexist. A case recently seen with Dr. E. J. Moseley, Jr., and Dr. William S. Gordon, presented slight symptoms of abdominal pain, profound collapse, reduced temperature, increased pulse, anxious expression, and pinched features, and this was followed in six or eight hours by reaction. I was at first misled, but there was in this case an absence of the acute, lasting pain, tenderness, and muscular rigidity. Later on, progressive improvement and large bloody stools cleared the obscurity in the diagnosis.

No feature in the diagnosis is more important than the sudden transition from the quiescent condition to one evincing acute intraperitoneal invasion, and no symptoms of the last condition are more uniform than acute, lasting pain, and tenderness with muscular rigidity. With these, we may or may not have the usual symptoms of shock. The limits of this paper will not permit me to analyze in detail the relative value of pain, tenderness, rigidity, vomiting, hiccough, reduced temperature, increased pulse rate, distention, liver and flank resonance, inhibited peristalsis, the value of blood count, blood pressure, the injection of fluids and air into the suspected peritoneal cavity, etc. Usually writers have confused preperforative symptoms, symptoms coming on immediately after perforation, and the later symptoms, those expressive of acute widespread peritonitis. I agree with those who classify the symptoms into three groups: (1) the preperforative; (2) the early or immediate symptoms of perforation; (3) the late; those of septic peritonitis. These last are really not symptoms of perforation, but are its inevitable sequence; virulent, widespread peritonitis.

In the diagnosis of perforation, we must not in its incipency expect an unbroken chain of evidence. Missing links are found in the symptomatology of acute gastric bile tract and appendicular infection. If there are pain and muscular rigidity in the right iliac fossa, a majority of surgeons will operate, confidently expecting to find an appendicitis. Clinicians, who have had the largest experience in dealing with typhoid perforations, dwell upon the danger of delay. Dr. Osler writes: "as typhoid patients bear operation

well, it is better to err in favor of surgery than to let valuable time be lost in waiting for further confirmatory evidence; and again: in doubtful cases, give the patient the benefit of the doubt and operate"; Dr. Cushing says, "when reasonably in doubt, explore"; Richardson: "operation should be done when perforation is suspected rather than demonstrated"; Greig Smith: "at the worst, happen what may, the patient can be in no more deplorable condition than before operative interference was carried out and I would plead for an attempt to reduce a mortality of one hundred per cent." Early operation lessens the amount of surgery called for, is conservative, and life saving.

The technique of the early operation is very simple and implies a median or right lateral incision (I prefer the latter, as it gives easier access), suturing the perforation, and cleansing the soiled area, and I agree with those who maintain that fifty per cent. to sixty per cent. of cases thus treated should recover. The best technique in eleventh hour cases is an unsolved problem. How best to treat widespread intraperitoneal infection from any cause is an open question. In this, as in other acute intraperitoneal infections, the key to success depends upon getting into the abdomen early and out of it just as quickly as is consistent with complete work. It is sometimes as hard to know when to get out of the abdomen at the right time as it is when to get in. Complete work implies that which will save the greatest number of patients. A conception of what should be regarded as complete work varies very widely. Good men are not willing in general infection to stop short of evisceration and the use of gallons of water in flushing; others are content to wipe out the infected cavity. Still others contend that if we trust more to the recuperative powers of the peritonæum after removing the focus of infection, we shall get better results. Still others, notably Dr. J. B. Murphy, think prolonged irrigation, wiping, and prolonged anæsthesia shock to such an extent that the patients do not rally. Dr. Murphy recently reported sixteen bad cases (one a typhoid perforation), in which he simply removed the focus of infection, instituted pelvic drainage, and trusted to the peritonæum to do the rest. Fifteen of these cases ended in recovery. Fowler saved sixty-two per cent. Escher thinks that suturing of perforation produces immediate stenosis of the bowel and, as I have stated, he contents himself with simply finding the perforation, and suturing the torn segment of the bowel into the abdominal incision. His report of fourteen operations and seven recoveries is the most encouraging I have seen. Greig Smith

uttered a truism very pertinent in connection with Escher's method of treating typhoid perforations: better a live patient with a faecal fistula, than a dead patient with an air and fluid-tight anastomosis. I live in the hope that some of the pathfinders in surgery will soon blaze a way out of this horrible wilderness, which the uninitiated may successfully follow in the treatment of widespread intraperitoneal infection. In the treatment of eleventh hour cases of general peritonitis from typhoid perforation, I have eviscerated and irrigated and I have irrigated without eviscerating. I have used multiple gauze and tubular wick drainage, anterior, posterior, and lateral, after wiping. I have followed as best I could Fowler's technique. In one recent case, operated in thirty-six hours after perforation, under local anæsthesia upon a practically moribund patient, I followed Escher's technique, and in my last case, operated in twenty-four hours after perforation, I only sutured the perforation, put a large tube into the rectovesical pouch, and placed the patient in Fowler's position. With few exceptions, my patients have all died. I can see nothing but the deepest gloom when I view widespread, intraperitoneal infection from typhoid perforation, especially in contrast with the brilliant results from the early operation. I shall continue to deny no one, however seemingly moribund, the only hope offered. I plead for an early diagnosis, and operation whenever and wherever a case of typhoid perforation occurs. Escher saved fifty per cent. Is his technique within the scope of the general practitioner? Two of my recent graduates have operated successfully in the backwoods of West Virginia. I advocate the closest cooperative work in this, as in many conditions, between surgeon and physician. If, however, the victim of typhoid perforation cannot be gotten to the surgeon, or the surgeon to the victim, I aver that the general practitioner has no more right to shirk the responsibility of operating, and thereby abandon his patient to inevitable death, than he would have in a case of strangulated external hernia. There is a possibility of a saved life by a faecal fistula in the case of strangulated hernia; but, as far as we know, it is death or operation in typhoid perforation. Dr. Victor Vaughan, in a recent address, says typhoid fever "is essentially a disease of the rural districts." Thousands of patients can secure only the services of the country practitioner. Don't stop to think of sepsis; it can always be secured, but even if it could not, the general practitioner's hands cannot possibly be as foul as the peritoneal cavity, with faecal matter pouring into it. Such a condition cannot be made worse. Look

for it and it will be found. Operate by Escher's technique and some patients will be saved. A case abandoned at any stage is a reproach.

LUMBAR PUNCTURE: ITS VALUE IN DIAGNOSIS AND TREATMENT.*

By EDGAR P. COOK, M. D.,

MENDOTA, ILL.

Although puncture of the spinal meninges was first employed by Quinke, in 1890, for the relief of the intracranial pressure in tuberculous meningitis, general attention was not attracted to the procedure until 1895, when Furbinger reported the striking results obtained in a series of cases in which he had resorted to lumbar puncture for diagnostic rather than therapeutic purposes. Since then the field of application of lumbar puncture has been greatly extended, and at the present time it has become an established operation for diagnosis and, in less degree only, a recognized means of treatment.

The technique of spinal puncture is simple and the procedure when aseptically performed is practically free from danger. Pfaundler reported two hundred lumbar punctures without a single bad result. In one case only of his series was there collapse, due to the removal of an excessive amount of fluid. Northrup noted no ill effects in fifty cases. Gumprecht, in 1900, collected fifteen cases of sudden death following lumbar puncture and added two cases of his own, but he failed definitely to connect the untoward results with the operation itself. Those observers who have had the largest experience with the operation agree that when properly performed it is harmless.

As a result of the extended use of lumbar puncture careful studies have been made of the cerebrospinal fluid *intra vitam*. These investigations have thrown a flood of light on many hitherto obscure problems in the pathology and ætiology of affections of the cerebrospinal meninges and have modified our views regarding certain acute and chronic diseases in which these structures are involved. Although the diagnostic value of lumbar puncture far exceeds any therapeutic value yet discovered for the procedure, it is nevertheless a welcome addition to therapeutics in a field where the resources at our command are yet very meagre.

The normal cerebrospinal fluid is perfectly clear. Sicard, Widal, and others have shown that in health it contains scarcely any cellular elements; there is an entire absence of polymorphonuclear leucocytes and the small mononuclear

cells or lymphocytes are very scanty if present at all. Albumin is present as a faint trace (0.02 per cent to 0.04 per cent.), and there is no fibrin. Sugar is normally present, but, according to Pfaundler, sugar disappears in acute inflammatory disease of the meninges. This observation, however, lacks sufficient confirmation to be of diagnostic weight. The amount of fluid allows of no definite conclusions, except that a great amount of fluid as shown by very high pressure is most frequently met with in tuberculous meningitis. An increase in the albumin (more than 0.05 per cent.) in the absence of blood, points to tumors or inflammatory disease, and a considerable excess of albumin in a clear fluid, according to Pfaundler, is almost a certain sign of tuberculous meningitis.

Wentworth states that in meningitis the withdrawn fluid is invariably cloudy. The degree of cloudiness, however, depends on the number and character of the cells in the meningeal exudate. It is sometimes so slight as to be detected with difficulty. While, therefore, marked changes in the gross appearance of the fluid are of suggestive value, reliance should be placed only on a complete microscopical and bacteriological examination. The necessity of thorough examination is emphasized by the experience of Barr, who reported cases of purulent meningitis in which puncture showed a clear fluid. A cardinal rule in estimating the results of lumbar puncture has been insisted on by Hand, who declares that positive results only are of diagnostic value; it is unsafe to draw any conclusions from negative findings. For example, although the demonstration of tubercle bacilli in the fluid constitutes a positive diagnosis of tuberculous meningitis, failure to prove their presence does not necessarily exclude the disease. Occasionally fluid may not be obtained. This failure is usually due to a faulty technique, but rarely it may result from the thick, wax like character of the exudate, as in a case mentioned by Packard, in which the diagnosis was proved by post mortem examination.

An admixture of blood in the spinal fluid may be accidental from the operation. Such an explanation is excluded when repeated punctures show persistence of the same amount of blood. The stage of the disease in which the puncture is resorted to must always be considered. Puncture made late in the attack may fail to show changes which were pronounced at an earlier period.

The bacteria most frequently found in the cerebrospinal fluid are the tubercle bacillus, the meningococcus intracellularis of Weichselbaum, the pneumococcus, and the streptococcus and staphy-

* Read at the meeting of the Illinois State Medical Society, Bloomington, Ill., May 18, 1904.

lococcus. The tubercle bacillus can usually be demonstrated in the sediment by the ordinary staining methods. By direct examination of the cover slips in this way, Pfaundler found tubercle bacilli in 91 per cent. of the cases where they were present. Rarely, inoculation experiments may be required to make a diagnosis in tuberculous meningitis on account of the scarcity of the micro-organisms. Cultures are usually necessary for the proper identification of the meningococcus, pneumococcus, and ordinary pus cocci. As pointed out by Councilman, the meningococcus may vary greatly in numbers. Usually it is readily found and in abundance. When present in small number it may be missed on the cover slips, and even when present in large number the culture tubes may show only one or two colonies. The demonstration of the meningococcus is positive proof of the existence of cerebrospinal meningitis of the epidemic type. In fifty-five cases of meningitis in which lumbar puncture was made, Councilman found the meningococcus in thirty-eight cases. He states that the cocci are most constantly present early in the disease, i. e., at a time when the diagnosis is most difficult from the symptoms alone. The identification of the meningococcus is also important from a prognostic standpoint, as these are the only cases in which recovery is likely to occur. Osler states that the pneumococcus cases are invariably fatal.

Cytodiagnosis, or the study of the cellular elements in the fluid, has yielded some interesting and valuable results. As already stated, normal cerebrospinal fluid contains few or no cells. In diseased conditions, leucocytes of one type or another may appear in greater or less abundance. The number of cells will determine the degree of cloudiness of the fluid, while the type of cells which preponderates will furnish information as to the nature of the infective agent. Generally speaking, the presence of the large polymorphonuclear leucocytes is indicative of an acute microbial invasion of the meninges, while the small mononuclear lymphocytes are found in the sub-acute and chronic affections, especially in the tuberculous form.

In purulent meningitis there is a polymorphonuclear leucocytosis, and the lymphocytes are scanty. A lymphocytosis is met with in tuberculous meningitis. The explanation of these findings is interesting. The polymorphonuclear leucocytes are cells of the highest phagocytic capacity, and therefore appear in the onset of an acute bacterial infection. The lymphocytes, being of inferior resisting power, occur in the sub-

acute inflammations of which tuberculous meningitis is a good example.

Lymphocytosis of the cerebrospinal fluid has also been noted in certain chronic toxic affections, and especially in tabes and general paralysis. In the latter affections, lymphocytosis is the rule, positive results having been found in 116 of 125 cases of these two diseases, which were reported to the Neurological Society of Paris, in March, 1903.

Care is necessary, however, in cytodiagnosis. A case reported by Pighini illustrates an interesting fallacy. A diagnosis of a tuberculous process was made where subsequent recovery suggested an error in diagnosis. He explains the mistake thus: Cytodiagnosis was made too late, a lymphocytosis having already replaced the initial polymorphonuclear leucocytosis excited by the bacterial invasion. Widal also cites an interesting case which, while apparently showing the uncertainty of cytodiagnosis, proves its accuracy. A patient with general paralysis developed a polymorphonuclear leucocytosis due to an apoplectic attack. A lymphocytosis reappeared with the subsidence of the congestive symptoms.

Cytodiagnosis of the cerebrospinal fluid has been attempted in some forms of mental disease and in a number of nervous diseases, but with the exception of tabes and general paralysis, no definite diagnostic conclusions are justifiable. The cerebrospinal fluid has been found normal in Friedreich's ataxia, cerebellar hereditary ataxia, multiple sclerosis, syringomyelia, polyneuritis, poliomyelitis, epilepsy, and neurasthenia. Positive changes have been noted in syphilitic meningomyelitis, lead paralysis, herpes zoster, and in some cases of chorea, but further observations are necessary to decide the exact value of the findings.

In the diagnosis of the intracranial complications of ear disease, lumbar puncture may afford valuable information. Schwartz, of Halle, has satisfactorily employed the method in his clinic for several years. He says that normal clear fluid excludes diffuse purulent meningitis in cases of otitis presenting intracranial complications. Cytodiagnosis offers much aid in the diagnosis of suspected purulent meningitis and tuberculous meningitis complicating otitis. A considerable increase in the amount of spinal fluid in these cases, according to Schwartz, points to the occurrence of sinus thrombosis.

The field of usefulness of lumbar puncture in treatment is as yet limited. Naturally it has been employed most frequently in the various forms of

meningitis, but with variable results. Hitherto the treatment of meningitis has been merely palliative or symptomatic. Lumbar puncture is a remedial measure which theoretically at least is reasonable. The symptoms of meningitis are due chiefly to the toxæmia and the mechanical effects of the increased intracranial tension. It is rational, therefore, to conclude that the withdrawal of a considerable amount of inflammatory exudate containing the specific germs in large numbers should exert a favorable influence on the course of the disease. Clinical experience has shown that lumbar puncture is of value in the treatment of meningitis, but it is to be remembered that in a disease like cerebrospinal meningitis, which is apt to present occasional remissions of symptoms and signs, very great care is necessary in drawing conclusions regarding the value of any single remedy. Koplik has reported five cases of meningitis with four recoveries, the fatal case occurring in a child aged eight months. Relief of the symptoms due to the pressure and toxæmia followed the tapping, which was repeated according to the indications in each case, most of the cases being tapped three times in the course of the disease. In view of the fact that we have no specific remedy in cerebrospinal meningitis, I believe that every case of the disease should be given the benefit of repeated lumbar punctures, because this line of management is rational and has shown the best results so far recorded.

Bochard reports several cases of head injury in which the escape of a small amount of the cerebrospinal fluid aroused the patient from stupor and hastened recovery. Marie and Gullian noted relief of headaches of syphilitic origin, following lumbar puncture. Recently Babinski has recorded eight cases in which lumbar puncture was resorted to for the relief of symptoms incident upon chronic aural catarrh. The patients were invariably relieved of the subjective noises and the deafness was markedly improved, in some cases permanently. In chronic hydrocephalus lumbar puncture produces temporary improvement, but it is not curative. This is the conclusion arrived at by Raczyński after testing the method in twenty-six cases of hydrocephalus.

The withdrawal of a small amount of cerebrospinal fluid by lumbar puncture preliminary to the subarachnoid injection of the antitetanic serum in tetanus has been frequently done of late. It is the most effective simple method of exhibiting the antitoxine in this disease. In July last, I saw a case of acute tetanus in a boy of twelve years on the fourth day of the attack, which followed a pistol wound of the palm of the hand. Twenty c.c.

of cerebrospinal fluid were removed by lumbar puncture and 15 c.c. of antitoxine injected into the spinal canal. No effect was produced on the course of the disease, which rapidly terminated fatally.

The rôle of lumbar puncture in the method of subarachnoid cocainization for anæsthesia is chiefly of surgical interest.

In conclusion, I wish to present two illustrative cases in which lumbar puncture was employed:

CASE I.—Young negro, aged 16 years, first consulted me April 12, 1902, giving a history suggestive of incipient lung disease. Examination was entirely negative, except for a few faint râles in the right apex after coughing. The lymphatic glands were normal. Temperature, 100.6° F.; pulse, 116; respirations, 18. Sputum examination was twice negative. Repeated examinations of the sputum, which was scanty and obtained with difficulty, finally showed a very few tubercle bacilli.

On May 1st, careful examination of the chest failed to reveal any physical signs of disease. Temperature was 100.8° F.; pulse, 120; respirations, 18. Two days later there was sudden onset of vomiting, which persisted for forty-eight hours, and was followed by severe headache, chiefly frontal. Pain developed in the back of the neck and there was rigidity of the cervical muscles. The patient remained mentally clear, but was very restless, rolling about in bed. The pulse fell to 52, and was full and regular, but was accompanied by a subfebrile temperature. The urine showed a trace of albumin, several hyaline casts, and a few red blood cells. No ocular changes were noted. Moderate delirium slowly developed, gradually passing into coma. The pulse remained slow, finally rising to 84, with normal temperature and respiration just before death, which occurred in coma, May 16, 1902. Lumbar puncture was made post mortem and 15 c.c. of clear fluid were removed. A few tubercle bacilli were found in the centrifugated fluid, thus confirming the clinical diagnosis of tuberculous cerebrospinal meningitis supervening on incipient pulmonary tuberculosis. Cultures on blood serum were negative.

CASE II.—School girl, aged 10 years, was seen in consultation February 6, 1903. The onset of attack was sudden two days previously with headache and vomiting. Examination showed the pulse to be 92; temperature, 104° F.; respiration, 32, irregular, of Cheyne-Stokes type. Patient lay in coma on the left side with the limbs drawn up; head retracted and muscles of neck rigid; herpes labialis marked; eyes and ears negative; no facial paralyses; heart, lungs, and skin normal; Kernig's sign distinct. There was slight paralysis of right foot, producing inversion and flaccidity. The urine contained considerable albumin and a few hyaline casts. Lumbar puncture was performed and 20 c.c. of clear fluid were withdrawn. Cover slips were negative. Cultures on Loeffler's blood serum showed diplococci in pure growth, resem-

bling morphologically the meningococcus. Following the lumbar puncture there was slight but gradual improvement in the symptoms. The coma persisted for nearly two days, gradually disappearing. On February 11, the temperature was normal and convalescence established. Subsequent recovery was rapid and there were no sequelæ. Aside from the lumbar puncture the treatment was purely symptomatic.

ELECTRICITY IN OTOTOLOGY.

By J. J. RICHARDSON, M. D.,

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Electrical energy in its various forms has not been employed in the diagnosis and treatment of aural effusions to the same extent that it has been in those of other regions of the body. The subject has been practically ignored by some of our best known writers on otology. In reviewing the literature, however, we find it has been employed in a way since the time of Volta. More or less material is met with, but from the standpoint of a specialist the communications are not of much value. In most instances they consist of reports of cases by electrotherapeutists, who show a lack of knowledge of aural affections. Again, we find reports of cases treated by *electricity* without any reference to the kind of current employed, its intensity, or manner of application. All these factors naturally vitiate the value of such reports to the specialist. I am not an enthusiast, who claims electricity to be a panacea for all diseases, but after careful experimentation and observation, I am convinced that it at least possesses great possibilities along certain lines. The more I employ it the more I appreciate the great benefit that may result in the future from its scientific application. I know from practical experience that we can by its employment in one form or another, (1) stimulate weak muscles, (2) relieve pain, either by direct action of the current or by the cathartic application of anæsthetics, (3) stimulate absorption of inflammatory exudates, (4) overcome stenosis or complete strictures, and, (5) at times revive nervous activity. In order to get satisfactory results it is necessary to have not only a knowledge of the physiology and pathology of the parts we are treating, but a thorough understanding of electrophysiology and electrophysics. The apparatus employed must be of the highest standard and under perfect control when applying the different currents to such a delicate organ as the human ear. Without these, we are assuming a risk which is unjustifiable and may inflict injury upon our patients instead of affording relief. For example in the application of galvanism, the polarity of the current is of the greatest importance. The negative pole will often do good while the application of the positive may

be painful and even injurious. In other instances the strength of the current must be accurately measured. A mild one will frequently relieve or cure conditions where a stronger one would aggravate them. This is especially true in some forms of tinnitus. An accurate milliamperemeter should always be used, notwithstanding the statement made by Politzer that the rheostat and galvanometer, indispensable for physiological experiments, are superfluous for therapeutic purposes. We do not administer powerful drugs without knowing their dosage. The same principle applies exactly to the use of galvanism without a meter, as only by its pointings have we a means of knowing the amount of energy passing or the patient's resistance. This resistance is frequently different in different individuals and is also modified by pathological changes.

The action of electricity on the normal auditory nerve produces an interesting phenomenon. The sensation produced is described differently by different persons, but is always identical in the same individual. In one it resembles the ringing of bells, in others a hissing or buzzing sound, while in still others it produces musical tones of various intensities. This is the normal reaction of the acoustic nerve and the constant current alone should be used in investigating this excitability. The series of successive shocks produced by the interrupted current is of too short duration to produce any distinct sensation. The intensity of the current necessary to produce these reactions varies according to the polarity, and is altered by pathological changes in the ear. With the negative pole at least four, and with the positive six to eight milliamperes are necessary. When the negative pole is applied to the ear and the current abruptly established, a clapping noise is experienced which continues a little during the passage of the current and produces a kind of whistling sound, or a sound resembling the buzzing of insects, of boiling water, or wind. This auditory sensation disappears, although the current may continue. There will be no sensation while the current is interrupted. On the application of the positive pole there is no auditory sensation at the time the current is applied, or during its passage, unless it be prolonged, when a feeble crackling sound may be experienced. More or less serious difficulty is encountered in bringing about this normal excitability, on account of the auditory nerve being so deeply placed and surrounded by its bony envelope and labyrinthine fluid. It is much less accessible than the other nerves of that region, so that often before obtaining the special auditory reaction, other effects are observed which interfere with the test. Excitation of the auriculotemporal nerve may cause some pain and excitation, and of the facial,

muscular facial contraction. Stimulation of the chorda tympani is especially difficult to avoid and is followed by incessant efforts at deglutition and an increased amount of saliva. I have frequently observed cough and, in one case, a sort of vocal oppression and hoarseness which continued several hours. These effects are doubtless due to the stimulation of the auricular branch of the pneumogastric. The most disagreeable phenomena that may be produced are those due to excitation of the brain. Giddiness, vertigo, paleness, nausea, and tendency to syncope may be observed and it is important to know of these phenomena in advance and also to bear in mind that they depend above all upon a sudden variation of the intensity of the current. The current interruption must be gradual and not abrupt if we wish to avoid these unpleasant symptoms. The acoustic nerve reaction is a valuable clinical test and ranks along with the tuning fork and Galton's whistle. Gradenigo goes so far as to maintain that electrical examination must play in otology the same part that the ophthalmoscope does in ophthalmology.

The normal excitability of the nerve is modified by pathological conditions. In perforations of the tympanum and in the majority of labyrinthine diseases it is observed that very feeble currents, one to two milliamperes or even a fraction of a milliampere, will often produce the indicated reaction. When the stronger currents are employed the noises last often during the entire passage of the current. The most established fact is the association of hyperæsthesia and hyperæmia of the nerve. It never exists in non-inflammatory diseases of the ear. Diminished excitability or electric torpor at times exists and is observed in cases of impacted cerumen and in diseases of the labyrinth with violent tinnitus. It has been demonstrated by Rohrer to exist in all cases of auditory neuritis, either primary or secondary to cerebral hæmorrhage, tumors, or softening. We may have conditions existing analogous to certain neuritides of motor nerves where galvanic excitability is increased at a certain period and becomes gradually less—the torpor being the final end of hyperexcitability.

There are different methods of applying electricity to the ears. The one which I employ for both the galvanic and faradaic currents, when both ears are to be acted upon, is a bifurcated intraauricular electrode, the metallic ends of which I cover with moist absorbent cotton. For the indifferent pole, an ordinary sponge electrode is placed in the hand or over the nape of the neck. I frequently apply it to the Eustachian tube by introducing a hard rubber catheter in the ordinary way, and passing through it a metallic bougie electrode, and place the other

electrode over the mastoid region. In this way it acts directly on the muscles of the tube, which at times lose their normal tonicity, and it also stimulates the circulation of the parts. For this purpose I usually employ the faradaic current, which produces a sort of tingling sensation, but no vertigo or other symptoms of cerebral irritation.

The active pole for therapeutic purposes should almost always be the positive, unless electric torpor exists, as it is the sedative, decongestive one. The negative pole, which we employ in studying the auditory nerve excitability, acts in the inverse sense. With the faradaic current the polarity is unimportant.

In the distressing symptom *tinnitus*, which exists in so many of the aural diseases of adults, electricity will frequently be beneficial where other forms of treatment have been of no avail. It is the misfortune of us all to meet with cases of deafness with this symptom and where the patients state that if the noises in the ear could only be removed or lessened, they could get along well enough. It is in this class of cases where the ordinary treatment of inflation, Eustachian and middle ear modification, and where the nasopharynx and nasal cavities have been attended to and no improvement has followed, that electricity offers some encouragement. A fair percentage of the patients will be greatly benefited and one occasionally cured. When the tinnitus is of labyrinthine origin, or due to chronic inflammatory changes in the middle ear, the constant current is the one most employed. One to three milliamperes are sufficient and should be allowed to pass from six to ten minutes. Where there is ankylosis of the ossicles, the interrupted current has been more satisfactory in my cases, although it has not been used to the same extent as the constant current. The good effects are due to its mechanical action on the adhesions and to stimulation of the circulation and of the weakened muscles of the middle ear.

True strictures of the Eustachian tube are of rare occurrence, but when they do exist they are best treated by electrolysis. The galvanic current is utilized for this purpose. A hard rubber or silver catheter, properly insulated with rubber up to its point, is introduced and a small gold bougie is passed through the catheter and up to the point of constriction in the tube. The object is readily recognized; the bougie acts as the active electrode. It is to be attached to the negative pole of the battery, the current turned on slowly, and three to six milliamperes are to be allowed to pass. After six or eight minutes, by a gentle pressure on the bougie it will be felt to pass the softened stricture. The operation is a little painful and for a few days following there will be an increased amount of deaf-

ness and ringing and fullness in the ear. On the third day I usually pass a celluloid bougie, and at the same intervals of three or four days for two or three weeks. The dispensing electrode is held in the hand in preference to the mastoid region, or over the neck when there will be less tendency to cerebral irritation.

Complete success, by electrical treatment, of deafness either of tympanic or labyrinthine origin, is of rare occurrence. I do not recall any cases that I have treated where the hearing was greatly improved, except those naturally resulting from the diminution of the subjective noises. Hysterical deafness, like hysterical aphonia, is best treated by the faradaic current. Pruritus of the auricular canal, which is so distressing at times, is often benefited by this form of treatment. In neuralgic otalgia the interrupted current is very efficacious, when applied by means of an intraauricular electrode. Cocaine applied to the ear acts very incompletely, but its anæsthetic effect may be aided by the action of the constant current. This cataphoric process is utilized in producing anæsthesia of the tympanic membrane and external canal for slight operative procedures. The auricular canal is filled with a 10 per cent. solution of cocaine and a mild current allowed to pass for five to ten minutes when anæsthesia ensues. This same process has been utilized by some with various drugs as a means of curing deafness, but I have had no personal experience along these lines and the results published are not encouraging. The positive pole should be in contact with the fluid, and the negative applied over the neck.

1016 FOURTEENTH STREET, N. W.

Legislation Against Mosquitoes.—Assemblyman Wilsnack, of Queens county, on February 10th, introduced a bill in the New York legislature providing for the appointment of a commission, consisting of the State commissioner of health, the State engineer and surveyor, and the city commissioner of health of New York city; the engineer of the board of estimate and apportionment, of New York city, and six other members to be appointed by the Governor, to examine into the condition of the marshes at Arthur Kill, on Staten Island, and Greater Newark and Hackensack, N. J. The commission is to report to the next legislature its recommendations as to the best method of getting rid of the mosquito evil in its breeding places. The New York State Commission is authorized by the Wilsnack bill to cooperate with a similar commission to be appointed by the New Jersey legislature, or with a commission to be appointed by the Federal government. At present the Long Islanders try to get rid of the mosquitoes by burning out the marshes, but they have no lasting relief.

RETRODISPLACEMENT OF THE UTERUS.

By HELEN HUGHES, M. D.,
MANKATO, MINN.

The importance of this disorder among the diseases of women is evidenced by the number of methods that have been exploited for its cure, none of which has been so satisfactory as to close the subject.

Two methods have been evolved after much study and debate, which if used in accordance with their indications afford us a very successful treatment for many cases. These methods are support from below, including the different forms of pessary during the time that the natural supports are recovering themselves, and support from above by various operations. The results would be more satisfactory if a correct knowledge of each case was obtained, and the choice of methods made according to the conditions.

No one can be too rigid, too careful, or too painstaking in the examination of the pelvic organs. Within the last year I saw a woman who had an abortion, repeated hæmorrhages, and lastly was subjected to a curettage, and all this time she was under the care of a reputable physician who had failed to discover that the uterus was involved in a growth that afterwards proved to be malignant.

A thorough pelvic examination requires time and patience; what we fail to discover the first time we may observe in a second, or third, examination when the patient has become accustomed to our manipulations. We have no right to give an opinion or begin a line of treatment until we have made ourselves perfectly familiar with the condition of the pelvic organs, and this is very difficult, especially in the young, the rigid, the fat, and the sensitive, but that it is difficult is the very point I want to make. Many cases require repeated effort, but we have the same obligation to make a correct diagnosis for our difficult cases as for our simple ones.

When the uterus is retroverted it is often impossible to outline the tubes and ovaries by the vagina, but a very thorough examination can be made by drawing down the cervix with a pair of long artery forceps and then exploring by the rectum; in this way the posterior uterine ligaments are avoided.

In restoring a uterus to its original position or as near that position as we possibly can, we should keep in mind its natural supports and the part each plays in sustaining it in that floating, movable, yet secure position which is natural to

it. Only two pairs of ligaments possess muscular fibres, the round and the uterosacral; these fibres are prolongations from the muscular coat of the uterus, the most highly contractile organ in the whole body, and are more numerous close to that organ. This fact seems to have been overlooked by those gynaecologists who condemn the Alexander method for shortening the round ligaments and advise that the cords be sacrificed at the proximal end, preferring to retain the thick fibrous cord of the distal extremity to the thinner, but more muscular part near the uterus.

The uterosacral ligaments also contain muscular fibres, and are intimately connected with the fibres of the rectum which is, as we shall see, an important point in accounting for symptoms in retroversions. These ligaments possessed of muscular fibres are the most important, both in keeping the uterus in place and in restoring its balance after displacement. The uterus lies at an angle of about 45° with the plane of the vagina, supported by the loose areolar tissue that fills the space between the anterior walls of the vagina and the uterus itself, and is held forward by the round ligaments. About the junction of the body and cervix posteriorly are thrown out the fibres of the uterosacral ligament, whose duty is to hold the uterus backward and prevent it following the cervix into the vaginal canal. The other ligaments are folds of peritonæum and simply help to sustain the balance. The uterus receives the heft of the intestines on its rounded posterior surface, which casts them to either side, where they become a support rather than a load. So long as the proper relations are maintained, the uterus rests securely in its position and no such exercise as is consistent with the maintenance of good health will in any way affect it. All athletic exercises that tend to keep the body in good condition are a gain to the pelvic organs as they are to all other parts of the body, but the moment the equilibrium is destroyed many exercises that were useful before become decidedly pernicious.

The causes that bring about a lack of harmony with it, surely following retroversion, descent, and prolapse are many and varied. The habit so common among women of allowing the bladder to become overfilled is a frequent cause, and long sickness, such as typhoid fever, when the patient lies on the back for days and weeks, while every muscle is relaxed. Chronic inflammation of the cervix, especially following laceration, which inflammation often extends to the posterior ligaments, is another cause. This can be proved by the exquisite pain elicited when the

cervix is raised by the examining finger. Such a pain has long been looked on as a sign of endometritis, but it means more than that; it means that the posterior uterine ligaments are inflamed. Other causes are overexertion, producing great relaxation of all the muscles of the body; long continued tiring work; inflammation of the annexa; the torsal position after childbirth; subinvolution; resuming household duties after childbirth before the ligaments have recovered their tone; and the senseless use of the warm douche; also all growths so situated that they pull down or press down the uterus. Long walks, heavy lifting, straining, the wearing of tight clothing, and fastening heavy skirts around the waist, as well as many gymnastic exercises help toward retroversion. The round ligaments are stretched gradually and persistently, and while the fundus descends toward the sacrum the cervix rises toward the pubes, thus making traction on the posterior ligaments. It is during this period that the most prominent symptoms arise: eye symptoms, headache, indigestion, backache, and the whole train of reflex symptoms that follow strain on any organ of the body. We often hear a doctor say that the uterus is in very good position even when it stands midway between its normal position and the hollow of the sacrum. It is in a very good position to begin treatment, and if nothing is done for the patient this is only a start on the road to complete prolapse. In some cases when the uterus descends to the sacral hollow, nature interferes and adhesions are formed, preventing further descent. This is a condition that seldom produces symptoms, and leaves the woman about as well off as a ventrosuspension. *It is the progressive prolapse rather than the abnormal position that produces the painful symptoms.* It is during the progressive prolapse that constipation and rectal symptoms are prominent, for it is at that time that traction is made on the uterosacral ligaments, whose fibres are intimately connected with the rectum and which has the same nerve supply. We have seen too many cases where the pelvis was choked with a growth, and yet the action of the rectum was not interfered with, to suppose that a retroverted uterus always causes constipation. Where the uterus is movable, the case of the married woman during the childbearing period is of all the most hopeful, for if a pregnancy occurs the uterus must rise out of the hollow of the sacrum and at delivery with proper care it will assume the natural position.

There is no rule and there never will be any rule for treatment that will suit each individual

case, but we have two principles which we can observe: first, to relieve the symptoms, and, second, to follow nature as closely as we can in restoring the parts to their proper place. The highest form of gynecological work, and the only form that can offer a cure at the present time, is the non-operative.

I know that any treatment other than surgical is looked on with contempt, and that "routine treatment" and "tampon treatment" are terms of opprobrium in the profession. It is not the treatment, but the way in which it is carried out that is disgraceful. The term palliative has been applied to all such procedures, a term altogether misleading. No such treatment should be undertaken with any other goal in view than that of complete return to the normal, and the title of such treatment should be curative and not palliative.

Every case of retroversion not complicated by tumors, oophoritis, pustules, or the like, where the muscular tissue in the round and uterosacral ligaments is still capable of functioning, and where there is no mechanical obstruction, can be cured by replacing the uterus again, and again if necessary, applying properly a tampon, or, if there is no tenderness in the posterior ligaments a hard rubber pessary, massaging the uterus and annexa, building up the general health, wearing loose clothing suspended from the shoulders and taking the "knee chest position" from five to ten minutes twice daily, and practising walking on the hands and feet, or "elephant" walking, as it is called in the gymnasium.

Such a line of treatment judiciously carried out will cure any suitable case in the same length of time that is given to the removal of the symptoms by surgery, that is to say, two weeks in bed and two months of convalescence. Such a line of treatment should seldom be attempted at home unless the services of a nurse can be secured.

It is said, and with truth, that a woman has to be keyed up to the excitement of an operation before she will give herself the necessary time, but this is largely the fault of the physician. The patient is as clay in the hands of her medical adviser. And if he spoke with the same certainty of relief for her after medical as after surgical treatment she would submit even more willingly. As for the matter of expense, it is about equal.

What has brought everlasting disgrace and suspicion on this method is that it has been used again and again in unsuitable cases, and carried out in a slipshod haphazard way, by physicians who looked forward to no more definite termination than the end of the woman's patience. While

medical treatment is strongly to be recommended in suitable cases, it is just as strongly to be condemned in the unsuitable, that is to say, where there are complications that prevent the muscular ligaments from recovering their tone, where the muscle fibres have been destroyed by inflammation, where there are adhesions, oophoritis, salpingitis, and endometritis of a chronic form, such as that following gonorrhœal infection, or where a ruptured perineum or relaxed vaginal outlet makes it impossible for the uterus to maintain its equilibrium. In such cases there is actual loss of function from destruction of tissue and only palliative treatment can be thought of.

Sometimes the repair of a perineum or relaxed vaginal outlet with replacement of the uterus and keeping it in place with a pessary for a few months, is sufficient, or perhaps the clearing out of diseased glands and repair of the cervix are called for.

Curettage of the body of the uterus had better be deferred until some genius invents an instrument that will curette. I seldom use a curette, except in some cases of incomplete abortion, and then experience has taught me to rely largely on my finger. I have tried to curette a rubber bag, into which I had poured a non-soluble red jelly or paste. Splitting up the bag after a twenty minutes' conscientious attempt to clear it out with a curette and the use of several quarts of water, I was very glad that nobody's life depended on the completeness of that curettement. Another consideration that will often deter us from a curettage is that the corpus uteri is not at all so prone to inflammations as its more glandular cervix, and there is the risk of infecting a previously sterile body from an infected neck.

In the surgery of the pelvis, we must be governed by the conditions. Of the many complications there is not time to speak, though many of them are the direct cause of the displacement. As to the various ways of restoring the uterus by surgery, perhaps the shortening of the round ligaments offers the most promise with the least risk, but it should be kept in mind if the posterior ligaments are not functioning, that the uterus will be simply suspended from the round ligaments and will never give as much comfort to the patient as if the organ was raised up and anteverted, and held in that position by ventrosuspension, the main point in the choice between these operations being the condition of the posterior ligaments.

I have at present under my care a woman operated on fourteen years ago by a noted surgeon.

As a prevention to the descent of the uterus the operation was eminently successful, the fundus was well forward and the round ligaments could be palpated as tense and short, but the body and neck were in the same line and the uterosacral ligaments out of use. The patient told me that from the day she left the hospital to the present she was never free from pain, and I could well believe her. Nor is this a solitary instance. There is a large percentage of women operated on for this trouble who would not care to subscribe to the "cured" that stands after their names on the hospital books. But when their cases are studied carefully it will appear that they suffer, not because we have not the means at hand to relieve them, but because we do not apply the proper means to each individual case.

Ventrosuspension will always be the operation of election where there is annexal trouble that requires surgical interference, as the removal of tubes, ovaries, and the breaking of adhesions which are always found in connection with inflammations. Where the menopause is reached, we can rest assured that the symptoms will be removed and that we are not substituting one serious pathological condition for another. Ventrofixation with its variations remains as the only method in that class of cases in which the ligaments are crippled or deprived of their functional power by disease, while the Alexander method will yield many cases to medical treatment as our respect for medical methods increases.

Therapeutical Notes.

Removal of Nævi.—The child is put to sleep, writes Neiswanger in the *Alkaloidal Clinic*, for February, and a well wet pad, the size of the hand, is placed upon the abdomen and attached to the positive terminal of a galvanic battery. To the cathode is attached a short needle holder, in which is fastened a suitable needle—generally a long, slim one, from which the temper has been drawn. After the seat of operation has been cleansed and the needle drawn through an alcohol flame, it is passed *almost* through the mark, superficially, and parallel with the epidermis. The amount of current employed depends upon the distance the needle has been inserted, but usually is from $\frac{1}{2}$ ampere to 8 milliamperes, which is maintained until the usual blanched appearance indicative of decomposition is obtained. In like manner we attack every portion that is red, introducing the needle as many times as is necessary for the purpose.

The part is then dusted with boric acid, or other dry antiseptic, and in about a week a dark crust covers the whole area. This should not be disturbed until it is almost ready to drop off.

If the mark has not been very large, the resultant scar will be almost entirely absorbed in a few months, and even where the surface operated upon has been considerable, the scar will not be very noticeable in a year, because, it must be remembered, that the caustic action of the negative pole is very similar to that of any of the *alkaline* caustics, leaving a soft, pliable cicatrix that is easily absorbed.

Indigestion in the Adult.—In an article on Indigestion in *Treatment*, for December, 1904, Dr. Charles A. Beck says *inter alia*: In treating acute indigestion, dyspepsia, or gastric catarrh, in the *adult*, a speedy cure may be effected in the spontaneous removal of the ingesta from a stomach that has been treated like a gizzard. The best plan here is to encourage vomiting, one of the oldest and most simple of methods (that might be more frequently employed by the practitioner), by tickling the fauces with the finger (*care digitum!*), or by administering some tepid water. The patient is urged to take one glass after another (85°) until its nauseating effects on the palate and volume of gastric contents provoke free emesis. Another draught of water is then taken with the same effect, bringing away with it the remnants of the offending material and mucus. A third draught of water may now be given to which a little sodium bicarbonate (half a teaspoonful) has been added; this will neutralize the acid products of decomposition, and further dissolve and remove the mucus. A portion of the latter is left behind, and this, acting as a sedative to the gastric walls, will give speedy relief and rest. This method of treatment is simple, and may abort an acute attack of gastric catarrh; its application, however, will require discretion on the part of the practitioner. It must be remembered that old people stand vomiting and emetics badly; in some patients the above procedure might be dangerous, perhaps fatal, through rupture of a cerebral blood vessel. A rider might be added here: *All* medicines administered to old people, or to those having sclerotic arteries, should be made up as palatable as possible.

Hyperidrosis.—According to Unna, cited in *Nonceaux remèdes*, for February 8, 1905, washing the affected parts with spirits of camphor or a toilet vinegar of which eucalyptus is an ingredient, is valuable and may be followed by:

- R Ichthylol } of each.....5 parts;
Turpentine }
Ointment of zinc oxide.....10 parts.

M. For an ointment, to be used nightly.

In the shoes and socks may be sprinkled this powder:

- R Mustard1 part;
Powdered talcum.....30 parts.
M. Foot powder.

If the hands alone are affected, a half teaspoonful of the following may be thoroughly rubbed into the hands after each washing:

- R Eau de cologne.....90 grammes (3 ounces);
Tincture of belladonna.....15 grammes ($\frac{1}{2}$ ounce).
M. For the hands.

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A RESERVE MEDICAL CORPS FOR THE ARMY.

At the last meeting of the Association of Military Surgeons of the United States Major Azel Ames, formerly a brigade surgeon of volunteers and previously to that an acting assistant surgeon in the army, presented an elaborate and, on the whole, a well considered plan for the organization of a medical reserve corps for the army, one intended to provide for the efficient supplementing of the regular medical service in times of emergency and at the same time to do away with the anomaly of the contract surgeon. Major Ames's paper is published in the February number of the association's *Journal*.

The reserve corps, according to the major's plan, should be a large one, and its members, enrolled under a sort of proportional system from all parts of the country, should have actual rank, but not be under pay except when they were called into active service. They should have the privilege of special instruction in the Army Medical School, and this might be advantageously supplemented or replaced, Major Ames thinks, by instruction on the correspondence plan. It appears that at the outset he thought he had good reason to expect that the surgeon general and the War Department would join in a movement to procure the Congressional action necessary to put the whole scheme into operation, but this expectation proved illusory, and in consequence the major was moved to some acer-

bity of expression concerning the regular medical corps. In the discussion that followed the reading of Major Ames's paper his reflections on the corps were shown, particularly by Major Jefferson R. Kean, to have been quite undeserved.

The legislation actually proposed cuts loose from the scheme of appointing the members of the reserve corps on geographical lines, and lodges the appointing power with the surgeon general. Since in time of war the corps will be drawn into active service and perform its functions under the surgeon general's responsibility, we do not see why the power of appointment should be vested elsewhere than in that officer. The legislation sought for also ignored the correspondence scheme of instruction. We are quite ready to admit that correspondence instruction is better than no instruction at all, but that, we fear, is the best that can be said of it. At least we should look upon it as quite inadequate to the military training of a body of medical officers appointed from civil life.

THE AMERICAN MEDICAL ASSOCIATION'S PROPOSED "DIRECTORY."

It is generally understood that the American Medical Association is about to publish a list of its members. There would be nothing extraordinary in the publication of such a list, but the fear seems to be widely entertained that a directory character is to be given to it, and that consequently those who are not members, and whose names accordingly will not be included, will be subjected to the risk of being said not to be in good standing. There are even some who think that this detrimental effect is foreseen and designed by the association as a means of coercing them into joining the organization. We feel sure that this must be a mistake, because any such action would be opposed to the spirit in which the association was formed and in which it has been supported for more than half a century, and because it would be suicidal as a matter of policy.

We should be sorry to think that the association was actuated by any such unworthy motive, but it is not easy to overlook the possibility of the result that is feared. The implication that a man is not in good standing unless his name appears in the "directory" is one that can readily

be cultivated to a vicious purpose, but it would be tremendously erroneous, and we believe that in every considerable community there would be no lack of practitioners brave enough to disregard it. We are all interested in promoting the real welfare of the American Medical Association, but many would resist coercion exercised in its name. The association was formed for the cultivation of medical science and for strengthening the bonds of brotherhood among physicians, and those who guided its early career had no thought of forcing their colleagues into its ranks. Surely it will not now be suffered to degenerate into a political machine, and those who represent the great mass of the members in the House of Delegates could readily be made to feel that this was the general sentiment, a sentiment behind which there would be the determination not to be coerced.

A REMARKABLE PRESCRIPTION.

Dr. Henry Beates, Jr., of Philadelphia, contributes to the February number of the *American Journal of Pharmacy* an article which he introduces with the following prescription:

R Aconitiae Cryst, Merck.....Gr. 1-20;
Resinæ Phosphori, 4 per cent.....Gr. v;
Calci Phosphatis.....Gr. xlviii;
Misce et fiant capsulas numeros quatuor et viginti.
SIGNA.—One every two hours for four or five doses, then one every four hours, constitutes an "instrument" which is exponent of many facts associated with life and the profoundest interests of human existence.

"The prescription," Dr. Beates adds, without specifying whether he means this particular one or a prescription in general, "is designated 'an instrument' because of its legal significance, for it is a 'writing acknowledging or certifying to a claim, or recording the terms of a contract, deed, or grant,' and by common consent presupposes a right, by reason of the possession of qualification, to formulate and to have compounded and administered, without harm, according to obtaining conditions." We understand Dr. Beates as meaning that a prescription in general is "an instrument" such as he describes, that a properly qualified person has a right to write it and have it put up and administered, and that such administration will be "without harm according to obtaining conditions." We judge that he thought it unnecessary to comment specifically on the pre-

scription quoted, but simply cited it as a horrible example of what a prescription ought not to be, whether from his own point of view of it as an "instrument" or from any other.

We cannot make out that the prescription cited acknowledges or certifies to a claim or records the terms of a contract, deed, or grant. It has the negative disqualification, therefore, of not answering to Dr. Beates's definition of "an instrument." It has certain other peculiarities—for example, that of a Latinity unique in the phrase "fiant capsulas numeros," and that of incorporating in the directions to be written on the label a general statement having, we should say, "nothing to do with the case." Dr. Beates saw, of course, that all this would strike his readers at once, and he accordingly withheld specific comment. Dr. Beates's article is one of a number written to prove the necessity of higher education on the part of both physicians and pharmacists, all of which are printed in the same number of the *American Journal of Pharmacy*, and a perusal of them will doubtless accomplish much toward convincing the readers of that journal that such higher education is devoutly to be wished for.

THE ASEPTIC OBLIGATIONS OF MIDWIFERY.

From the present standpoint of the bacteriologist, it can be stated, without argument here, that the healthy vagina is immune to pathogenic organisms. That its acid secretions are germicidal is demonstrated by the experiments of Krönig, Duerksen, and others, who after placing various organisms in the vaginas of healthy women found that the canal was sterile after forty-eight hours. Streptococci die first, then, in the order named, staphylococci and pyocyanæi, the two last living twice as long as the first. Gonococci, on the contrary, find the same acid secretions a favorable medium for development, and are hence active, not only in the vagina, but also within the uterus and tubes.

Quite a different condition exists about the vaginal entrance. Here micrococcic life is luxuriant, as might be expected from the environment of these parts; their nearness to the anus, their opportunities for contamination with decom-

posed urine, cutaneous excretions, and soiled clothing, and for infection by personal handling. The integument of the pudendum, being partly true skin and partly transitional between skin and mucous tissue, provides a natural habitat for such microorganisms. Even in the healthy woman, then, the outlet of the birth canal is naturally and artificially septic, and that this condition is universal is proved beyond question.

The obstetrician must accept the facts, therefore, that the birth canal, considered in its entirety and as he finds it, is neither wholly clean nor wholly infected, and that the degree of infection varies according to the distance of the point in question from the outlet, steadily lessening, however, from below upward. Edgar found that the secretions in the vulvar canal of twenty-eight pregnant and parturient women showed pyogenic organisms in forty per cent. of the cases, though in all but two of the women the external genitals had been washed with soap and water just previous to making the cultures. In the healthy parturient, then, the septic enemy is openly massed at the entrance of the birth canal, while its scouts are ambushed in reduced force within the passage. The objective points, therefore, for attacking the enemy—in providing for and maintaining asepsis in labor and the puerperium—are the introitus, the vulva, and the adjacent regions.

The deduction from these statements is obvious; when the healthy vagina is normally immune, infection, if received at all, must be from without. Though autoinfection may and undoubtedly does exist, it is relatively so infrequent that, for the present purpose, that factor in puerperal septicæmia may be disregarded. In the main, labor is a natural process, carried on under natural laws and safeguards. During the function the birth canal is specifically immunized by the vaginal bacilli, naturally antagonistic to cocci, by leucocytosis, by the absence of free oxygen as a culture medium, and by the outward flow of the vaginal secretions; and is mechanically sterilized by the flushing of the passage with liquor amnii and blood and by friction against its walls of the child and placenta during their expulsion. From all this it follows inevitably that any interference with the spon-

taneous process, particularly by intrusion into the birth canal through an infected entrance, deranges its orderly course and weakens its natural defenses.

The obstetrician's unmistakable relation to his patient is that of an ally rather than an enemy; he exists solely to help parturition. His first important service at the bedside is to find out whether labor is to be natural or whether his aid will be requisite. In deciding the question he makes use of the principles of his art to establish the relation of the passenger to the passage, that is, he examines for position. Up to within very recent times the only accepted method of the examination was by palpation of the presenting part by way of the vagina. Now he ascertains the fetal position by abdominal palpation and auscultation, reserving internal examination for confirmation of his previous abdominal study and for such minor purposes as observing the character and progress of cervical dilatation, the condition of the passage as respects its adaptation to the passenger, etc. But just here the great superiority of the method of external examination over the vaginal becomes evident; it precludes all risk of infection. Experiments show that the danger of systemic infection increases *pari passu* with the number of internal examinations, being least when these are omitted entirely and greatest when they are frequent. That the foetal position can be determined in the majority of cases better by the external method than by the internal, is a fact of daily experience; that it is safer needs no argument. The only inference from these statements—and to deny them is to confess one's ignorance of modern obstetrics—is that those practitioners who still use internal examinations, to the exclusion of external, for diagnosing position, subject the woman to the hazard of sepsis. They either ignorantly or deliberately commit an assault upon the rights of the patient.

Granting that it is practically impossible to sterilize the vaginal outlet, yet much may be done toward that result. It is manifestly impracticable to try to cleanse its delicate surfaces with the same elaborateness which one would use for the coarser, less sensitive skin of the abdomen. Energetic scrubbing of the pudendum with brush,

soap, hot water, and chemicals would not be tolerated by the patient unless anesthetized, and, whether she was conscious or unconscious, such work would almost surely lacerate its tissues, thereby offering ready entrances to the ubiquitous germs. The clinical results of many conscientious practitioners bear witness to the value of simple soap and water as a prophylactic against infection. I believe that if, at the beginning of the first stage, the usual surface microorganisms were carefully removed from the introitus by this means alone, the natural germicidal provisions for labor would maintain sufficient immunity against those residual germs in its deeper layers, which cannot be removed artificially. Should operative assistance become needed, the first cleansing, repeated under anesthesia, may approach more nearly to the ideal. Once clean means continuously clean; the more protracted the labor the more frequent the disinfecting.

Thus much of sterilization is possible for every lying-in woman, in private or public, without offending her modesty or inflicting pain. Whether in addition every one must have the vulvar and pubic hair shaved is disputable; it is a question of time, availability of the trained nurse, the after-discomfort during renewal of the growth, etc. When the hair is luxuriant, it ought certainly to be clipped with scissors, and I have never found a patient who objected to this practice after its purpose had been explained to her. The ante partum douche, plain or medicated, in the healthy woman is not only unnecessary, but on the contrary is improper because it removes the natural protective. The golden mean in antiseptics, between the extreme technics of the abdominal surgeon and its burlesque by "our friends, the enemy," lies in not attempting too much, but in making a little go a great way. The danger of carrying sepsis through an infected entrance, while trying to locate the fetus by vaginal palpation, more than balances any good that the patient will gain by that method of diagnosis. The cardinal point in the details of the bedside toilet, so far as it concerns the patient, lies certainly in the initial cleansing of the external genitals.

Of the various plans devised for sterilization of the hands, that one most appeals to the ob-

stetrician which combines in itself simplicity, effectiveness, and cheapness. The method lately recommended by Harrington, while probably most germicidal of all, requires the free use of alcohol, after the usual scrubbing with soap and water and a five minutes' immersion under a seventy-five per cent. alcoholic solution of mercury bichloride. It is manifestly impossible to add to the various necessary articles carried in the obstetrical satchel a quart bottle or two of alcohol. Allowing that this mode of sterilizing is best for the amphitheatre, for the ordinary bedroom the handiest germicide is still the time honored bichloride tablet, "cheap and fillin' for the price," and it must be a very poverty stricken house which cannot provide a piece of laundry soap. The coal tar derivatives are preferred by many to the mercurial, and a sufficient quantity of either takes up but little room in the satchel. Rubber gloves are steadily gaining a place in the lying-in room, particularly for all operative and intrauterine work, but their two essential defects, expense and fragility, hinder their general adoption. Many good obstetricians restrict their antiseptic toilet to the use of soap and water, limiting their vaginal examinations to the least number possible. Supposing that this alone is competent manual disinfection, it must be granted by those who rely upon it that only superficial microorganisms can be removed by a single washing, however thorough. For since the deeper layers of bacteria are constantly working their way upward, as the external epithelia become softened by contact with fluids and wiped off by friction, true immunity can be maintained only by frequent repetition of the preliminary washing. The final word upon the subject of sterilization of living tissues is not yet said, and the best method for its attainment awaits its discoverer. But the proved benefit to the parturient of antiseptics, even if the best method of its application is yet unsettled, makes the principle doubly insistent, and that there are many defects in its working details is no excuse for discarding the principle entirely. The rule for the obstetrician must be absolute; no unclean hands in the vagina.

During the last hundred years of midwifery two results stand contrasted; throughout three

quarters of the century puerperal septicæmia was much more prevalent in institutional than in family practice, in the last quarter these facts are exactly reversed. Infective processes during the puerperium are the rare exception in the public maternities of to-day, a statement proved by the records of such institutions the world over. The relative percentage nowadays in the home cannot be computed so accurately as that in the maternities, because of evident difficulty in gathering the requisite data. The most reliable source of information upon this point is probably the annual reports of the various State health departments, but these are misleading because they tell the truth, but not the whole truth. For illustration, in case of death due to any of the diseases classified as belonging to "the puerperal state," the local death certificate not infrequently states it as due to one or more of the secondary conditions arising during the course of the primary disease; to pneumonia, or exhaustion, or malaria, etc., rather than to puerperal septicæmia or puerperal metritis or childbed fever. The bearing of this well known fact, so far as it relates to the accuracy of mortuary statistics of private midwifery, is obvious. It is estimated by those best competent to decide that the mortality and morbidity of childbed in the home are fully as large, if not larger, than a generation ago. The readiest explanation for this lamentable and inexcusable condition must be that the family physician and midwife deliver their patients with the same indifference to sepsis which their fathers had. In the public maternity everything that touches the birth canal must be sterile; in private midwifery sterility depends upon the choice of the attendant, thereby making life for the mothers of our children measurably safer in the ward of the hospital than in the privacy of the home. Apparently the only incentive which will induce the majority of general practitioners to change their present irrational routine of delivery for that of the protective method is the compulsion of an educated public sentiment. "The Lord rewarded me according to His righteousness; according to the cleanness of my hands hath He rewarded me."

—*Psalms* xviii, 20.

STANLEY P. WARREN.

THE PROPOSED "BLANKET" CERTIFICATION OF CLINICAL THERMOMETERS.

In our issue for January 21st we asked our readers to give us their opinion as to what fraction of a Fahrenheit degree might be regarded as negligible in the deviation of a clinical thermometer from absolute accuracy—an extent of deviation, that is to say, that might be held to be so small as practically to justify the certification of the instrument as correct. We have been gratified at the number of communications on the subject that we have received, many of which have come from men of the greatest eminence in the profession and of vast clinical experience. But we do not think it well to base any general statement on these data, preferring to wait for still more numerous responses. We mention the matter now for the purpose of impressing upon all our readers the importance of a full expression of opinion on the very practical point involved, for it will doubtless have great influence in enabling the government Bureau of Standards to come to a conclusion. When time enough has elapsed to warrant us in thinking that we have received all the data to be expected, we shall recur to the subject.

A PHENOMENAL PIECE OF EFFRONTERY.

It is reported that a certain individual expects to recover from a New Haven surgeon the sum of \$25,000 damages for sufferings and disabilities alleged to have resulted from the leaving of a pledget of gauze in his abdomen at the time of an operation for appendicular disease. A jury capable of bringing in such an award might appropriately resolve itself into an association for honoring the memory of Rogue Riderhood, who, it will be remembered, having been rescued from drowning by a tug, swore he would sue the owners of the craft for the loss of his hat.

THE AMERICAN ANTITUBERCULOSIS LEAGUE.

The meeting of this organization which is to be held in Atlanta on April 17th, 18th, and 19th, under the presidency of Dr. George Brown, will undoubtedly prove to be one of great importance. Many State and other medical societies will be represented, and the Georgia State Commission on Tuberculosis and the Georgia Antituberculosis League will meet in Atlanta at the same time.

RECENT PUBLICATIONS BY THE ILLINOIS STATE BOARD OF HEALTH.

This enterprising and alert board has recently issued a valuable pamphlet entitled *Smallpox: its Prevention, Restriction, and Suppression*, and has published also a fourth edition of its brochure on *The Cause and Prevention of Consumption*. The circulation of such literature cannot fail to be productive of a great amount of good.

News Items.

Society Meetings for the Coming Week:

MONDAY, February 27th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, February 28th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, March 1st.—New York Genitourinary Society; New York Academy of Medicine (Section in Public Health); Society of Alumni of Bellevue Hospital, New York; Harlem Medical Association of the City of New York; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, March 2nd.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 3rd.—Manhattan Clinical Society; Practitioners' Society of New York (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society.

SATURDAY, March 4th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 18, 1905:

	February 18.		February 11.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	209	8	201	3
Diphtheria and croup	272	47	275	42
Scarlet fever	225	20	246	14
Smallpox	1	1	3	1
Chickenpox	132	1	101	1
Tuberculosis	339	171	368	181
Typhoid fever	23	4	28	4
Cerebrospinal meningitis	40	4	29	4
	1,201	291	1,222	274

The Society of Medical Jurisprudence.—At the regular meeting of this society, held on February 20th, Professor Wilhelm Waldeyer, of Berlin, was elected an honorary member.

Mount Sinai Hospital.—Dr. Emil Mayer, adjunct attending laryngologist to the Mount Sinai Hospital, has been appointed chief of clinic to the ear, nose, and throat department of the dispensary of that institution.

Fango Institute of New York.—An institution for the application in selected cases of genuine Italian fango has been opened at 69 West Ninetieth Street. The institution also offers facilities for all kinds of baths and is under superior medical supervision.

Orthopædic Hospital.—The two concerts for the benefit of the Orthopædic Hospital, at which M. Ysaye and Herr Kreisler will appear in the Bach concerto for two solo violins, and which will take place on Monday evening, March 13th,

and Tuesday afternoon, March 14th, promise to be unusually successful. The New York Symphony Orchestra, under the direction of Walter Damrosch, also will play. The boxes, seating six, are \$30 each, and prices for seats range from \$2.50 down to \$1.

At the Medical Society of the County of Kings a lecture was given last Tuesday on Observations in Japan and Manchuria with Both Armies and Their Bearing on the Reorganization of the Medical Department of the United States Army, by Major Louis Livingston Seaman, late surgeon in the United States Volunteer Engineers, with the allied forces in China during the late Boxer uprising; with the United States Army in Cuba during the Spanish-American War, etc., etc.

Baby Hospital in Need.—The directors of the hospital for babies at Lexington Avenue and Fifty-fifth Street have issued an appeal to the public for aid. Opened in 1902, its full capacity was required within six months, and it now finds itself face to face with the problem of how the increased demands on its service can be met. Last summer one third of the patients applying for admission had to be rejected. The endowment fund should not be encroached upon, but its integrity is menaced. The immediate need has been met by the acquisition of a house adjoining the hospital. The necessary changes have, however, necessitated the raising of \$25,000. Contributions may be sent to the treasurer, Henry R. Kunhardt, 17 Battery Place, New York.

The Manhattan Maternity Hospital and Dispensary, at 327 East Sixtieth Street, was opened on February 16th. The building is square, of five stories and basement, and built of brick with a white enamel finish. On the main floor are the dispensary, the examining and admitting rooms, an office and superintendent's reception room, with the students' dormitory and dining room. On the floor above are the wards, accommodating eighteen patients, and the nurseries for both the ward and private patient babies. There are single cribs in the latter, and in the former little three-baby cribs with a couple of single ones for isolating the children when that is necessary. The ward patients' dining room is also on this floor. All the rooms are bright and light, there being windows on all sides of the building. On the third floor are the private rooms. On the fourth floor at one side is the operating room and amphitheatre, with seats extending up into the top story. On the top floor are the superintendent's suite of room and a private dining room, nurses' dining room, the house kitchen, and big supply room.

PHILADELPHIA.

West Philadelphia Medical Association.—The initial meeting of this association was held on February 10th at Rittenhouse Hall, Fifty-third Street and Haverford Avenue. The following officers were elected for the ensuing year: President, Dr. A. F. Targette; vice-president, Dr. George C. Shammo; recording secretary, Dr. William B. Bacon; financial secretary, Dr. A. P.

Good; treasurer, Dr. J. Brittingham. The association has a membership of seventy-five physicians.

Scientific Society Meetings for the Week Ending March 4, 1905.—Monday, February 27th, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, February 28th, Northwest Medical Society; Philadelphia Neurological Society. Wednesday, March 1st, College of Physicians; Association of Clinical Assistants of Wills's Hospital. Thursday, March 2nd, Obstetrical Society; Medical Society of the Southern Dispensary. Friday, March 3rd, American Philosophical Society.

Special Lectures at the University of Pennsylvania.—The faculty of the University of Pennsylvania has arranged the following lectures upon subjects which are of more or less general interest. While designed especially for the instruction of the fourth year class, invitations have been extended to the physicians of Philadelphia to attend on Monday at four o'clock in the new medical laboratories: February 6th and 13th, Dr. Leonard Pearson, Milk Supplies of Cities; February 20th, Dr. J. F. Schamberg, Vaccination; February 27th, Dr. J. F. Schamberg, Demonstration Upon the Subject of Eruptive Fevers; March 6th and 13th, Dr. E. C. Kirk, The Medical Relationship of Certain Dental and Oral Disorders; March 20th, Dr. A. P. Francine, The Restriction and Prevention of Pulmonary Tuberculosis; March 27th, Dr. R. Tait McKenzie, The Therapeutics of Exercise; April 3rd and 10th, Dr. Joseph Sailer, Hydrotherapy.

The Health of the City.—During the week ending February 11, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	95	8
Scarlet fever.....	41	1
Chickenpox.....	79	0
Diphtheria.....	63	14
Cerebrospinal meningitis.....	1	0
Measles.....	6	1
Whooping cough.....	15	2
Tuberculosis of the lungs.....	43	67
Pneumonia.....	113	117
Erysipelas.....	7	3

The total deaths for the week were 612, in an estimated population of 1,438,318, corresponding to an annual death rate of 22.13 per 1,000 population. The total infant mortality is 122; under one year, 91; from one to two years, 31. There were 41 still births; 22 males and 19 females. The following deaths were reported from other transmissible diseases: tuberculosis, other than tuberculosis of the lungs, 5; puerperal fever, 3; diarrhoea and enteritis under two years, 11. The temperatures reported by the weather bureau have been unusually low, ranging from a maximum of 38° on the 10th to a minimum of 9° on the 5th.

Charitable Bequests.—Leo Loeb and William B. Hackenberg, executors of the estate of Selina Walker, will distribute the following sums to various Hebrew charities in accordance with the adjudication of the estate by Judge Hanna, of the Orphans' Court: Jewish Foster Home and Orphan Asylum, \$9,965.64; Jewish Hospital Association, \$7,286.73; United Hebrew Charities,

\$7,286.73; Hebrew Education Society, \$2,428.90; Alliance-Israelite (Philadelphia Branch), \$2,428.90; Orphans' Guardians' Society, \$2,428.90; Jewish Maternity Hospital, \$2,428.90.

In adjudicating the estate of Countess Ellen de Cuelebroeck, who died in 1903, Judge Hanna, of the Orphans' Court, awarded a balance of \$20,488.95 to various charities.

By the will of Francis T. Fassett the Children's Hospital receives \$5,000 for the purpose of endowing a free bed, to be known as the "Anne Avour Fassett Bed," in memory of the wife and daughter of the testator.

By the will of A. Heineman \$500 each is devised to the Jewish Foster Home, the Jewish Orphan Asylum, and the United Hebrew Charities. Three hundred and fifty dollars is bequeathed to the Jewish Maternity Home.

Jewish Hospital Staff.—The work of the Jewish Hospital was so much increased during 1904 that it was found necessary to enlarge the staff. The president of the institution, William B. Hackenberg, announced the following staff on February 3rd:

Consulting surgeons—Dr. William W. Keen, Dr. J. William White, Dr. John B. Roberts, Dr. Edward E. Montgomery, Dr. Orville Horwitz, Dr. John M. Baldy, Dr. Charles P. Noble. Surgeons—Dr. Benjamin B. Wilson, Dr. Lewis W. Steinbach, Dr. William H. Teller, Dr. William L. Rodman, Dr. Max J. Stern, Dr. Melvin M. Franklin. Orthopaedic surgeon—Dr. DeForest Willard. Ophthalmologists—Dr. Isaac Leopold, Dr. Jay C. Knipe. Neurologists—Dr. Francis X. Dercum, Dr. Max H. Bochroch. Otologists—Dr. S. MacCuen Smith, Dr. Eli L. Klopp. Laryngologists—Dr. Arthur W. Watson, Dr. Louis Jurist. Obstetrician—Dr. William H. Randle. Pediatricists—Dr. Thompson S. Wescott, Dr. Ludwig Loeb, Dr. Joseph B. Potsdamer. Pathologist—Dr. Courtland Y. White. Dermatologist—Dr. Jay F. Schamberg. Radiologist—Dr. Sydney L. Feldstein. Consulting physicians—Dr. John H. Musser, Dr. James Tyson, Dr. James C. Wilson, Dr. Roland G. Curtin, Dr. Alfred Stengel, Dr. James M. Anders, Dr. Lawrence F. Flick. Consulting pediatricist—Dr. J. P. Crozer Griffith. Physicians—Dr. Adolph Feldstein, Dr. Thomas Betts, Dr. Solomon Solis-Cohen, Dr. William A. Cross, Dr. Francis X. Dercum, Dr. David Riesman, Dr. Courtland Y. White. Assistant physicians—Dr. Moses H. Behrend, Dr. Bernard Kohn, Dr. William A. Rocap, Dr. Edwin I. Becker, Dr. Victor A. Loeb, Dr. Maurice J. Karpeles, Dr. Harry F. Webster, Dr. Myer Solis-Cohen, Dr. George P. Katzenstein, Dr. Louis H. Jacobs, Dr. Milton K. Myers, Dr. William Shields, Dr. George W. Cook, Dr. Samuel Leopold, Dr. Mortimer Herzberg, Dr. Robert F. Ridpath. Chief resident physician—Dr. Edwin A. Jarecki.

Course of Instruction in Public Health.—The authorities of the University of Pennsylvania realize the efforts which are being made in communities throughout the country to obtain officials who have had some special training in matters pertaining to public health. Each year the demands for men of this type (either as chiefs of departments or in some subordinate position) is increased, and at the present time there is a lack of men qualified to fill such positions. To meet the needs of such demand, the university will introduce into its curriculum, beginning October 1, 1905, the following course in public health:

Sanitary Engineering.—Including the subject of water supplies, sewerage systems, street cleaning, disposal of waste, etc. **Sanitary Legislation.**—A study of the movement for sanitary reform, and of the laws enacted relating to public health, and the methods of enforcement employed in Great Britain and the United States. **Inspection of Meat,**

Milk, and Other Animal Products.—The methods of preparation and preservation of the same, the conduct of dairies, creameries, etc., and demonstrations of the diseases of animals transmissible to man. *The Sanitary Engineering of Buildings.*—Including demonstrations of systems of heating, ventilation, plumbing and drainage, the study of plans, etc. *Social and Vital Statistics in the United States.*—An examination of statistical methods and their results, with special reference to vital statistics and to city populations. *Practical Methods Used in Sanitary Work.*—Including water, air, and milk analyses, studies in ventilation and heating, investigation of the soil, methods of disinfection, sterilization, etc. (This is purely laboratory instruction.) *General Hygiene.*—As applied to the community, including lectures upon the causation of disease—exciting and predisposing, methods of prevention—including isolation, quarantine, natural and acquired immunity, protective inoculation, vaccination, and the antitoxic state, methods of house disinfection and the means employed, suggestions for the organization of sanitary work, the influence of water supplies and sewage disposal on the public health, etc. *Personal Hygiene.*—Including the physiology of exercise, the adaptation of exercise to the various physical requirements, the use of exercise for the prevention and correction of deformities, the methods of examination and record keeping, the routine physical examination of growing children and the relation of air, food, bathing, etc., to health and development; the hygiene of the school room.

GENERAL.

The Case of Dr. Harper, President of Chicago University.—In response to our telegraphed inquiry regarding the case of Dr. Harper, President of Chicago University, we have received the following wire: "The suspicions of malignant disease of the cæcum are well founded and have unfortunately been corroborated by Dr. McBurney's exploratory incision."—NICHOLAS SENN."

Minneapolis Assistant City Physician.—Dr. O. E. Linjer, who has held this position for some time, has resigned to devote himself entirely to his private practice.

Richmond, Va., Academy of Medicine and Surgery.—The subject announced for discussion by this organization at its next meeting on February 28th is Movable Kidney, by Dr. H. S. McLean and Dr. Blanton L. Hillsman.

Connecticut State Board of Health.—The following cases of infectious diseases have been reported to this board for January, 1905: Measles, 228; scarlet fever, 184; diphtheria and croup, 208; cerebrospinal fever, 2; whooping cough, 55; typhoid fever, 29; consumption, 46.

The Fulton, N. Y., Physicians' and Surgeons' Association has elected the following officers for the current year: President, H. P. Marsh, M. D.; vice-president, L. F. Joy, M. D.; secretary and treasurer, A. L. Hall, M. D.; censors, Dr. Fox, Dr. Haviland, and Dr. Scott.

The Obstetrical Society of Cincinnati has installed new officers as follows: President, Dr. R. W. Stewart; vice-president, Dr. Ambrose Johnson; recording secretary, Dr. John H. Landis; corresponding secretary, Dr. E. S. McKee; treasurer, Dr. L. S. Colter.

The First District Branch Medical Society of Kansas held its annual meeting on February 9th in Kansas City, Kans. Afternoon and evening sessions were held at the council chamber in the

city hall. Officers were elected for the coming year as follows: President, Dr. P. D. Hughes, of Kansas City; vice-president, Dr. H. L. Alkire, of Topeka; secretary, Dr. James Naismith, of Lawrence; treasurer, Dr. C. C. Goddard, of Leavenworth.

Bequest to Trenton, N. J., Hospitals.—Miss Margaret W. Tantum and her aunt, Mrs. Myra V. Freas, have notified the managers of the three public hospitals in Trenton that each institution is to be given an amount aggregating \$35,000 for the establishment of free beds in memory of the late Dr. James D. Tantum. Dr. Tantum was one of the wealthiest citizens of Trenton. He died recently from the effects of an operation in a Philadelphia hospital. He left no will, but on his deathbed requested his daughter and sister to give from his estate \$35,000 to three hospitals in Trenton and \$5,000 to the German Hospital in Philadelphia.

Pure Food Investigation in the New York Legislature.—A resolution was introduced in the assembly by Mr. Sheldon on February 14th. It is apparently aimed at the investigation of the present situation with reference to adulteration of foods and medicines, and calls on the State health department for a report on the subject with recommendations for remedies. The resolution is as follows:

Resolved, That the commissioner of health be and hereby is requested to furnish to this house a statement of what effort has been made on the part of the department of health for the enforcement of said statute, and whether, in his opinion, other or increased facilities or enactments are essential for the proper enforcement of the pure food law within this State.

Examinations for Admission to the Army Medical Corps.—Preliminary examinations for appointment of assistant surgeons in the army will be held on May 1 and August 1, 1905. Permission to appear for examination can be obtained upon application to the Surgeon General, United States army, Washington, D. C., from whom full information concerning the examination can be procured. The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between twenty-two and thirty years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training or its equivalent in practice. The examinations will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to the localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible. In order to perfect all necessary arrangements for the examinations of May 1st, applications must be complete and in possession of the Surgeon General on or before April 1st, and for the examination of August 1st, on or before July 1st. Early attention is therefore enjoined upon all intended applicants. There are at present twenty vacancies in the medical corps of the army.

The Röntgen Congress in Berlin.—April 30 to May 3, 1905. The Berlin Röntgen Society (*Röntgen Vereinigung zu Berlin E. V.*) has arranged for a congress in commemoration of the first decennial of Röntgen's discovery, to be held under the auspices of Dr. von Bergmann, honorary president, and of an honorary committee headed by the Prussian Minister of Instruction and His Majesty's physician, the Surgeon General of the Prussian Army, and including the president of the *Troisième congrès d'électrologie et de radiologie* for those in Germany and other countries interested in the investigation, technics, and employment of the Röntgen ray.

The congress, together with an exhibition of apparatus, radiograms, etc., will be held in the rooms of the *Ressource* in the Latin quarter of Berlin (N. 24, Oranienburgerstrasse 18) on the four days succeeding Easter week.

The executive committee of the congress and exhibition is composed of Professor Eberlein, chairman; Dr. Immelmann, Berlin W., Lützowstrasse 72, secretary; and Dr. Cowl, treasurer, who will continue to receive and acknowledge applications for membership, contributions to the proceedings, and other communications concerning the congress and exhibition.

Cards of membership will be issued after April 26th at the bureau of the congress. The cost, including a copy of the volume of proceedings, is 15 marks, 15 shillings, or \$3.60, which should be sent in advance to the treasurer.

Early notice of participation, with exact address, title of paper, etc., is desirable. It may be found necessary to restrict the time devoted to a single communication, discussion, or demonstration.

An explanatory circular concerning the exhibition, which is to be devoted to new and interesting articles pertaining to the Röntgen ray will be gladly sent on early application.

If those who address the congress in English will previously send in a short digest of their remarks, the same will be rendered in German at the conclusion of their papers.

The American Therapeutic Society.—The sixth annual meeting will be held in Philadelphia, Pa., May 4, 5, and 6, 1905. Following is the programme:

The Value of Ergot as a Sedative, by Dr. Torald Sollmann, of Cleveland, O.; The Proper Sphere of Bromides in Epilepsy, by Dr. Frederick Peterson, of New York city; The Radiation Treatment of Tuberculous Glands, by Dr. William J. Morton, of New York city; The Prevention and Treatment of Uremia in Acute Nephritis, by Dr. Howard Van Rensselaer, of Albany; The Management of Chronic Parenchymatous and Chronic Interstitial Nephritis, by Dr. Solomon Solis-Cohen, of Philadelphia, Pa.; The Remedial Value of Hypnotic Cumulative Action, by Dr. George F. Butler, of Chicago, Ill.; The Value of Physiological Salt Solution in Circulatory Failure, by Dr. H. C. Wood, Jr., of Philadelphia, Pa.; The Action of Certain Drugs in Heart Disease, by Dr. Thomas E. Satterthwaite, of New York city; The Exhibition of Several Cases of Skin Disease, by Dr. John V. Shoemaker, of Philadelphia, Pa.; The Recognition and Treatment of Cholecystitis, by Dr. Robert T. Morris, of New York city; The Etiology and Treatment of Recurrent Duodenal Congestion and Inflammation, by Dr. Howard H. Barker, of Washington, D. C.; The Diet in Non-Inflammatory Intestinal Indigestion, by Dr. George B. Fowler, of New York city; The Treatment of Chronic Diarrhea, by Dr. Reynold W. Wilcox, of New York city; Rectal Alimentation, by Dr. William H. Porter, of New York city; The Etiology and Treatment of Infantile Atrophy, by Dr. John B. White, of New York city; Notes on the Treatment of Hay Fever and Asthma, by Dr. Charles H. Knight, of New York city; Drug Adulterations, by Dr. Harvey W. Wiley, of Washington, D. C.; The Prophylaxis of Pneumonia, by Dr. James M. Anders, of Philadelphia, Pa.; The Recognition and Treatment of Pancreatic Inflammations, by Dr. Carl Beck, of New York city; The Management of Injuries to the Knee Joint, by Dr. De Forest Willard, of Philadelphia, Pa.; The Treatment of

Neuritis, by Dr. Daniel R. Brower, of Chicago, Ill.; The Value of the Correction of Errors of Refraction in Psychoses, by Dr. Edward D. Fisher, of New York city; The Management of Dysmenorrhœa, by Dr. Egbert H. Grandin, of New York city; The Treatment of Incontinence of Urine in Children, by Dr. Noble P. Barnes, of Washington, D. C. Chairman of committee on arrangements, Dr. John V. Shoemaker, 1519 Walnut Street, Philadelphia.

Statement of Mortality in Chicago for the Week Ending February 18, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Feb. 18, 1905.	Feb. 11, 1905.	Feb. 20, 1904.
Total deaths, all causes.....	630	554	651
Annual death rate per 1,000.....	16.50	14.50	17.61
Males.....	351	319	375
Females.....	279	235	276
By ages—			
Under 1 year.....	149	123	128
Between 1 and 5 years.....	64	82	50
Over 60 years.....	116	103	145
Principal causes of death—			
Acute intestinal diseases.....	25	20	29
Apoplexy.....	15	19	18
Bright's disease.....	36	32	41
Diphtheria.....	35	40	35
Consumption.....	73	67	70
Cancer.....	21	21	21
Convulsions.....	20	14	20
Diphtheria.....	6	11	12
Heart diseases.....	45	37	50
Influenza.....	8	12	5
Measles.....	1	8	0
Nervous diseases.....	27	21	20
Pneumonia.....	136	118	170
Scarlet fever.....	3	3	9
Smallpox.....	4	2	0
Suicide.....	10	8	7
Typhoid fever.....	2	4	8
Violence (other than suicide).....	24	22	20
Whooping cough.....	3	10	0
All other causes.....	136	84	116

A total of 426 deaths was recorded by the bureau of vital statistics during the first four days of the week—a total which represents an annual death rate of 30.2 per thousand of population. This is a figure not reached before since 1866, and the officials of the bureau were apprehensive of a record breaking week. Fortunately, the returns fell from this daily average of 106.5 to an average of 68 during the last three days, and the mortality rate of the week is only 16.50, as compared with 17.61 for the corresponding week of last year, and of 16.83 for the average February death rate of the previous decennium. There is a marked reduction in the reported deaths from the contagious diseases of childhood, from influenza and from typhoid fever, as compared with the preceding week. The respective totals of these deaths are 20 for the week and 38 for the week of February 18th. Laboratory indications point to a continued decrease of diphtheria; only 1 out of 32 cultures showed the presence of the diphtheria bacillus, while during the week before it was found in 7 cultures out of 34. On the other hand, the influenza bacillus was found in 13 of the 32 cases of suspected diphtheria, and the bacteriologists believe that influenza is frequently diagnosed as diphtheria. The protean manifestations of la grippe resemble the clinical symptoms of so many other diseases—diphtheria as closely as almost any other—that the bacterial examination is of first importance. Only 2 deaths from typhoid fever were reported, and the use of the epithet "vanishing" in connection with Chicago typhoid seems justifiable.

Pith of Current Literature

SEMAINE MEDICALE.

January 25, 1905.

Mikulicz's Disease,

By L. CHEINISSE.

Mikulicz's Disease.—Cheinisse has compiled the literature on this disease, which is one of general lymphadenitis in which the salivary and analogous glands are particularly involved.

PRESSE MEDICALE

January 28, 1905.

Opening Lecture at the Surgical Clinic at La Charité,

By Professor P. RECLUS.

Lecture.—Reclus's address was an eloquent obituary of Paul Tillaux.

January 15, 1905.

1. Operation of Nephrectomy for Cancer,

By RAYMOND GREGOIRE.

2. The Action of the Supinator Brevis in Paralysis of the Radial Nerve. Pathogeny of an Incomplete Radial Paralysis in the Leader of an Orchestra,

By GEORGES GUILLAIN and COURTELLEMENT.

1. **Nephrectomy.**—Gregoire advocates an incision in the axillary line from the costal border to the iliac crest with another incision running forward at each end 4 or 5 cm., the upper one along the margin of the thorax, the lower along the crural arch, thus forming a short flap. The chief advantage of this incision over the one in the lumbar region is that the whole of the fatty capsule of the kidney can be removed through it. Frequently the renal cancer is disseminated in the perinephritic tissues and has to be removed piece by piece.

2. **The Supinator Brevis and Paralysis of the Radial Nerve.**—Guillain and Courtellement report the case of a man, 40 years old, in whom without known cause radial paralysis of the right hand developed. First he noticed that he could not move his little finger readily, six hours later the ring finger was similarly affected and after that the paralysis increased progressively without pain or any subjective symptom. Examination revealed a very tender point on the posterior surface of the forearm at a place corresponding to the emergence of the posterior branch of the radial nerve from the supinator brevis. The writers believe that the cause of the paralysis was a neuritis of the radial nerve induced by the action of the supinator brevis in the movements of pronation and supination so frequently repeated by the patient in the practice of his profession.

LYON MEDICAL

January 22, 1905.

1. Cholecystocele and Floating Liver,

By M. L. BOUVERET.

January 22 and 29, 1905.

2. Pylorectomy,

By M. GOULLIQUOUD.

1. **Cholecystocele and Hepatoptosis.**—Bouweret reports a case in which the patient, a woman, did not complain of her liver or gall bladder, but had considerable abdominal trouble, was constipated, had mucomembranous colitis, and presented the usual symptoms of well marked enter-

optosis. During an examination a tumor was accidentally found. It grew slowly and was not always to be found in the same place. A successful operation was eventually performed.

2. **Pylorectomy.**—Goullioud is moved by the disfavor into which this operation has recently fallen to give in full detail the histories of 13 cases in which he has performed this operation. At first he performed Kocher's operation, but soon abandoned it for Billroth's, which he later modified. One patient died immediately after operation, one two months and one four months later; the balance, ten, recovered. All were operated on between March, 1899, and November, 1904, five during the latter year. There has been no recurrence of the cancer in one patient at the end of five years, in another at the end of three years and in a third at the end of eighteen months.

REVUE DE MEDECINE

January 10, 1905.

1. A Study Relating to the Alimentation of Tuberculous

Dogs,

By RICHEL.

2. A New Investigation on Clinical Cardiology,

By D'ESPIRE.

3. Experimental Tuberculosis of the Heart and the Aorta,

By BERNARD and SALOMON.

4. Renal Opotherapy (Renault-Dubois Method). Ingestion of Raw Pigs' Kidneys. Clinical Results,

By CHOUPIN.

1. **A Study Relating to Alimentation of Tuberculous Dogs.**—Richet draws the following conclusions from his investigations: 1. The expenditure in heat units of tuberculous dogs exceeds that of normal dogs by about 25 per cent. 2. In order to estimate this expenditure satisfactorily the determination should be made at the surface of the body. If the animal loses weight the heat units absorbed must be less than those expended, and we must conclude that there are heat units of denutrition. On the other hand, if the animal gains weight the heat units absorbed exceed those which are expended, and there are heat units of fixation. 3. If the number of heat units absorbed in twenty-four hours is less than twelve the animal will die, for the absorption of heat is insufficient and he is existing at the expense of his tissues. 4. The average absorption of heat units by the tuberculous dog with a mixed diet is about eighteen, but with a diet of raw meat it may be diminished to eight. 5. The minimum quantity of nitrogen per twenty-four hours which is required in the first stages of tuberculous infection is fifteen centigrammes, which corresponds to about one gramme of proteid material. 6. It follows, therefore, in respect to the alimentation of tuberculous dogs that two conditions must be satisfied; more than twelve heat units must be absorbed per diem, and more than fifteen centigrammes of nitrogen, or, in other words, a minimum daily quantity of one gramme of proteids and two grammes of hydrocarbons.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 16, 1905.

1. The Influence of Alcohol Upon the Susceptibility of Rabbits Used to Cultivate Bacteria.

By C. FRAENKEL.

2. Immunization Against Tuberculosis,
By P. BAUMGARTEN and C. HEGLER.
3. The Gastric Secretion of Gastrotomized Man with Rec-
tal Feeding,
By UMBER.
4. Experimental Examinations of Gastric Juice,
By A. BICKEL.
5. The Influence of the Röntgen Rays Upon the Ovaries,
By L. HALBERSTAEDTER.
6. Aronson's Antistreptococcus Serum,
By R. KLEIN.
7. Nervous and Mental Diseases Following Electrical In-
juries (*Concluded*),
By A. EULENBURG.
8. The Infectious Paths of Pulmonary Tuberculosis,
By H. BEITZKE.

1. **Influence of Alcohol Upon Rabbits.**—Fraenkel has examined rabbits to which alcohol had been administered and which were subsequently inoculated with cholera and typhoid bacilli. It appears that a single administration of alcohol augments the susceptibility of animals inoculated with cholera, but if the alcohol administration is continued, this susceptibility is diminished. Even though the alcohol is given for some weeks, however, the capacity of the animals to furnish a serum with specific characteristics, is not diminished, but is even increased, if only to a slight degree. The experiments with typhoid yielded similar results. The author withholds his opinion as to corresponding results upon man.

2. **Immunization Against Tuberculosis.**—Baumgarten and Hegler have made attempts at immunization with the serum of a calf which had been inoculated with human tubercle bacilli; and later, five successive times, had been inoculated with virulent material from animals sick with bovine tuberculosis, without showing any noteworthy signs of disease. The serum of this calf was used prophylactically upon another calf which had been inoculated with bovine tuberculosis. Two other calves, similarly inoculated were used for control, the latter two dying of extensive tuberculosis, while the first calf remained immune.

4. **Gastric Juice.**—Bickel gives the results of his examination on the molecular concentration of the gastric juice in milk and meat diets and in pilocarpine poisoning. It appears that pilocarpine increases the secretory activity in a specific way. Experiments on dogs with mineral waters, showed that "Kochbrünnen" water given on the empty stomach increases the secretory activity of the stomach.

5. **Influence of Röntgen Rays on the Ovaries.**—Halberstaedter exposed five rabbits to the action of the Röntgen rays in such a way that the ovarian region of one side was under the influence of the rays. Macroscopically, a diminution in the size of the ovaries could be seen and microscopically, there was a disappearance of Graafian follicles. The author then examined the ovaries, in anaesthesia, of another set of rabbits before exposing them to the rays. They were then subjected to the influence of the rays and the same ovarian condition was subsequently found. The practical conclusion to be drawn is that when the Röntgen rays are used therapeutically upon women, the ovarian regions should be protected against their influence.

6. **Aronson's Antistreptococcus Serum.**—Klein reports the use of the serum in two cases. In one, a boy suffering from pleuropneumonia, severe intestinal disturbances arose, indicating a sepsis. The use of the serum created a great improvement in which the crisis of the pneumonia played no part. The second case was that of an elderly man suffering from a urogenital sepsis in which the employment of the serum brought about an immediate fall in the temperature, although the local condition continued.

8. **Pulmonary Tuberculosis.**—Beitzke affirms that the newer researches have only impressed more firmly the older views that the infection by the way of the air is the most important genetic element in pulmonary tuberculosis. The tuberculous individuals furnish the greatest source of infection. Bovine tuberculosis is also dangerous to man, and prophylaxis against tuberculosis must be directed toward these elements.

ZENTRALBLATT FUER CHIRURGIE

January 7, 1905.

1. Chloroform-Oxygen Anaesthesia,
By ROTH.
2. Phlegmone Ligneuse (Reclus),
By A. SCHMINKE.

1. **Chloroform-Oxygen Anaesthesia.**—Roth speaks warmly of anaesthesia induced by the simultaneous use of oxygen and chloroform. He records the favorable views of a number of prominent surgeons, and reports 2,000 cases of his own in which not the slightest difficulty or annoyance arose. An advantage of the method lies in the exact dosage which is possible. Roth believes the oxygen acts as an antidote to the chloroform. He is now conducting experiments along this line. He asks for statistics from other operators.

January 14, 1905.

1. Amaurosis Following Paraffin Injection for Saddle
Nose,
By W. MINTZ.

1. **Amaurosis After Paraffin Injections.**—Mintz reports the third case of this kind. The patient had a syphilitic saddle nose and one injection of forty-three grade paraffin was made for prosthetic purposes. Three minutes after the injection there was pain in the left eye followed by complete blindness, vomiting and a pulse of forty-eight. In the next few days symptoms of venous congestion appeared in the orbit—paralysis of the ocular muscles, corneal cloudiness and exophthalmos. In the neighborhood of the injection, a small gangrenous spot appeared in the skin. The author says that, since these complications can appear without our knowledge, patients should be informed of the possibilities which may follow paraffin injections.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 15, 1905.

1. The Reducing Power of the Urine in Pleuritis Peritonitis, and Tuberculosis of the Lungs,
By AUGUSTO PLESSI.
2. The Iodine Treatment of Typhoid Fever,
By ALEARDI CERIOLI.
3. Renal Hæmaturia Probably of Traumatic Origin,
By BALDO ZANIBONI.

1. **Reducing Power of the Urine.**—Plessi studies the reducing power of urine in health and

disease. This study is intended to bring out the amount of non-oxidized substances which are present in the renal secretion and thus to determine the state of metabolism in the body. The author thinks that the method in question offers one of the best means of clinical research in conditions of altered metabolism. The relation between the amount of reducing substances in the urine and the weight of the patient furnishes a ready index to the products of incomplete oxidation. Reducing substances appear in increased amounts in the urine in pleuritis and in exudative peritonitis. During these maladies variations occur, however, in the amount of reducing substances, and the largest amount is seen when the fluid is undergoing absorption, while the smallest amount appears when the fluid is effused. The disappearance of an œdema is also accompanied by a noteworthy increase in the amount of reducing substances. These bodies are also increased in pulmonary tuberculosis, but there seems to be no relation between the amount of reducing substances, and the condition of the lung. The greatest amount of these bodies is seen in the urine of tuberculous subjects, when the general symptoms are most pronounced. The method of determining the reducing power of the urine which the present author employed is a modification of that of Helier, and was suggested by Lucatello. To one c.c. of urine are added 50 c.c. of distilled water, two c.c. of a twenty-five per cent. solution of sulphuric acid, and fifteen c.c. of a decinormal solution of potassium permanganate. The mixture is boiled for five minutes, in order to obtain the perfect oxidation of the organic substances, and then is cooled to 70°. To this are then added 15 c.c. of a decinormal solution of oxalic acid. Then the solution of permanganate is added once more, drop by drop, until its red color persists. The amount of this solution thus used indicates the reducing power of the urine. When the urine contains albumin, it should be cleared by precipitating and filtering the latter.

2. Iodine in Typhoid Fever.—Cerioli highly recommends the use of iodine in typhoid fever. He used this treatment in sixteen cases with excellent results. He gave daily doses of 7 centigrammes of iodine and 70 centigrammes of potassium iodide, administered internally in mixtures. He did not find it necessary to use injections of these drugs subcutaneously, but believes that in cases where there is imminent danger they could be used with advantage. No signs of iodism were discovered in any of the cases treated in this way. In addition, powders of quinine and sodium benzoate were given, and the usual diet was employed. In two cases only did he use ice bags over the abdomen.

RIFORMA MEDICA.

January 7, 1905.

1. On the Minute Changes in the Organs as the Result of the Injection of the Blood Serum of Heterogeneous Animals (*To be continued*). By G. R. SÆLLI.
2. On the Effects of the Resection of the Nerves of the Pancreas, By GIUSEPPE ZAMBONI.

3. On the Origin and Distribution of Elastic Tissue in Cirrhotic Livers, By GIROLAMO LEONTI.
4. On the Physiopathology of the Great Omentum, By RAFFAELE PIRRONI.

2. Rôle of the Nerves of the Pancreas.—According to Zamboni, there is very little in the literature of the functional relations of the pancreas which concerns the rôle of the nerves of this organ. Since 1888, when Martinotti for the first time removed the pancreas in dogs, a great deal of research work has been done on the gland itself, on the islands of Langerhans, etc., and on the relation of the pancreas to diabetes, but little has been done to show the exact functions of the nervous mechanism of the gland. Zamboni resected the pancreatic nerves in a series of dogs and on another series, in addition, tied portions of the gland itself at each end thereof, in order to compare the behavior of the isolated segments with that of the central portion. The dogs bore the operations well and not only did not show any signs of illness, but increased in weight. There was never any sugar in their urine. On autopsy, nothing unusual was noted in the gland in the way of lesions. The tied portions were uniformly atrophied and did not show the special resistance in the islands of Langerhans which has been described by Schultze. The blood vessels of the gland were very much dilated, even as long as six months after the operation, and their walls showed degenerative changes, except in the central portion of the pancreas. The islands of Langerhans showed important degenerative changes, and the fact that these changes occurred without producing any glycosuria, points to the supposition that these structures are not concerned in the function of the pancreas to the extent supposed. Zamboni thinks that the islands of Langerhans represent embryonal residues in the gland, or that they are structures which have a more important function in the lower vertebrates. He will discuss this question more fully in a later paper.

3. Elastic Tissue in Cirrhosis.—Girolamo found that the amount of elastic tissue in the liver varies according to the stage of the disease and the individual patient, but especially according to the amount of embryonal or new connective tissue which had been transformed into old connective tissue. The early cases usually show a distribution of the elastic tissue along the natural septa between the lobules, etc., as well as along the blood vessels. The elastic tissue along the arteries and veins runs longitudinally, while that along the biliary canals usually runs transversely to the axis of the vessel. This elastic tissue is not derived, as some have asserted, from the vessels, but is only a part of that elastic tissue in which the older forms of connective tissue are so rich.

4. Function of Omentum.—Pirroni wished to investigate the alleged functional relation between the spleen and the omentum and for this purpose removed the spleen in a series of animals and examined their omenta afterwards. As he could not gain any positive results by this means, he used the following method: He removed or tied off the spleen in a number of animals, and then injected into these animals solution of sodium

taurocholate. This is a powerful hæmolytic against which animals may be immunized by increasing the dose gradually. During this immunization the spleen becomes enlarged and the Malpighian bodies proliferate. In order to detect a connection between the functions of the spleen and those of the epiploon, the author immunized with sodium taurocholate animals deprived of the spleen, and watched whether any changes occurred in their omentums. Then he compared his findings with those appearing in animals immunized in the same way, but not deprived of the spleen. He found that the histological reaction in the omentum of the animals deprived of spleens and immunized with taurocholate was infinitely more marked than that occurring in animals with intact spleens. This reaction consisted in the production of a phagocytosis. In the animals with spleen intact this phagocytosis took place largely within the spleen, but in those in which the spleen had been removed the phagocytosis took place much more markedly in the omentum, the latter having taken up a compensatory increase of function in place of the absent spleen. In addition to its local protective function which is already known, the omentum, therefore, participates in the general work of defense in the body.

January 14, 1905.

1. Endothelia in the Normal Blood; Their Relations to the Mononuclear Leucocytes, to the Transition Forms, and to the So Called Lymphocytes of the Blood,

By VINCENZO PATELLA.

2. The Behavior of Cartilage in Wounds, By G. FASOLI.
3. The Mode of Action and the Proofs of Activity of Certain Antimicrobial Serums (*To be continued*),

By A. PALADINO BLANDINI.

4. On the Minute Changes in the Organs as the Result of the Injection of Heterogeneous Serums,

By GIUSEPPE ROMANO SÆLI.

1. **Endothelia in the Blood.**—Patella, at the Congress of Padua held during the past year, reported the results of his researches which tended to show that endothelial cells exist in normal circulating blood, and that they are increased in some diseases, such as, for instance, in cases of endocarditis due to polyarthritis. These elements were flat cells with an irregular outline and with comparatively faintly staining cytoplasm as well as caryoplasm. On scraping the inner walls of arteries in animals, and dissolving the scrapings in normal salt solution, similar elements were found. Patella believes that the term "lymphocyte" has been erroneously applied to a large number of cells of the normal blood, which have deeply staining nuclei of large size and a thin area of cell body staining pale about this nucleus. True lymphocytes are the representatives of the lymphoid tissue in the blood, and are quite different from these. True lymphocytes show diametrically opposite staining qualities, and their cytoplasm is more basophile than their caryoplasm. Ehrlich was the first to describe mature and fully developed true lymphocytes. They may be seen in the juice from the centre of a lymphatic gland and in the thoracic duct. True lymphocytes are made up of a large nucleus which is weakly basophile

and of a thin rim of cytoplasm, which is markedly basophile. The nucleus shows several nucleoli (?). In the lymph these cells are derived from much smaller elements which contain a number of scattered basophile granules, and which later form the cytoplasm by crowding to the periphery and joining in a homogeneous mass. These true lymphocytes, according to Patella, are rather scarce in the normal blood, and most of what are generally termed lymphocytes are merely derivatives of endothelial cells, which are shed by the linings of the arteries, veins, and capillaries. While this hypothesis seems a little daring at first glance, the author pleads that his theory simplifies our conception of the origin of the large and medium sized mononuclear cells of the blood, and is much more probable than the other theories heretofore advanced, which for the most part are based on old pathological ideas. If the mononuclear cells in question be regarded as derivatives of endothelia, the classification of leucocytes becomes much simplified. A proof offered by Patella in support of his theory is, that after numerous unsuccessful attempts, he was able to produce in the mononuclear cells, which he claims are derived from endothelia, that peculiar reduction of silver which is known to be characteristic of endothelia in all parts of the body. He refers to the faculty of endothelial cells to reduce silver on exposure to light and to show a thin line of reduced silver in their peripheries. The presence of a large number of these endothelial corpuscles is an indication of an affection in the arteries or the heart.

2. **The Behavior of Wounded Cartilage.**—Fasoli studies the mode of repair in wounded cartilage, a subject which has received but scant attention hitherto. Microscopically, he found the following to be the process of repair: While the cells which are nearest to the margin of the wound in cartilage quickly atrophy, those a little further removed undergo proliferation, as shown by the caryocinetic changes which they undergo. After from seven to nine days, the new cells reach their maximum development. Later there are no caryocinetic figures, but there is an appreciable increase in cartilage cells along the line of incision. The matrix of the cartilage atrophies within the immediate vicinity of the injury, but a new matrix is formed from the new cells just spoken of and fills the gap. In cases in which the loss of tissue in the cartilage is slight, the repair takes place perfectly, and nothing but two lines of densely packed new cartilage cells, with an area of sparsely celled matrix between (in the line of incision), points to the existence of a wound. In other cases, where the loss of tissue is great, connective tissue derived from tendons, periosteum, or synovia forms part of the bridge that is thrown over the cartilaginous gap. Sometimes more cartilage is formed anew than is needed, and then the wound shows an exuberant projection or a series of projections.

4. **Lesions Produced by Heterogeneous Serums.**—Sæli found that the injection of heterogeneous serums into animals produces definite histological lesions in some organs, while in others

the changes which these serums occasion are much less marked. These lesions are induced quite apart from the clinical symptoms, such as fever, emaciation, loss of appetite, etc., which are observed in such animals. Well marked lesions were noted in four cases in the liver, in which a true interstitial hepatitis was found. In the spleen there was also a chronic proliferative process, but the kidneys showed a much less well marked set of lesions after injections with the serums of other species of animals. This seems to be in opposition to the opinion of Linossier and Lemoine, who in 1903 produced albuminuria in rabbits by the injection of serum from calves, and thought that this symptom was due to severe lesions in the kidneys of the animals experimented upon. The degree of the lesions produced varied according to the different species of animals dealt with. Thus the lesions produced in rabbits by the injection of the serum of dogs were much more marked than the lesions resulting in dogs in virtue of injections of the serum of bulls. The intravenous method of injection proved to be the more effective, as compared with the intraperitoneal method, inasmuch as in the former the poisons reached the tissues directly, without being first exposed to the protective and antidotal action of the organism.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 18, 1905

1. Chylous Ascites with Eosinophilia. An Analysis of Reported Cases, By L. NAPOLEON BOSTON.
2. The Environment and Visual Requirements of Railway Enginemen and Firemen. Personal Observations from an Engine Cab, By NELSON, MILES BLACK.
3. The Sanatorium for Incipient Pulmonary Tuberculosis. Its Aims, Methods, and Results, By FREDERICK L. HILLS.
4. Pulsating Exophthalmos; Successive Ligation of Both Common Carotid Arteries; Death, By HOWARD F. HANSELL.
5. Intermittent Exophthalmos, with Report of a Case, By WILLIAM CAMPBELL POSEY.
6. An Encouraging Case of Locomotor Ataxia, By GUY HINSDALE.
7. Immunity (*Continued*). Chapter IV.

1. **Chylous Ascites.**—Boston reports one personal case of chylous ascites with eosinophilia. He has collected and analyzed 128 cases. The results of his analysis are presented in seven tables. Complete references are given to all the reported cases. A distinction must be made between true chylous and chyloform ascites. The former affection results from the escape of chyle into the peritoneal cavity. Many pathological conditions may be responsible for the escape of the chyle. Chyloform ascites is the result of the contamination of ordinary ascitic fluid with fatty or mucoid substances derived from degenerated peritoneal cells or inflammatory exudates. The cases collected by the author belong to both these types.

4. **Pulsating Exophthalmos.**—Hansell ligated the second carotid six weeks after the ligation of the first. He felt it imperative to resort to the second ligature as soon as he did, because the

repeated retinal hæmorrhages were threatening the integrity of the eye. The patient died on the fifth day after operation. She died of cerebral anæmia, paralyzed on one side and after a period of almost continuous convulsive attacks. The general subject of pulsating exophthalmos is discussed at some length. The condition, in the majority of cases, is probably due to rupture of the carotid artery in its passage through the cavernous sinus. Up to 1898 there were one hundred and ninety-seven cases of this affection published, but the cause, course, and treatment of the condition still remain unsettled.

5. **Intermittent Exophthalmos.**—Posey reports his case in detail. There have been reported forty typical cases of this affection, and the author gives references for each. To these must be added eleven cases of venous tumors of the orbit in which, however, there was no exophthalmos present. The ætiology, pathology, symptomatology, diagnosis, and treatment of the disease are each discussed.

6. **Locomotor Ataxia.**—See this *Journal*, Vol. LXXX, page 186.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 16, 1905.

1. The Prognosis of Epilepsy, By WILLIAM ALDREN TURNER.
2. A Study of the Birth Rates, General Death Rates, and Death Rates from Cancer for the New England States for the Year 1900, By WILLIAM F. WHITNEY.
3. The Effect of Tubal Abscess Upon the Position of the Ureter, By ERNEST BOYEN YOUNG.
4. The Surgery of Meckel's Diverticulum, By JOHN W. KEEFE.
5. Perilous Calms of Appendicitis, By ROBERT WALLACE HARDON.

1. **Epilepsy.**—Turner asserts that after epilepsy has been arrested for nine years it may be assumed that a cure has been established. It must be remembered, however, that a small percentage of cases do relapse after this period. If such a definition of "cure" is granted, then it may be said that epilepsy is curable in about ten per cent. of all cases. The prognosis in any specific cases must be based on the proper appraisal of the following factors: (1) Sex; (2) inheritance; (3) age at the onset of the disease; (4) duration of the disease; (5) frequency of the seizures and, (6) character and time of the seizures. The intrinsic value of each of these factors may be stated thus: (1) Of no importance. (2) A family tendency to either epilepsy or insanity, though offering no obstacle to the arrest of the seizures in favorable cases, materially increases the likelihood of the disease becoming confirmed and the supervention of dementia. (3) Epilepsy commencing in infancy and childhood is the least favorable for arrest of the fits, and the most favorable for the production of the confirmed disease. The common type of epilepsy, or that commencing during puberty, is the most favorable form of epilepsy, both as regards the arrest of the seizures and the absence of mental infirmity. Adult

epilepsy is unfavorable, but senile epilepsy is tractable. (4) The earlier a case is brought under systematic treatment the more hopeful is the prognosis. There is a greater prospect of arrest or improvement during the first five than during the second five years of the disease. (5) The longer the interval between the attacks, the greater the prospect of arrest or improvement. (6) Cases of grand mal are more amenable to treatment than cases of petit mal. Cases of combined grand and petit mal are the least favorable. Mental deterioration is also greatest in this variety of the disease. It is least noticeable in cases of petit mal.

2. **A Statistical Study.**—Whitney concludes that it will probably be many years before the truth is known regarding the alleged increase of cancer. It is probable that the recent increased accuracy in diagnosis and registration will show that the mortality from cancer reached its height at the end of the century just closed.

3. **Tubal Abscesses.**—Young, from a study on the living as well as on the dead, concludes: (1) That small collections of pus in the Fallopian tubes do not displace the ureters. (2) That larger collections displace the ureters, (a) Outward generally, whether the ureter is above or below the mass. (b) Downward rarely, on to the posterior cul de sac. (3) That such displacements are probably due to traction upon the infiltrated broad ligaments by the distended tubes: the ureter moving with the broad ligament. (b) Direct pressure from the growing abscess, forcing the ureter in the direction of least resistance. (c) A combination of both. Previous to the investigation of this subject the operation of vaginal section has seemed a somewhat haphazard procedure, but in the light of what has been found, our lack of accidents seems quite fully explained.

4. **Meckel's Diverticulum.**—Keefe reports two cases of intraabdominal disease caused by the presence of Meckel's diverticulum. The cardinal symptoms of disease due to this persistent foetal structure are: (1) Sudden onset. (2) Pain, general abdominal and paroxysmal in character. (3) Continued vomiting. (4) Absence of feces or flatus per rectum. (5) Rapid pulse. (6) Rigidity of abdominal muscles. The treatment is purely surgical.

5. **Appendicular Inflammation.**—Hardon concludes: (1) Defervescence of symptoms and apparent better condition of a patient do not always mean recovery, but may be the forerunner of a more dangerous condition. (2) There being no specific for the disease, no matter what treatment is used, the one who procrastinates should shoulder the responsibility for the death. (3) When a clear diagnosis is made but one treatment should be advised, that of operation as soon as possible under the conditions, or the golden opportunity may be forever gone. (4) The physician who does not explain the great dangers of delay and the small comparative danger of operation is doing his patient a serious injustice, which often leads to fatal results. (5)

Operation at the proper time usually greatly shortens convalescence, and eliminates all danger from this cause hereafter. (6) Procrastination is the greatest cause of surgical deaths, operation often being performed as a last resort, when but little hope of recovery exists.

MEDICAL NEWS.

February 18, 1905.

1. Intrapleural Complications in Pulmonary Tuberculosis, By S. G. BONNEY.
2. Observations on Twenty-eight Cases of Prostatectomy, By J. BENTLEY SQUIER.
3. The Opium Question in the Philippines, By JAMES A. LE ROY.
4. Some So Called Rheumatisms, By JAMES J. WALSH.
5. Case of Primary Malignant Tumor of the Lung, By MAURICE PACKARD.
6. Calculi in Blandin's and Submaxillary Glands. Reports of Cases, By HERMAN JARECKY.
7. Prognosis and Treatment of Chronic Nephritis, By A. C. MORGAN.

1. **Tuberculosis.**—Bonney considers the following possible intrapleural complications of tuberculosis: (1) Pleurisy with serous effusion; (2) empyema; (3) pneumothorax; (4) pneumopyothorax. The symptomatology and treatment of these complications are reviewed. The author does not claim that anything new will be found in his paper.

2. **Prostatectomy.**—Squier is an advocate of the perineal route for performing prostatectomy. Seven of his patients were operated upon by the suprapubic method (three died) and twenty-one by the perineal route (two died). The paper is devoted specially to the consideration of the after-treatment which, in the author's opinion, is of more importance than the operative methods usually reported.

3. **Opium in the Philippines.**—Le Roy gives, in condensed form, the conclusions reached by the special committee appointed to study the question of regulating the sale of opium in the Philippines. This committee was composed of Major E. C. Carter, Bishop W. P. Brent, and Dr. Jose Albert. The general policy recommended may be said to consist of government monopoly of the opium trade to be followed gradually by progressive prohibition. The methods by which these ends are to be finally attained are indicated.

4. **So Called Rheumatism.**—Walsh insists that rheumatism is a much abused term. His paper is an elaboration of the idea that much of the so called uric acid diathesis with the consequent rheumatic pains is nothing more than neuritis of various kinds due to overexertion, pressure upon nerve trunks preventing proper nutrition, the presence of irritant substances in the blood, such as alcohol, lead, and the blood disturbances of diabetes and to some inherited weakness of special sets of nerves.

6. **Calculi in Glands.**—Jarecky reports the following cases: (1) Calculus in Blandin's duct associated with one in Wharton's duct. (2) Calculus in Wharton's duct attaining a large size with-

out symptoms. (3) Small calculus with intermittent swelling of submaxillary gland. These cases teach that in every case of swelling of doubtful diagnosis beneath or around the angle of the jaw, a routine examination of the floor of the mouth should be made. A calculus would then be easily discovered, and the patient saved the annoyance of any unnecessary treatment or the worry of supposed malignancy.

MEDICAL RECORD.

February 18, 1905.

1. A Report of Eighty-four Operations on the Kidney and Ureter, By GEORGE EMERSON BREWER.
2. Standardized Gruels: an Application of the Percentage Principle to Gruel Feeding, By HENRY DWIGHT CHAPIN.
3. Traumatic Rupture of the Intestine Without Injury to the Abdominal Wall, By CARLETON P. FLINT.
4. Fresh Cold Air Treatment of Pneumonia in Infants and Children, By W. P. NORTHRUP.
5. Preventive Medicine: a Study in Education, By LAWRENCE T. ROYSTER.

1. Operations on the Kidney and Ureters.—Brewer reports eighty-four operations performed during the past ten years. Nine were performed in the first five years, while thirty-nine were performed in the past twelve months. In these eighty-four cases there were twenty-seven nephrotomies, with eight deaths; twenty-seven nephrectomies with one death; nine nephrorrhaphies with no mortality; ten decapsulations on five patients, with two deaths; five operations on the pelvic portion of the ureter without a death, and six emergency operations on traumatic cases with one death. The more important and illustrative cases are reported in detail. Among the points emphasized by the author are the following: (1) The difficulty of making a correct diagnosis in cases of suspected stone. For example, stone was suspected in thirty-six cases and found in only twenty-one. In nine of these latter cases adequate explanations for the symptoms were found. In six cases no lesions were found. The author reviews the symptomatology and physical diagnosis of stone in the kidney or ureter. (2) Decapsulation of the kidney for chronic nephritis (ten operations on five subjects) has not led to recovery in any of the author's cases. (3) All cases of severe contusions of the flank followed by hæmaturia should be immediately explored. Extensive injury to the kidney may exist with only slight local and general symptoms.

3. Rupture of the Intestines.—Flint has studied a number of cases of traumatic rupture of the intestine in which there was no injury to the abdominal wall. Two personal cases are reported in full. The author considers the symptomatology and diagnosis of these often obscure cases. The paper may be summarized thus: (1) Any injury to the abdomen may be associated with damage to the intestine or other viscera. (2) An exploratory operation is justifiable in cases with distinct rigidity. (3) An operation is absolutely indicated when there is, besides rigidity, pain, tenderness, vomiting, shock, dulness, or

other symptoms indicative of some intraabdominal disturbance. (4) Cases not operated in are lost. (5) The importance of early operation cannot be emphasized too strongly. (6) At present the death rate is about 75 to 80 per cent. (7) When a greater proportion are operated upon early, the death rate will be much lower.

4. Pneumonia in Infants and Children.—Northrup insists on the value of fresh air in the treatment of pneumonia in children and infants. He ends his paper with the same conclusions set forth in a paper in the *Medical News*, April 30, 1904, and which we reproduced in our issue of May 7, 1904.

AMERICAN MEDICINE.

February 18, 1905.

1. The History and Development of Surgery During the Past Century (*Concluded*), By FREDERIC S. DENNIS.
2. Kidney Diseases Requiring Surgical Interference, By J. M. BALDY.
3. The Extraction of Cataract: Choice of Operation Based Upon Intraocular Conditions, By S. D. RISLEY.
4. The Efficiency of Copper Foil in Destroying Typhoid and Colon Bacilli in Water, By HENRY KRAEMER.
5. Classification of Gastric Ulcers, By A. L. BENEDICT.
6. Treatment of Strangulated Hernia in the Very Old, By DAVID PEYTON.
7. Some Medical and Sanitary Experiences in a Portion of the Philippines, By BENJAMIN J. EDGER, JR.

2. Kidney Disease.—Baldy asserts that not infrequently kidney disease gives rise to misleading symptoms. Five illustrative cases are reported. In two the symptoms were gastrointestinal and nervous, while the responsible lesion was floating kidney. One case of cystic kidney with a well defined adenoma on its surface was taken for ovarian disease, one case of calculus of the kidney and ureter was mistaken for and operated upon for an ovarian and uterine growth, and a tuberculous kidney and ureter was mistaken for a pyosalpinx. All five cases came finally to operations on the kidneys with good surgical recoveries. Ordinarily the kidney lesion should not be overlooked, and in the majority of the cases reported by the author ordinary care would have made the mistakes reported impossible.

4. Disinfection by Copper Foil.—Kraemer, from a series of experiments conducted for the purpose of determining the efficiency of copper foil in destroying typhoid and colon bacilli in water, draws the following conclusions: (1) The intestinal bacteria, like colon and typhoid, are completely destroyed by placing clean copper foil in the water containing them. (2) The effects of colloidal copper and copper sulphate in the purification of drinking water are in a quantitative sense much like those of filtration, only the organisms are completely destroyed. (3) Pending the introduction of the copper treatment of water on a large scale the householder may avail himself of a method for the purification of drinking water by the use of strips of copper foil about $3\frac{1}{2}$ inches square to each quart of water, this being allowed to stand over night, or from six to eight

hours, at the ordinary temperature, and then the water drawn off or the copper foil removed.

5. **Gastric Ulcer.**—Benedict offers the following classification of gastric ulcers: (1) Peptic ulcer. (2) Erosions by chemical and thermic caustics, as in corrosive poisoning and ingestion of liquids at or above 60° C. (3) Ulcer due to organic vascular lesions, such as embolism, thrombosis, or obliterative inflammation of a vessel. (4) Catarrhal ulcers are with doubtful propriety separated from the last category, as they occur in chronically inflamed and degenerated stomachs which present minor degrees of vascular disease. (5) Varicose ulceration, analogous to the external condition of the same name, is usually due to portal obstruction and specially to that dependent upon hepatic sclerosis. (6) Toxæmic diapedesis, with a tendency to actual rhexis. (7) Vicious menstruation. (8) Gangrenous ulceration. (9) Phlegmonous ulceration of the stomach. (10) Specific ulcer. (11) Traumatic ulcerations.

ARCHIVES OF THE ROENTGEN RAY.

No. 54, 1905.

1. The Dangers of the X Rays, By FRANKLIN.
2. Phototherapy, By KING.
3. X Rays in the Treatment of the Pruriginous Dermatoses, By BELOT.
4. The Use of Hydroelectric Methods in Medical Practice, By WHITAKER.

1. **The Dangers of the X Rays.**—Franklin has made use of the following expedients to avoid the injuries which may attend x ray practice: 1. Every patient is placed in a recumbent position on the operating table, no matter where the lesion may be located, and is protected with sheets of lead foil. A separate mask is supplied for each patient, with an aperture which permits only the exposure of the lesion. This protects the patient from injury when unavoidable movements are made. 2. The exposures are of a definite potency in accordance with the author's method of radiometry. The potency is small at the beginning, and is gradually increased to the desired point. 3. With regard to the operator the added aggravation of developing solutions should be obviated by the use of rubber gloves. The physiological effects of the x rays are now so reasonably certain that untoward effects ought not to be expected in the hands of competent operators. With the general adoption of the radiometric technics described by the author the last and greatest danger of the x rays will have been eliminated.

2. **Phototherapy.**—King speaks of the electric arc and other forms of light which are used in phototherapy. The electric arc which is so useful in lupus and similar affections requires specially constructed lenses for collecting the rays, and compressors for blanching the diseased tissues, thus rendering them more susceptible to the effect of the ultraviolet rays. The intensity of the light from the Finsen lamp is such that it would burn the tissues were not the heat rays eliminated, and the chemical rays alone permit-

ted to traverse the tissues. The author has treated a great variety of diseases by means of light, especially skin diseases, including those which are malignant. His success has been sufficient to make him a believer in its efficacy. He believes that results from this mode of treatment depend partly upon the susceptibility of the tissues, in each case, and partly upon the technics of the physician. He recognizes that the present technics is still imperfect, and that there is also room for instruments of greater efficiency.

3. **X Rays in the Treatment of Pruriginous Dermatoses.**—Belot concludes as follows: 1. The skin should absorb as quickly as possible the quantity of rays necessary for a cure, provided always that this quantity is compatible with the maintenance of the integrity of the skin. If this should not be possible the maximum dosage that can be employed with safety should be administered at each session or series of sessions. 2. An interval of fifteen or twenty days should elapse between any two applications. 3. Treatment should not be resumed until the reaction has nearly or quite subsided, the relative condition of the tissues and the lesion being the guide as to the dosage to be administered. By observing the foregoing method the author has entirely avoided the production of severe accidents in all the 150 cases which he has treated by radiotherapy.

LANCET.

February 4, 1905.

1. The Infectivity and Management of Scarlet Fever, By W. T. G. PUGH.
2. Primary Heart Failure as the Immediate Cause of Death in Acute Diphtheritic Toxæmia, By C. BOLTON.
3. The Cancer Problem, By J. BEARD.
4. The Characters of Bacillus Coli as an Indicator of Excretal Contamination, By W. G. SAVAGE.
5. A Case of Typhoid Fever Presenting Some Unusual Features, By K. ANDERSON.
6. Hydatid Cyst Simulating Subphrenic Abscess, By J. P. PARKINSON.
7. The Prognostic Value of the Diazo Reaction in Enteric Fever, By J. D. ROLLESTON.
8. The Army Medical Service of the Argentine Republic, By F. HOWARD.

1. **Scarlet Fever.**—Pugh states that the infective agent in scarlet fever has been proved definitely to be present in the throat, and not infrequently in the nasal cavities also. The bacterial poison exhibits a selective action, affecting the kidneys and the superficial layers of the skin, resulting in desquamation, but in all probability the desquamating cuticle is not infective. As in diphtheria, it is impossible to ascertain definitely by clinical means when the patient has been freed from infection. It is probable, however, that the majority of patients are free from infection at the end of the minimum period of isolation usually prescribed; six weeks. Transmission of infection is especially liable to occur from those who suffer or have suffered from rhinitis, and a nasal discharge is always to be viewed with suspicion. The conditions necessary for the trans-

mission of the disease are the following: The contagium must be present in a form capable of being carried; there must be a vehicle for its conveyance; it must be actually conveyed to a mucous membrane; the germ must be still virulent when received; the dose must be sufficiently large; and the receiver must be susceptible to infection. The author favors hospital treatment, especially among the poorer classes. Among the drawbacks of segregation, however, are the following: 1. The risk, in case of a wrong diagnosis, of the patient's acquiring scarlet fever. 2. The possibility of secondary infection with some other disease. 3. The longer period of isolation. 4. Differences in virulence of cases in the same ward, with resulting detriment to the milder cases. 5. Detention because of simple rhinitis. 6. Reinfection. 7. The occurrence of "return" cases on the patient's return home.

2. **Heart Failure in Diphtheria.**—Bolton recalls Ehrlich's demonstration that diphtheria toxine consists of two bodies: (1) toxine, giving rise to the acute symptoms of poisoning; and (2) toxone, which leads to degeneration of the peripheral nerves after the acute symptoms have subsided. So that diphtheria itself may be divided into two stages: (1) An acute toxic stage, due to toxine; and (2) a convalescent stage, during which paralytic phenomena develop as a result of the action of toxone. Death in acute diphtheria toxæmia is due to primary heart failure, and to account for this extensive fatty degeneration is found in the heart and acute degeneration in the motor nucleus of the vagus. It is quite likely that the acute changes in the vagus nucleus produce irritation or paralysis of the vagus, one or the other action predominating at different times. Greatly varying irregularity of action is usually the prominent feature; and the pulse may be either abnormally slow or rapid. So that the fatal syncope of acute diphtheritic toxæmia is therefore due to the disturbed innervation of an acutely degenerate heart. At a later stage of the disease interstitial cellular inflammation combines with the above changes to produce a latent weakness of the heart which can be brought into evidence by some strain.

3. **Cancer.**—Beard holds that malignant neoplasms are trophoblastomata—*i. e.*, pathological manifestations of the asexual portion (trophoblast) of the life cycle and sometimes attempting to repeat the germ cell portion of the life cycle. They never include or repeat any portion of an embryo, thus differing from the benign neoplasms (embryomata). They are never composed of "somatic" or "embryonic" cells, though they may mimic such. They erode and destroy normal cells and tissues by a superior power of digestion; *i. e.*, they produce an enzyme which is more powerful than the enzyme of normal tissues. So that our problem now is to discover the antithesis of this pathological enzyme, one which can destroy it and so lead to degeneration of the tumor by simple atrophy.

4. **Bacillus Coli.**—Savage has studied the colon bacillus as an indicator of excretal con-

tamination. It is admitted that the presence in water of this organism means that the water has been contaminated with sewage. The essential characters of a typical bacillus coli are also agreed upon. But how far may an organism deviate from this typical standard, and yet have an equal significance as a test for excretal contamination? The author discusses the various morphological and cultural characters of the organism, bringing out the following points: *Motility.* All true colon bacilli are motile, but when isolated they may not exhibit any motility. *Liquefaction.* All liquefiers of gelatin should be excluded. *Colonies.* The types of the colonies may vary because of environment or acquired characters. Usually they are quite typical. *Indol.* An organism normal in all respects except that it does not produce indol should not be rejected until after several weeks' growth in the laboratory and again testing in fresh peptone water, it still fails to produce indol. *Acid.* Production of acid in litmus whey or milk is a constantly present character of bacillus coli communis. *Milk Coagulation.* This is due to the formation of acid and is a stable and but very little variable characteristic. *Glucose.* All true bacilli coli ferment glucose and lactose with the formation of acid and gas. Many organisms ferment glucose, but not lactose. The author looks on the fermentation of lactose as the most important differentiating character of the colon bacillus.

7. **The Diazo Reaction.**—Rolleston has investigated the prognostic value of the diazo reaction of Ehrlich in typhoid fever, and reaches the following conclusions: (1) In all but severe attacks the diazo reaction tends to disappear in the course of the second or third week, this disappearance shortly preceding, or coinciding with the commencement of lysis. (2) Its reappearance during or after the completion of lysis is a warning of recrudescence or relapse, or of complications directly due to the specific bacillus. (3) A sudden disappearance of the reaction associated with a deterioration of the general condition is of bad omen. (4) The character of the reaction is a useful check to the history.

BRITISH MEDICAL JOURNAL.

February 4, 1905.

1. Some Points in the "Differential Diagnosis" of Scarlet Fever, German Measles, and Measles, By F. J. POYNTON.
2. The Prodromal Rashes of Measles, By J. D. ROLLESTON.
3. A Case of "Fibroid Pneumonia," By A. G. AULD.
4. Note on Lobar Pneumonia Following Measles, By F. C. BOTTOMLEY.
5. The Various Phases of a Hospital's Work, By SIR C. NIXON.
6. The Relations of Medical Men to Each Other: An Introduction to a Discussion on Medical Ethics, By R. MACLAREN.
7. The Calculation of the Date of Delivery in Pregnancy, By W. J. CAIE.
8. Scrofulous Ulcers of the Legs (Bazin's Malady). Successfully Treated by High Frequency Currents, By W. F. SOMERVILLE.

9. The Corneal Reflex the Most Reliable Guide in Anæsthesia,
By H. B. GARDNER.
10. Some Points in the Treatment of Brachialgia and Sciatica,
By J. E. HARBURN.
11. Case of Precocious Puberty in a Female Cretin,
By F. W. KENDLE.

1. **Scarlet Fever, Measles, Etc.**—Poynton discusses the diagnosis of scarlet fever, rubella, and measles. In scarlet fever the difficulty is not with the severe cases, but with the mild ones. The author is not yet convinced that the disease is not to be transmitted by desquamation: as long as the real cause of scarlet fever is unknown we are not justified in experimenting upon this point. Some physicians hold that influenza may be associated with rashes very closely resembling those of scarlet fever; the same is true of dengue fever. In German measles there are two types of exanthem: the morbilliform, which is more common and characteristic, and the scarlatiniform. Both last two or three days, are apt to itch, and may be followed by a fine branny desquamation. The most constant sequela is the occurrence of a secondary sore throat about the fifth day. As regards Dukes's so called "fourth disease," an epidemic rubella usually classed under rubella, the author holds that its existence has not yet been proved, although he does not deny the possibility of its existence. He calls attention to the great value of Koplik's spots in the diagnosis of measles: they are found in ninety-seven per cent. of the cases. The measles of the poor is much more severe than that of the rich. Never crowd cases of measles together: if it is absolutely necessary, then pick out the cases of bronchopneumonia, as otherwise it will spread fast among them.

2. **Prodromal Rashes of Measles.**—Rolleston summarizes the general characteristics of the prodromal rashes of measles as follows: 1. The great majority of them appear within the first two days of the disease. Frequently they precede the catarrhal symptoms, Koplik's spots, and the characteristic stomatitis. 2. They are usually very transient, which accounts for the scanty attention they have hitherto received. The scarlatiniform eruptions, however, may last for a day and a night, and the isolated macules and papules even longer. 3. They have a strong tendency to be localized. Even the scarlatiniform rashes, which are the most widely diffused, seldom occupy the same extent as the fully developed rash of scarlet fever. 4. Their distribution is capricious, no special situation being affected. 5. Highly characteristic is the simultaneous association of several varieties of eruption. Accidental eruptions also occur in the other acute exanthemata—*e. g.*, scarlet fever—but coexist or follow, instead of preceding the specific efflorescence. 6. The prodromal eruptions of measles are strikingly free from any symptoms of cutaneous irritation. There is no pain or pruritus, nor is there any subsequent desquamation. 7. Unlike in the case of smallpox, initial rashes appear to be of no aid in prognosis in measles. 8. The occurrence of such rashes as are here de-

scribed, in an epidemic focus, should arouse suspicion, and prompt examination should be made of the buccal mucosa for Koplik's spots and the characteristic stomatitis.

3. **Fibroid Pneumonia.**—Auld reports a case of fibroid pneumonia in a child eight years of age. It is a peculiar form of pulmonary induration which succeeds acute pneumonia. Many authorities deny that fibrosis can occur in such cases unless some definite lesion of chronic inflammatory character already exists. The author suggests that in these cases the antibacterial and antitoxic bodies are insufficiently produced, or their action is disturbed. The disease is febrile, it is pneumonic, and it is fibroid, hence it is a fibroid pneumonia. It may begin very acutely or subacutely, and though always rare, is more liable to attack lungs already injured.

4. **Lobar Pneumonia in Measles.**—Bottomley has observed thirteen cases of lobar pneumonia following measles, instead of the usual bronchopneumonia. The onset was sudden without bronchitis, and the outcome was usually favorable. In all the cases the pneumonia appeared before the rash had faded. In all cases one or both lower lobes were affected. The duration of the disease in the unilateral cases was from five to eight days: in the others up to three weeks. The temperature rarely rose above 102° F. In only one case was there delayed resolution. Only one case proved fatal, that of a boy aged eighteen months, who died of convulsions two days after the crisis. During the same period only three cases of bronchopneumonia following measles were seen, all dying.

7. **Date of Delivery.**—Caie finds that if Naegeli's method of calculating the date of delivery in pregnancy be used, a nearer approximation of the date may be obtained if only five days be added instead of seven. Löwenhardt's method is more accurate than Naegeli's. It consists in counting the number of days between the last preceding menstrual period and the one preceding that and multiplying by ten. The date can then be got by tables.

8. **Bazin's Disease.**—Somerville reports a case of Bazin's disease in a girl aged eleven years: it is a manifestation of scrofula occurring mostly in young women, in which multiple ulcers, the consequence of a subcutaneous and self-infective inflammation, occur on the legs. The ulcers are difficult of cure, prone to relapse, and are likely to be mistaken for syphilis. An apparently lasting and perfect cure was brought about by the use of high frequency currents.

9. **Corneal Reflex in Anæsthesia.**—Gardner states that in producing anæsthesia the corneal reflex should never be completely abolished, for then the fourth stage of dangerous anæsthesia has been entered, and the next centres to become paralyzed will be those automatically controlling respiratory and cardiac action. So that the dosage of the anæsthetic should be just sufficient to maintain the condition of a dulled, but not absent corneal reflex.

Letters to the Editor.

THE ABDOMINAL PLASTER BANDAGE.

113 HANCOCK STREET,

BROOKLYN, January 28, 1905.

To the Editor,

Sir: I should like to add a word or two in the praise of the plaster bandage of Dr. Rose. I had the good fortune to be working in the dispensary of the Post-Graduate Hospital with Dr. Rose at the time he was first using this form of abdominal support, some five years ago, and have used it in every suitable case since that time, and with almost uniformly good results. In a paper on Mucous Colic which I read before the Brooklyn Medical Society last spring, to which Dr. Kemp added much by his most interesting remarks in the discussion, I mentioned, with due credit to Dr. Rose, this method of abdominal strapping. I use simply two or more layers of straps, each two inches in width, instead of the large pieces formerly employed, and find that it is less bulky and more agreeable to the majority of persons when employed in this manner. While I am not, perhaps, quite so optimistic as to the virtues of any form of abdominal support as the author of the method in question, I believe that where a bandage is indicated the plaster is the best form to be employed.

H. W. LINCOLN.

A DISCLAIMER OF APPARENT DISCREDIT.

65 EAST NINETIETH STREET,

NEW YORK, February 8, 1905.

To the Editor,

Sir: In your issue for December 17, 1904, in my paper entitled Clinical Observations in Scarlet Fever, with Special Reference to the Heart and Other Complications, and Therapeutic Suggestions, the case of Elaine K. is reported by me. This case was under the treatment of a physician for between two and three weeks when complications developed, and the family recognized the neglect of the attending physician, whom they believed responsible for the development of the complications, and dismissed him. Dr. Marvin Pechner then was asked to take charge of the case. Since the publication of my paper my attention has been directed by several physicians to the fact that as the article appears it reflects discredit on Dr. Pechner. Just the reverse is the case. I write to ask you to allow me to give Dr. Pechner full credit for the careful after-treatment of the case, which might have ended fatally but for his vigilance.

LOUIS FISCHER.

CHLOROFORM AND FLAME.

267 WEST ONE HUNDRED AND FOURTEENTH STREET,

NEW YORK, February 11, 1905.

To the Editor,

Sir: I read with considerable interest the editorial, Chloroform Vapor and the Flame of Illuminating Gas, as I have been the victim of the combination quite a number of times. I have called the attention of a number of my medical

friends to the fact and they expressed surprise. It affects me by producing violent paroxysms of coughing with retching. I have not noticed any other symptoms, but shall watch in the future to see if there are any. I usually get relief by taking a dose of atropine sulphate, $\frac{1}{100}$ of a grain, and going into the external air. Upon the last occasion I held off the paroxysm (I thought) by sipping hot water and holding some in my mouth. The use of chloroform by daylight, electric light, or oil light does not affect me. I have had it administered to myself in daylight and noticed that it did not affect me thus. I have not seen any of the other persons present affected as I have been. I am particularly free from any nose, throat, laryngeal, or bronchial trouble. I should like to find some preventive, as it has interfered considerably with my work.

ROBERT W. REID.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of January 25, 1905.

The President, Dr. JAMES M. ANDERS, in the Chair.

Specimens Illustrating the Need of Early Operation in Surgical Diseases of the Abdomen.

—Dr. JOHN B. ROBERTS exhibited these specimens, the first of which was one of stricture of the sigmoid flexure due to ulceration of the mucous membrane. A diagnosis of obstruction of the gastrointestinal canal in the neighborhood of the pylorus and duodenum was made. The condition of the patient was so bad that jejunostomy alone seemed possible. This was done for the purpose of feeding the patient prior to a more extensive examination of the abdomen and operative relief of the condition found. Death occurred after a few days, from exhaustion. It was then found that the obstruction was in the sigmoid flexure. Early operative relief would almost certainly have been accomplished by intestinal anastomosis.

The second specimen showed a perforating duodenal ulcer close to the pylorus. A time for operation was appointed, but before the operation was done perforation occurred. An immediate operation was then advised as a last resort, but the patient and his friends would not consent. Dr. Roberts believed there was little doubt that gastrojejunostomy done a day or two prior to the time of perforation would have saved this patient's life.

Specimen No. 3 was a perforated appendix removed from a patient who had come under Dr. Roberts's care about forty hours after an attack of abdominal pain. When he saw the man his pulse was 160 and very feeble. His hands were cold, his face was covered with a clammy sweat, and the abdomen was distended and painful. Believing that an operation would almost certainly result in death, Dr. Roberts abstained from even opening the abdomen. The autopsy showed the lower abdomen full of pus, with a gangrenous opening in the appendix big enough to admit a lead pencil.

The fourth specimen was a large gallstone, measuring an inch and a half by three quarters of an inch, from the gall bladder of a woman who had suffered for a number of years with repeated attacks of pain in the region of the gall bladder. The operation showed the stomach, gall bladder, liver, and omentum to be bound together by old and firm adhesions. The gall bladder was dragged backward until its fundus pointed toward the spinal column. It was entirely filled by this large stone. The patient had in addition a bent and adherent appendix from former attacks of inflammation. The gall bladder was opened, and the calculus removed only with great difficulty, and the appendix was excised. Drainage through the lumbar region was employed and a large drainage tube introduced through the abdominal incision. The patient did moderately well for about two days, and then died from asthenia. The case illustrated the importance of cholecystotomy in the early stage of all cases of gallstone disease.

The fifth specimen was a globular gallstone, about three quarters of an inch in diameter, removed from the junction of the hepatic, cystic, and common gall ducts. The patient had great pain and persistent jaundice, which at the time of the operation gave her a dark bronze color. Cholecystotomy was required for the extraction of the stone, and was followed by hepatic and abdominal drainage.

The specimens were shown to call attention to the importance of operating early upon gall bladder disease, inflammations of the appendix, and obscure lesions of the stomach and intestines. Dr. Roberts believed that the best results would undoubtedly be obtained in such cases by early exploratory incision, followed by operations for relief, even if such surgical methods were employed before a definite diagnosis could be made. He stated that the profession and the public should realize that this was the teaching of modern surgery.

Dr. L. J. HAMMOND agreed with Dr. Roberts upon the importance of an early operation, but said he had not yet learned how to convince patients of this importance. He attributed the delay in operation not always to the surgeon or physician, but very frequently to the patient, who went from surgeon to surgeon and from hospital to hospital with fatal results.

A New Saw Especially Adapted to Cranial Surgery.—Dr. H. C. MASLAND exhibited a saw which seemed to solve the problem of being able to open the skull with safety, celerity, and the most promising likelihood of prompt recovery with replacement of the bone flap in a vital condition. The instrument consisted of a heavy handle to overcome vibration, a circular saw attached to a short shaft connecting with the flexible shaft of an electric motor or dental engine, and a guard accurately regulating the depth of the cut. If one used either a detachable inner guard or a separate curved guard held by the left hand, all irregularities in the thickness of the bone were divided with impunity. The saw made a cut but one millimetre wide, guaranteeing a minimum waste of bone and replacement without sinking. The original opening could be enlarged by making additional bone flaps.

Dr. ROBERTS said the saw seemed to him to be a very efficient instrument. He agreed with Dr. Mas-

land that it did not need the guard, since in cutting through bone it was easy to tell by the feel when one got through. The rapidity with which the skull had been cut through showed, he thought, how much the instrument would lessen the time of operation and reduce the time the patient would be under ether.

Dr. T. H. WEISENBURG did not agree with Dr. Masland that it was not necessary to have the saw set to cut bone thicker than a quarter of an inch, since he had seen some skulls in which a deeper cut was required. Neither did he agree that it was not necessary to have a circular incision. The circular flap in his opinion was more easily replaced and was better for cosmetic reasons. He further disagreed with Dr. Masland in regard to the matter of time, and referred to Dr. Frazier's operations in the University Hospital, in which he opened the skull in two minutes and seldom exceeded three or four minutes, which he scarcely thought could be improved upon.

Dr. MASLAND referred to the instrument used by Dr. Frazier. The width of incision made by that instrument he understood to be an eighth of an inch at least, which he did not think offered as great probability of union through the line of incision as a cut one millimetre in width made by the saw which he had exhibited. This guaranteed a minimum waste of bone and replacement without sinking.

The Limitations and Possibilities of Electricity in the Treatment of Diseases of Women.—Dr.

BARTON COOKE HIRST presented this paper, which was read by the secretary. Dr. Hirst had found of late years an advantage in the use of galvanism and faradism in a limited number of conditions among the diseases of women. As a hæmostatic agent in uncomplicated small fibroid tumors, with no other symptoms than metrorrhagia, he regarded it as one of the most efficient possessed by the medical profession. He found it peculiarly useful in the treatment of amenorrhœa and sterility, the result of imperfect development or atrophy of the uterus. Two illustrative cases were reported in which normal menstruation was restored and conception occurred after the use of this treatment. In one woman there had been amenorrhœa for a year. In the other the menstruation had been reduced to a scanty discharge lasting less than a day as a result of lactation atrophy. The third indication was to restore tone to a parietic sphincter ani muscle after its restoration by surgical means, in cases in which repeated attempts had been made to restore the muscle, with failure, and in which there had been no contractile power exercised for a number of years. A fourth indication for the use of electric currents was found in certain types of dysmenorrhœa associated with an ill developed uterus. Local treatment, however, he believed, was very rarely practicable in such cases.

This limited number of conditions, Dr. Hirst said, comprised all in which it could be hoped to accomplish much by electricity. He disclaimed any intention of discussing the newer developments of electric treatment, such as the use of the x rays, the ultra violet rays, and high frequency currents.

The Toxic Changes in the Brain and Spinal Cord Due to Carcinoma.—Dr. T. H. WEISENBURG said that the influence of carcinoma of parts other than the brain and spinal cord upon the nervous

system was becoming better recognized. Metastasis might occur in the brain, either in the form of a tumor or that of an infiltration of cancer cells with the pia of the cortex or of the base of the brain. A case was recorded where basal syphilis had been diagnosed, but at the autopsy a metastatic cancer was found. This taught that whenever cerebral symptoms occurred in the course of carcinoma, no matter in what form they appeared, metastasis should be thought of in the diagnosis. In the spinal cord, metastasis generally involved the vertebrae, causing a pressure myelitis.

Cases were recorded where during the course of the disease such symptoms as mental apathy, dementia, hemiplegia, and aphasia occurred. These were undoubtedly of toxic origin. Instances had been recorded by the writer of bulbar symptoms and dementia. In these cases a careful microscopical examination of the brain and spinal cord demonstrated alterations in the nerve cells of the medulla oblongata and pons. In another case, where there were no cerebral symptoms, changes were also found in the nerve cells of the cortex. Such findings had not previously been recorded.

Book Notices.

Atlas and Epitome of Operative Ophthalmology.

By Prof. Dr. O. HAAB, of Zurich. Authorized Translation from the German with Editorial Notes and Additions. Edited by G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. With 30 Colored Lithographic Plates and 154 Text Cuts. Philadelphia: W. B. Saunders & Co., 1905. Pp. 377.

It is difficult for a surgeon accustomed for years to the sight of patients undergoing operation to estimate how much or how valuable assistance will be given one of less experience by lifelike representations of single steps. Each of these pictures presents the *tout ensemble* of an operation at a particular stage, and it would seem as though a study of them would be of great service to the inexperienced surgeon. Certainly they cannot confuse one, unless it may happen that they conflict with preconceived erroneous ideas, when they would furnish valuable correction to those ideas.

The work is very brief to cover so large a subject. Over 60 pages are devoted to general considerations, the care of hospital wards and operating rooms, anesthesia, antiseptics, dressings, and instruments, and about 300 pages to operations. In places the work resembles an autobiography. The account of the author's early struggles to engraft antiseptics upon ophthalmic surgery arouses our enthusiasm, even though we feel that he is perhaps lagging a little behind now when he states that he is still using for preliminary cleansing of the conjunctival sac a bichloride solution of 1 to 5,000 and in suspicious cases 1 to 1,000, and that he keeps his instruments in a three per cent. solution of carbolic acid and returns them to the solution during the operation. This was the almost universal custom in general surgery twenty years ago, but since then both the general and the special surgeon have learned that

sepsis may be guarded against equally well by less irritating means. But Professor Haab is ever practical and his methods are sound and good, even though we may make gentle criticisms. His descriptions of operative technics are excellent and the severest criticism that can be made of them is that the limitations of space cause many of them to be too brief to be readily and thoroughly comprehended.

Miscellany.

Dr. Osler's Address to the Canadian Club.—Dr. William Osler, according to the *Canadian Practitioner*, for January, 1905, addressed the Canadian Club of Toronto at their luncheon on December 29th. The reception to Professor Osler by the four hundred members who were present was most enthusiastic.

Professor Osler, who was introduced as one who had become the first physician within the British Empire, was received with loud cheers. He addressed his hearers as fellow countrymen, and said it always gave him great satisfaction to return to his old town, where he had received his early education, and where he had so many friends. Taking up the serious part of his subject, Dr. Osler said, as Canadians they had three relations to consider—the country to the south, the motherland, and their own Canada. Fortunately, or unfortunately, the nation to the south was one of the most powerful on earth. A Briton should be proud of it, for no other nation, ancient or modern, ever had such a child.

A very serious and important influence was that of gravitation, the attraction of the larger body upon the smaller, which caused an incessant dribbling over the border of their young men. A million Canadians were in the States, many in prominent positions in finance, and in the professions, particularly in medicine and theology. There they had been successful by reason of two special qualities, industry and thoroughness, the only qualities worth anything in the make-up of a young man. If it were only in the matter of draining away the young men, it would make no difference, as plenty were left to run the country. But a more serious loss was that of the young women. He had a patient once, a neurasthenic young man of thirty or so, whose heart was not settled. Dr. Osler asked him why he did not get married. "Because all the girls I wanted have gone to the States," was the reply. Of 651 women engaged in nursing in six of the great eastern hospitals, 196 were Canadians, an enormous proportion, almost one third.

"Something should be done," said Dr. Osler, to stop the loss of the mothers of the country. He suggested two ways. Introduce a tax on bachelors. At twenty-five or twenty-six, the man who had not a family to support ought to be helping the other fellow, and such a tax would be a reasonable and rational political measure. The other way was an export tax of \$100 on every girl who left Canada.

"She's worth more," the doctor remarked, while the club hilariously assented. She was

worth \$1,000 to the country, and it would pay to give her family that to keep her at home.

In the States, those who went over were taken in and well treated. Never was it asked where did a man come from, but what could he do? He was impressed with the extraordinary kindness of the feeling there. They were not treated as foreigners, and after twenty years he could say that not once had the question come up.

They might take a lesson from that, for he had noticed a carping spirit in Canada against Americans. It ill became them to speak in any way derogatory of those among whom a million of their own lived as brethren. He would urge all Canadians, when they thought of the war of the revolution, to think how much that war had done for the mother country and for Canada, when it brought over the picked blood of the United Empire Loyalists. When they thought of the Fenian raid they should think of the silent raid going on ever since from Canada, and keep their mouths as with a bridle. When they thought of the Alabama claims, they should think of the thousands and thousands of dollars brought over every summer by Americans to Canada. When they thought of the Alaskan boundary, they should think of the trek to the south of their own citizens. He hoped they would live closely and comfortably, in harmony.

British relationship was a very delicate problem. A great many miles separated them, and the tie was, after all, only a tie of sentiment. He said only, but there was no stronger tie. Sentiment ruled them in every relation of life. It sent their young men to battle in South Africa, and what stronger was needed? Great care was needed by the politicians of the old country and of this to promote a proper and organic unity. Only three courses lay before them, annexation, independence, or some measure of imperial federation. Great nonsense had been talked about the difficulties connected with federation, but he could see no remarkable difficulties in contrast with the advantages. The chief difficulty was that Britain beyond the seas wanted everything and would give nothing to the mother land in return. They had to take a share in the responsibilities and could not ask the mother country to be constantly providing for her children.

What were the ideals they should cherish for their own country? He was glad to speak to them as men. Men under forty cherish ideals. After forty they were not so easy to cherish. It was sane and reasonable to think of themselves as a strong race, and they were satisfactorily situated for the development of one strong in body. Rarely had a strong nation appeared elsewhere than in the north. The cold and rigor of the winter was much to their advantage, and would produce a stronger type than any other on the continent. In their generation, by far the most virile nation would dwell north of the Great Lakes. The amalgamation and commingling of the heterogeneous elements of English, Irish, and Scotch was the best mixture the world had seen. He would get it arranged by Act of Parliament that every fourth Upper Canadian should marry

a French Canadian girl, and the future of the race would be assured.

They wanted a strong race mentally. It was easy to grow corn and potatoes, but they could not grow brains.

"Brains come hard and come high." But they could foster elementary education by well equipped schools and teachers. No problem was more important than that of getting good masters, for it was not good for the boys to be brought up under women. They must pay better salaries, and make their teachers feel they were doing useful and honorable work for their country, with a prospect of a provision for old age and family. The university problem was rapidly approaching solution, and the rapidity with which the provincial university was growing made him hope it would get to the breast of the province and not be bottle fed as it has been so long.

Canadian literature, as represented in the magazines and journals, was advancing, and in one line particularly, not much thought of by business men, Canada reached a high level. Poetry was a very important matter, and they should not look disparagingly upon it. Where there is no vision the people perish, had been said of old, and the vision came not so much to the people as by the poets. He would advise them when they had a young fellow scribbling verses in the office to raise his salary.

The most important thing was to grow a strong race morally, and it was the hardest of all. He did not think Canada immoral. Homicides were less frequent, and drunkenness not so prevalent, though some of them with Scotch fathers might have a little tissue thirst. Illegitimacy was rare, and divorce rarer perhaps than they would like it to be. Morally the country had made a good start, but there was far too much evil speaking, lying, and slandering in connection with political life. It was entirely superfluous and unnecessary. Young men in this atmosphere of slander and hostility towards opponents suffered great harm. He regarded it as an infinitely worse vice than drunkenness. The only way to meet it was simple indeed.

They should deal with political opponents in an everyday Christian spirit, or if not in the character of St. Paul's noble Christian, at least in that of Aristotle's true gentleman. The young were taught to distrust by this mud slinging, and that very easily passed from the sphere of politics to distrust of one's neighbor, and to a general lack of human sympathy and brotherhood, which they should have to one another as Canadians.

Heredity; Its Influence for Good or Evil.—Barr, in the *Alienist and Neurologist*, for November, 1904, refers to the common assertion that heredity is law, which law is verified by accumulated evidence gathered in every department of science that treats of organic life. The law of physiological heredity is based upon the tendency observed in every organism to repeat itself in its descendants. In the higher animals this includes the transmission of psychic qualities, which depend upon physiological conditions. Haeckel observes that heredity is a kind of growth, like the

spontaneous division of a unicellular plant of the simplest organization.

There are many variations in heredity, but the author wishes to consider only three broad divisions, the direct, the reversional, and the collateral. In direct heredity the offspring may receive physical and psychical characteristics from both parents in equal degree, or there may be resemblance to one more than to the other. Again there may be a difference according to sex, the son receiving paternal, the daughter maternal characteristics, or the reverse. In reversional heredity, or atavism, we have a form which attests the certainty of hereditary transmission. The offspring may resemble neither parent, but may develop physical traits or other qualities which are traceable to a grandparent or some more remote progenitor.

In the reversion to type which occurs in this phase of heredity, the prepotency of type frequently asserts itself, either in hastening degeneracy or in an effort of nature to redeem the race. Thus in a family contaminated with various defects on account of repeated neurotic intermarriages, the admixture of uncontaminated stock resulted in normal children, though the taint reappeared in later generations.

In indirect or collateral heredity we have the appearance of qualities which were not prominent in immediate, but in collateral progenitors, uncles or aunts more or less remote. This is an evidence only of atavism traceable to neuroses in a common ancestor, which are tenacious and are revealed in many descendants rather than in one. In "use heredity" we have a similar persistence, the repetition of habit or occupation becoming a feature of the family or nation and being transmitted. In the same way certain powers or even organs are lost because the animal or the individual is no longer dependent upon them.

The law of cinetogenesis, or of use and disuse, as stated in 1809 by Lamarck, is that "the development of organs and their force or power of action are in direct relation to the employment of these organs." In view of the mystery of life and the responsibility of race continuity the author expresses the conviction that no man or woman with a pronounced heredity of ill, physical or psychical, has a right to risk its transmission. The surest rescue of a race from imbecile childishness is a prolongation of normal childhood, full of healthful exercise and free from mental precocity, which delays the period of puberty. If marriage is deferred until maturity in full vigor is attained, the period of reproduction will be proportionally advanced, and the quality of the race will be preserved without diminution of numbers.

To Aid the Metropolitan Hospital and Dispensary.—To increase the fund being raised by the members of the Ladies' Auxiliary for the Metropolitan Hospital and Dispensary, a point euchre and dance is to be given at the St. Regis on Tuesday evening, February 28th. Dancing is to begin at ten o'clock, the card games preceding to

start at half past eight o'clock. Tickets may be obtained either from the president, Mrs. Birnbohm, of Buckingham Court, Ninety-ninth Street and Riverside Drive, or Mrs. J. Alexander Brown, of 1556 Broadway.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from February 11 to February 17, 1905:

Smallpox—United States.

Place.	Date.	Cases.	Deaths.
California—San Francisco.	Jan. 21-28.	1	
Illinois—Chicago.	Feb. 4-11.	26	2
Illinois—Galesburg.	Feb. 4-11.	1	
Kentucky—Louisville.	Feb. 2-9.	2	
Louisiana—New Orleans.	Feb. 4-11.	8	
Michigan—Detroit.	Feb. 4-11.	4	Imported.
Missouri—St. Louis.	Feb. 4-11.	41	2
New York—New York.	Feb. 4-11.	3	1
Ohio—Dayton.	Feb. 4-11.	1	
Pennsylvania—Allentown.	Feb. 4-11.	1	Imported from Portage.
Pennsylvania—Lancaster.	Jan. 28-Feb. 4.	1	
Tennessee—Memphis.	Feb. 4-11.	3	
Tennessee—Nashville.	Feb. 4-11.	2	

Smallpox—Foreign.

Argentina—Buenos Aires.	Nov. 1-30.	15	18
China—Shanghai.	Dec. 24-Jan. 7.	15 cases foreigners, 130 deaths natives.	
Ecuador—Guayaquil.	Jan. 18-25.	17	4
France—Paris.	Jan. 21-28.	17	
Germany—Bremen.	Jan. 14-21.	4	
Great Britain—Hull.	Jan. 21-28.	7	
Great Britain—Leeds.	Jan. 28-Feb. 4.	20	1
Gt. Britain—Newcastle-on-Tyne.	Jan. 1-28.	7	1
Great Britain—South Shields.	Jan. 21-28.	2	
India—Bombay.	Jan. 10-17.	1	62
India—Calcutta.	Jan. 7-14.	1	2
India—Karachi.	Jan. 15-22.	1	
India—Madras.	Dec. 31-Jan. 13.	1	
Italy—Lecce Province.	Jan. 12-26.	95	4
Italy—Palermo.	Jan. 1-28.	31	5
Norway—Christiania.	Jan. 21-28.	2	
Russia—Warsaw.	Dec. 3-10.	2	4
Turkey—Constantinople.	Jan. 22-29.	1	9

Yellow Fever.

Ecuador—Guayaquil.	Jan. 18-25.	3	
Mexico—Coahuacalcos.	Jan. 28-Feb. 4.	1	
Mexico—Juichitan.	Jan. 29-Feb. 4.	2	
Panama—Colon.	Jan. 23-29.	1	1
Panama—Panama.	Jan. 1-28.	13	4

Cholera.

India—Calcutta.	Jan. 7-14.	106	
Russia—Don territory.	Dec. 31.	2	
Russia—Government of Astrakhan.	Nov. 14-21.	3	
Russia—Government of Astrakhan.	Dec. 21-27.	1	
Russia—Government of Baku.	Nov. 14-21.	168	5
Russia—Government of Baku.	Dec. 14-21.	273	
Russia—Government of Erivan.	Nov. 14-21.	324	279
Russia—Government of Samara.	Dec. 21-27.	1	
Russia—Government of Saratow.	Nov. 14-21.	11	
Russia—Government of Saratow.	Dec. 21-27.	8	3
Russia—Trans-Caspian Territory.	Nov. 14-21.	37	
Russia—Trans-Caspian Territory.	Dec. 21-24.	3	
Russia—Volga Province.	Nov. 14-21.	69	
Turkey in Asia—Van.	Dec. 31.	27	12

Plague—Foreign.

Brazil—Para.	Jan. 1-9.	1	
Egypt—Suez.	Jan. 7-14.	5	4
Egypt—Tukh district.	Jan. 7-14.	4	3
India—Bombay.	Jan. 10-17.	1	208
India—Calcutta.	Jan. 7-14.	33	
India—Karachi.	Jan. 8-15.	61	54
Mauritius.	Nov. 4-Dec. 1.	97	60
Russia—Ural Territory.	Dec. 26-28.	34	35
Straits Settlements—Singapore.	Dec. 24-31.	1	5

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 15, 1905:

EARLE, B. H., Assistant Surgeon. Granted leave of absence for seven days. February 13, 1905.

FOWLER, J. B., Acting Assistant Surgeon. Granted leave of absence for thirty days from March 7th.

FRICKS, L. D., Passed Assistant Surgeon. To report to Surgeon G. W. Stoner, Immigration Depot, New York, N. Y., for duty. February 14, 1905.

GASSAWAY, J. M., Surgeon. Bureau letter of February 3, 1905, granting Surgeon Gassaway leave of absence for ten days from February 9th, amended to read ten days from February 14th.

McKAY, MALCOLM, Pharmacist. Upon being relieved at Wilmington, N. C., by Pharmacist S. W. Richardson, to proceed to Boston, Mass., and report to the Medical Officer in Command for duty and assignment to quarters. February 9, 1905.

RICHARDSON, S. W., Pharmacist. Relieved from duty at Boston, Mass., and directed to proceed to Wilmington, N. C., and report to the Medical Officer in Command for duty and assignment to quarters, relieving Pharmacist Malcolm McKay. February 9, 1905.

WERTENBAKER, C. P., Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Havana, Cuba, for duty in the office of the United States Consul. February 6, 1905. Granted leave of absence for twenty days from January 22nd.

WICKES, H. W., Passed Assistant Surgeon. Leave of absence for one day granted Passed Assistant Surgeon Wickes by Bureau telegram of January 28th, revoked.

Board Convened.

Board convened to meet at Fortress Monroe, Va., for the purpose of making an investigation as to the cause of the damage to the launch *Spray*. Detail for the board—Surgeon J. B. STONER, chairman. Acting Assistant Surgeon H. W. KEATLEY, recorder. February 9, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 18, 1905:

KENDALL, WILLIAM P., Major and Surgeon. Granted leave of absence for twenty-two days, to take effect February 5, 1905; on expiration of leave, ordered to proceed to Manila, P. I.

STEPHENSON, WILLIAM, Major and Surgeon. Assumed temporary charge of the Chief Surgeon's Office, San Francisco, Cal.

TORNEY, GEORGE H., Lieutenant Colonel and Deputy Surgeon General. Left United States Army General Hospital, Presidio of San Francisco, Cal., on February 4th, on thirty days' leave of absence.

WELLS, GEORGE H., Major and Surgeon. Relieved from duty in the Division of the Philippines and ordered to proceed to San Francisco, Cal., and report for orders.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 18, 1905:

BACKUS, J. W., Assistant Surgeon. Ordered to the Naval Hospital, Portsmouth, N. H., and to additional duty on the *Southerly*.

BAGG, C. P., Surgeon. Detached from the Naval Hospital, Mare Island, Cal., and ordered to the Naval Station, Guam, L. I., sailing from San Francisco, Cal., on February 25, 1905.

BOGAN, F. M., Passed Assistant Surgeon. Detached from the *Decatur* and ordered to the Naval Hospital, Yokohama, Japan, for treatment.

DUNN, H. A., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., on February 20, 1905, and granted leave for six weeks.

MUNSON, F. M., Surgeon. Detached from the Naval Station, Olongapo, P. I., and ordered to the Naval Station, Guam, L. I.

WILLIAMS, H. B., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., on February 14, 1905, and ordered to the *West Virginia*.

Births, Marriages and Deaths.

Married.

FAHNSTOCK—PERRY.—In New York, on Wednesday, February 15th, Dr. Ernest Fahnstock and Mrs. G. de Grove Perry.

HOLLAND—DE MITKIEWITZ.—In Cambridge, Maryland, on Wednesday, February 15th, Dr. Arthur Lawrence Holland and Countess de Mitkiewitz.

JOHNSON—SATTERLEE.—In New York, on Tuesday, February 14th, Mr. Tracy A. Johnson and Miss Laura Satterlee, daughter of Dr. and Mrs. F. Le Roy Satterlee.

Died.

ANDERSON.—In Traverse City, Michigan, on Wednesday, February 8th, Dr. Humphrey B. Anderson, in the forty-seventh year of his age.

ARNOLD.—In Omaha, Nebraska, on Friday, February 3rd, Dr. Edward Dudley Arnold, in the fifty-eighth year of his age.

BULLITT.—In San Antonio, Texas, on Thursday, February 12th, Dr. Cuthbert Bullitt, in the eighty-fourth year of his age.

BUTLER.—In Sparta, Virginia, on Thursday, February 9th, Dr. John D. Butler, in the eighty-sixth year of his age.

CARROLL.—In Niobe, N. Y., on Wednesday, February 8th, Dr. Ava M. Carroll, in the forty-eighth year of her age.

COWAN.—In Greensburg, Pennsylvania, on Sunday, February 12th, Dr. Frank Cowan, in the sixty-first year of his age.

DE LANNY.—In Telluride, Colorado, on Monday, February 6th, Dr. C. W. de Lanny, in the fifty-first year of his age.

DELKER.—In Philadelphia, on Tuesday, February 14th, Dr. Frederick Delker.

DE NEVERS.—In Chicago, Illinois, on Thursday, February 9th, Mrs. Ethel May de Nevers, wife of Dr. Francis de Nevers.

FORD.—In Detroit, Michigan, on Wednesday, February 8th, Mrs. M. J. Ford, wife of Dr. Charles E. Ford.

GITTINGS.—In Philadelphia, on Thursday, February 9th, Dr. J. B. Howard Gittings, in the sixty-eighth year of his age.

GREENFIELD.—In Greenville, Mississippi, on Wednesday, February 8th, Dr. Cyrus Greenfield, in the seventy-sixth year of his age.

HAGADORN.—In Bay City, Michigan, on Tuesday, February 7th, Dr. A. F. Hagadorn, in the fifty-fourth year of his age.

HEATH.—In Scranton, Pennsylvania, on Tuesday, February 7th, Dr. William H. Heath, in the eighty-sixth year of his age.

JOHNSON.—In Sag Harbor, Long Island, on Monday, February 13th, Dr. Peter Roosevelt Johnson, in the seventy-eighth year of his age.

LESLIE.—In Cincinnati, Ohio, on Wednesday, February 8th, Dr. James Leslie.

MILAN.—In Paducah, Kentucky, on Thursday, February 9th, Dr. M. G. Milan, in the seventy-fourth year of his age.

MITCHELL.—In Mangoluck, Virginia, on Wednesday, February 1st, Dr. William Alpheus Mitchell, in the sixty-first year of his age.

PADULA.—In Quincy, Massachusetts, on Thursday, February 9th, Dr. Thomas F. Padula, in the forty-sixth year of his age.

PRESTON.—In Dansville, N. Y., on Saturday, February 4th, Dr. Wooster Beach Preston.

RAMSAY.—In Kensington, Pennsylvania, on Monday, February 13th, Dr. Alexander Ramsay, in the fifty-fifth year of his age.

SCHMIDT.—In St. Louis, Missouri, on Thursday, February 9th, Dr. John Schmidt, in the thirtieth year of his age.

SHAPLEIGH.—In Shanghai, China, on Friday, February 3rd, Dr. Alfred L. Shapleigh, in the thirty-sixth year of his age.

SHERWOOD.—In Washington, D. C., on Wednesday, February 8th, Dr. Thomas Humphrey Sherwood, in the seventy-second year of his age.

TUXBURY.—In Denver, Colorado, on Sunday, February 5th, Dr. Fred P. Tuxbury, in the thirty-eighth year of his age.

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WHOLE NO. 1370.

Original Communications.

THE SURGICAL TREATMENT OF HÆMORRHOIDS.*

By CHARLES MCBURNEY, M. D.,

NEW YORK.

During the last decade the actual or possible application of surgery to every organ and region of the human body has been usually most carefully studied, and, as a rule, scientific methods of a high degree of perfection have in each instance been developed, the completeness of the operative procedures, and the careful attention to detail, both during the operations and throughout the after-treatment, leaving little or nothing to be desired. In the case of hæmorrhoids it has seemed to me that surgeons have failed to devote the same careful attention that they have given to other subjects; that they have been willing to continue to make use of crude and often imperfect methods, and that they have not given operations on hæmorrhoids the full benefit of their knowledge of asepsis, and of detail in after-treatment. It is a fact certainly that a large number of individuals are still subjected to operations too crude and too severe in character, that the convalescence thereafter is often painful and too prolonged, that the wounds often suppurate, and that disabilities, the result of operation, are not infrequent. In these defects in the surgical treatment of hæmorrhoids is to be found the chief reason why an unduly large number of persons who suffer from hæmorrhoids, either avoid operation entirely, or apply to the quack, who offers a treatment which, while far from perfect, is comparatively free from pain and discomfort and brief in duration. A recent perusal, which, I must confess, was by no means a complete one, of literature referring to hæmorrhoids, only confirms my belief that the surgical treatment of these tumors, as frequently practised, can be much improved. In this connection I will quote from the article on hæmorrhoids in a very recent

(1904) and an important publication, which covers the whole range of general surgery:

"A patient who is to be operated on for hæmorrhoids should take castor oil for two days in order to thoroughly empty the bowels. He is then placed under a local or general anæsthetic and put in the lithotomy position, while the parts are thoroughly cleaned. The sphincter is gradually dilated until the hæmorrhoids are exposed. The individual nodules are seized with a special forceps so applied that the pinch of the mucous membrane shall extend longitudinally and not transversely. As a further precaution against stenosis there should be considerable mucous membrane left between the portions to be excised. A second clamp is applied to the pedicle of the hæmorrhoid, and the hæmorrhoid is divided between these two clamps by means of the point of the cautery. If the hæmorrhoid is a large one it may be cut off with scissors in order to save time, and its stem cauterized. If the cautery is not too hot, and it is thoroughly applied, there will be no bleeding upon the removal of the second clamp. If an artery spurts it should be ligated. Dilated veins that are not large enough to be removed in this manner may be punctured with the point of the cautery. When all the hæmorrhoids have been treated in one of these ways, a thin tube wrapped with iodoform gauze is passed through the sphincter to allow the escape of gas; the anus is smeared with vaseline and a dressing of gauze and cotton applied and held in position by a T bandage. Some patients have no pain after such an operation, while others suffer so much as to require morphine injections. It is unnecessary to give opium in order to delay defæcation. On the third or fourth day castor oil and an enema should be given to facilitate defæcation, but even then the process is painful. Some surgeons prefer to give a laxative on the day after operation. Defæcation is then less painful, but may be followed by some rise in temperature. Either during defæcation, or immediately afterward, the patient should sit in a warm bath for the sake of his comfort and clean-

* Read at a meeting of the Practitioners' Society of New York.

liness. After the fourth day the bowels should act daily. The patient may get up in a week, though a perfect cure requires from three to six weeks. If the operation has been properly carried out there is no necessity to pass rectal bougies in order to prevent cicatricial contraction. For the purpose of cutting off the hæmorrhoid one may use the tip of the galvanocautery instead of the thermocautery."

The operation as thus described certainly seems rather formidable and unattractive. I might make numerous quotations from other authorities in support of my statement that operations on hæmorrhoids, as frequently practised, are open to improvement. Hæmorrhoids are vascular tumors, composed chiefly of enlarged veins with a few arteries. When entirely or largely external these tumors contain also a variable amount of new tissue and inflammatory exudate. When entirely internal the elements last referred to are nearly or completely absent. It is not my intention in this brief communication to discuss at length the causes of the production of these tumors. A congenital tendency to venous enlargement such as is seen in the legs, thighs, and scrotum, exists in many individuals in the hæmorrhoidal veins, and in addition we recognize the causative influence of a constantly loaded rectum, very continuous maintenance of the sitting posture, a sluggish venous circulation which accompanies overeating and drinking, and imperfect liver action, and absence of a normal amount of exercise to promote normal circulation. More immediate interferences with the return of venous blood from the lower rectum and anus are carcinomata and other tumors, malpositions of the uterus, pregnancy, enlargement of the prostate, and an irritable contracted sphincter muscle, or an enfeebled flabby condition of the levator ani muscles. Many of these causes are removable, and, at least, efforts should be made to remove the cause before resorting to operation for the cures of hæmorrhoids.

Very painful external hæmorrhoids are frequently produced, or suddenly aggravated by an irritable, firmly contracted sphincter muscle, which effectually prevents the return of blood from the anus. In these cases dilatation of the sphincter will often effect a satisfactory cure without other operation. By dilatation of the sphincter I mean such a stretching of the muscle, properly accomplished while the patient is under the influence of an anæsthetic, that the unnatural contractions of the muscle are entirely overcome. The result of this operation in similar cases is that the constriction of the vessels being

removed, the tumors below the constriction at once empty themselves of blood, and become so rapidly reduced in size that often, on the following day, little or no evidence of hæmorrhoids will be found.

Dilatation of the sphincter is an operation deserving of some care and delicacy of manipulation. The fingers are by far the best instruments. Mechanical appliances are much more liable to tear mucous membrane and do real injury to the muscle. The rectum having been emptied by an enema, and the parts having been thoroughly cleansed, the patient should be anæsthetized and placed on the side with the knees drawn up. One forefinger, well lubricated with some sterile material, is gently passed through the sphincter. Then two fingers are passed together, and then three fingers. Relaxation of the sphincter will be already noted.

The two forefingers are then to be introduced back to back and flexed so as to form two hooks in the concavity of which the muscle rests. By traction gently applied first from side to side, and then anteroposteriorly, the muscle is made to yield without rupturing the mucous membrane. After a few moments the muscle becomes quite unresisting, the anus is widely dilated and no injury has been done. If too great violence is used, or if the dilatation is made too rapidly, numerous fissures will be produced which may or may not heal. To obtain the full benefit of this operation the anus and other parts involved must be firmly supported and put at rest by means of a large conical pad made of loose gauze, the apex of the cone supporting the anus and the base resting upon a good wide firmly applied T bandage. The bandage and pad need not be worn more than twenty-four hours, and on the second day a mild laxative should be given. The cases to which this operation is applicable are those in which a firmly contracted sphincter muscle produces an acutely distended condition of the hæmorrhoidal tissue which is situated below the sphincter. Such cases may be complicated by more or less extensive internal hæmorrhoids. Even then stretching the sphincter will give immediate relief to the acute symptoms.

The internal hæmorrhoids will, of course, remain, and will require for their cure an operation of a different character. Another acute condition which occurs in connection with external hæmorrhoids is produced by the rupture of a vein within the hæmorrhoid. This rupture may occur as a result of an effort at defæcation or there may be no assignable cause. The extravasated blood distends the hæmorrhoid, œdema rapidly

occurs, the return of venous blood is prevented and severe pain is felt. Here, also, the sphincter responds to the irritation, contracts forcibly and still further impairs the circulation. In these cases the extravasated blood usually rapidly coagulates, forming a clearly defined, round, subcutaneous tumor, the dark color of which is often discernible through its thin covering. Relief can be easily given by removing the coagulum. This is readily and painlessly done, after injecting a few drops of a two per cent. cocaine solution, by making a small incision directly down to the coagulum, and turning it out of its bed. Firm pressure should be maintained for a few minutes until all oozing has ceased. The small wound will heal rapidly if especial care in regard to cleanliness is taken for a few days. The very large majority of hæmorrhoids are of a more or less chronic character before the attention of either patient or physician has been called to them.

Various well known symptoms arise, such as pain, hæmorrhage, etc., and relief is sought. It is noticeable, however, that many individuals with hæmorrhoids have no symptoms of the disease, and suffer no annoyance whatever. Such cases require no operative interference unless the condition is such that increasing size, and the development of the usual symptoms, are clearly to be apprehended. The fact that distinct hæmorrhoids and a very marked superabundance of mucous membrane often cause no symptoms, clearly suggests that it is not necessary to do extensive operations in order to produce entirely satisfactory cures.

It having been decided that palliative measures are not sufficient for a given case, and that a radical cure is clearly desirable, the question in regard to the methods to be employed is to be answered.

The methods to which I wish especially to refer are, first, the method by injection; second, operation with clamp and cautery, or with cautery alone; third, the operation known as Whitehead's; fourth, the operation which I shall describe in detail, and which seems to me to possess decided advantages over the others. It is sufficient to say of the injection method that it is not constantly radical, and that it not infrequently results in suppuration or sloughing. I think it rests with those who advocate the use of the cautery in operating upon hæmorrhoids to show that this method has distinct advantages which outweigh its disadvantages. In operating upon other parts of the body surgeons do not usually select the cautery and the eschar which it produces, as preferable to the knife, suture, and

primary union. My own belief is that the problem of the removal of hæmorrhoidal tumors differs in no essential particular from the problem of the removal of superficial tumors elsewhere, and that, when proper care is exercised, perfectly clean aseptic healing can be secured when operating through mucous membrane. So far as the vascular nature of hæmorrhoidal tumors is concerned, the cautery has no advantages, as is shown by the general agreement among modern surgeons that such tumors as nævoid growths of great vascularity are usually best treated by complete extirpation with the knife. Occasionally, for the treatment of one or two single dilated hæmorrhoidal veins, or very small vascular nodules, or in cases where hæmorrhoids are already in a sloughing condition, the cautery is convenient. The operation known as Whitehead's consists in a resection throughout the entire circumference of the anus of hæmorrhoids, mucous membrane, and submucous tissue. The dissection of the lower end of the rectum is carried as high as the hæmorrhoids extend and the tissue is there divided circularly throughout the circumference of the intestine. The edge of the divided mucous membrane above, and the mucocutaneous edge below are then drawn together and sutured. The suture line is necessarily imperfect, and an annular cicatrix is produced just at or above the anus. This operation is usually applied to such cases as present numerous hæmorrhoids, and it is claimed that, by it, the whole "pile bearing area" is removed. The operation seems to be based upon the theory that all vascular tissue and all mucocutaneous folds are abnormal and that cure can only be accomplished by the complete extirpation of these tissues. This theory is not supported by observation, for even in those healthy individuals who have no symptoms of hæmorrhoids, vascular tissue and mucocutaneous folds are often abundant. In cases where at a superficial examination the anus seems to be filled and surrounded by hæmorrhoids, a more careful examination will result in the identification of two or three hæmorrhoids which really give rise to the symptoms and the removal of which, by a much less severe operation, will produce an entirely satisfactory condition. In the occasional case where the removal of two, or at most three hæmorrhoids does not seem to be sufficient, it is better, nevertheless, to be satisfied, for the time being, with an operation of that extent. After complete healing has occurred one will be surprised to find often that little or nothing more remains to be done. If, however, one or more distinct hæmorrhoids require treatment, they

may again be operated upon in a simple manner. Whitehead's operation has far too frequently resulted in prolonged ulceration, and in most intractable stricture, to be recommended under any circumstances.

The operation to which I especially wish to call attention as the one which I much prefer to all others, originated in the operation known as Allingham's. I have performed it in a large number of cases for many years, making an occasional improvement from time to time, until now I feel justified in recommending it to others. The success of this operation depends, as is the case in most surgical work, upon a careful attention to detail, the description of which will, I hope, not prove too wearisome.

The careful examination of the patient before the time set for operation is important, for before an anæsthetic is given it is usually possible to accurately determine the exact situation and size of the tumor or tumors which require removal. After the anæsthetic is given, and particularly after the sphincter has been stretched and the rectum irrigated, the extrusion of relaxed mucous membrane is often so great that one is in doubt what to remove and what to leave. Neglect to make a careful preliminary examination not infrequently leads, I think, to the doing of a much more extensive operation than is required.

On the night before operation a half ounce of castor oil should be given, or, if that is especially objectionable to the patient, other good laxatives will do as well. Purgation is by no means desirable, and is likely to lead to loose defæcations during the operation. A large soap application should be made to the perinæum and adjacent parts, to be worn for at least six hours before operation. Shaving of the neighborhood of the anus is not necessary and is disagreeable. At least two hours before operation the rectum and lower intestine should be washed by an ordinary enema. Sufficient time will then be left to allow all fluid to drain away. The vagina should also be irrigated and then packed tightly with sterile gauze. The operation can be best done with the patient in the lithotomy position, the buttocks being drawn down so as to overhang the edge of the table, the surgeon being seated in front of the parts to be operated on. Examination of the rectum should now again be made, so as to identify the exact limits of the tissue which requires removal. The sphincter is to be gently but thoroughly stretched, not only to facilitate the operative work, but also that there may be no spasmodic action of the muscle afterwards, which would be certain to cause pain and would prob-

ably interfere with perfect wound healing. With the aid of a large glass speculum, which I prefer, or a Sims's speculum, the rectum should be thoroughly irrigated with warm salt solution and then dried. If the anus is held wide open during this irrigation, fluid will not pass up the intestine, and subsequently annoy the operator by descending at intervals. The perinæum and buttocks are to be washed with ether and the surrounding objects excluded with sterile towels with as much care as would be exercised if one were about to do a laparotomy. If the surgeon wears operating gloves—who does not to-day?—now is the time to put them on. If one is sufficiently attentive to the requirements of aseptic detail when operating upon the rectum the most perfect wound healing can be obtained.

The hæmorrhoid to be operated upon is grasped with a tight clamp from side to side, lifted gently from its attached aspect by an assistant, while the operator with a knife (not with scissors) makes an incision on either side of the tumor, parallel with its long axis, through the mucous membrane above, and the skin below. The two incisions should meet at a very acute angle below, and should invade the skin only enough to make this angle and avoid producing an awkward fold or tag. The tumor with the surface included by the incisions is now to be dissected up with the knife or with straight, sharp scissors. This dissection must include the vessels of the hæmorrhoid, but no more surrounding tissue than is necessary. The incisions can now be continued upward on either side, always converging to a point just above the hæmorrhoid. They need not actually meet. As the tumor is now still further dissected upwards, and as the incisions and plane of dissection converge towards the same point above, the remaining attachment of the tumor is reduced to a small pedicle which, if care has been exercised, will be found to contain the principal artery of supply and emergent veins. At the highest part of this pedicle a catgut ligature is to be tightly tied about it. The hæmorrhoid is not yet to be cut away. The long, narrow wound is to be carefully searched, and every bleeding vessel tied or twisted. Often no ligatures are required: sometimes four or five. No bleeding is to be neglected. The wound must now be very neatly sutured with a continuous suture of No. 1 catgut, beginning at the lower angle. A tenaculum which pulls down the lower angle is of assistance in making the wound edges approximate evenly, and, as one approaches the upper part of the wound, traction upon the hæmorrhoid brings the whole wound

into view. Sometimes a flat retractor on the opposite side of the anus is needed. The suture is to be continued until the very base of the pedicle is reached and then tied. Now the hæmorrhoid may be cut away just below, but not too near the ligature on the pedicle. If a second or third hæmorrhoid exists it is to be removed in the same manner, care being taken not to cut into one wound while making the other. As a rule, not more than two good sized hæmorrhoids can be removed at one sitting without taking away an undue amount of mucous membrane. When there appears to be the slightest danger of taking away too much tissue, it is much better to postpone further operation until the patient has completely recovered from what has been already done. When the time comes to make a second thorough examination one will usually be surprised to find a complete absence of the tissue upon which a second operation was planned. Blood or other soiling is finally to be washed away with salt solution and the parts dried. Now introduce a suppository containing one grain of opium, or $\frac{1}{8}$ grain of morphine. The dressing is very important if œdema of the lower angle of the wounds, pain, and delay in healing are to be avoided.

First adjust perfectly the abdominal portion of the T bandage. No ordinary T bandage will be of service. For these cases, and indeed for almost all cases, the abdominal portion must be about twelve inches wide or more, such as would be used after a laparotomy. The perineal part of the bandage must be eight inches wide behind, narrowing slightly as it passes the perinæum, and then be wider or not as desired. The material of the bandage should be good, heavy Canton flannel. With such a bandage as I describe, real support can be given through the dressing to the parts operated upon. Loose sterilized gauze is now to be packed against the anus, fold on fold and in quantity, until the whole ischio-rectal fossa is more than full. Abundant squares of gauze are to be laid on this packing, and then a good thick layer of cotton. The perineal band is now to be put in place and drawn very tightly, the object being to push the anus and lower rectum forcibly into the pelvis, thus completely immobilizing the parts and taking all weight off of the levator muscles. This complete immobilization is most important, both to secure immunity from pain and primary union of the wounds.

No food of any kind is to be given until the following day. Sufficient water may be given to entirely allay thirst. One sixth of a grain of morphine immediately after operation will not be

too much. After the day of operation $\frac{1}{4}$ grain of extract of opium is given every eight hours, so that defæcation may not occur until the sixth or seventh day. For the same reason only very small meals are given, and those should be of a varied character. Milk and broths load the intestines, produce bulky and often hard movements, and induce the desire to defæcate. The dietary should be about as follows: Breakfast, a small cup of tea or coffee, one egg, and a piece of toast. Luncheon, one chop and a piece of bread, with butter. Dinner, a small quantity of chicken or beef and one vegetable, with bread. Water frequently in small quantities at a time. This limited diet I have found entirely satisfactory, as the patient appreciates that defæcation is not desirable, and the opium taken diminishes appetite. Patients treated in this manner are entirely free from pain and remain perfectly comfortable day after day. After three days it is usually sufficient to give the opium twice daily and after four days once a day. Gas in the lower intestine gives rise to no difficulty, for it soon finds its way out in spite of the tight dressing. Tubing introduced as part of the dressing is entirely unnecessary. Of course, some patients require the use of the catheter, and in females I order it so that no soiling may occur. Male patients may be allowed to stand up after the second day to urinate and thus often avoid the catheter. On the second day after operation the dressing is changed, and the anus and adjacent skin gently washed with a weak solution of peroxide of hydrogen. The anus will be found deeply depressed, entirely free from pain, and without œdema. By the end of three days after operation a slightly looser dressing may be permitted. On the sixth day, sometimes not until the seventh day, a half ounce of castor oil, or a drachm of compound licorice powder is given at about 10 a. m., as it is desirable to have the bowels act during the daytime, when the patient can be conveniently attended to, and the night is thus left undisturbed. When urgent desire to empty the bowels is felt, the patient should get up out of bed and be seated upon a comfortable commode or water closet seat, and he should not be subjected to the discomfort and straining which are so usual when the bed pan is used. The sitting posture is much more favorable, and if no effort at straining is made, the movement will take place entirely painlessly and without bleeding. After the movement the anus should be gently washed externally. If a second movement occurs $\frac{1}{4}$ grain of opium should be given to prevent further disturbance of the parts operated upon. Two days later any good

laxative will do, and daily evacuation should thereafter be encouraged.

It is claimed for this operation that it is absolutely safe: that it is radical; that neither ulceration or stenosis ever result from it; that convalescence is painless; and that cure is obtained with a minimum loss of time.

28 WEST THIRTY-SEVENTH STREET.

HIGH FREQUENCY, HIGH POTENTIAL CURRENTS, AND X RADIATIONS IN THE TREATMENT OF EPILEPSY.

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NEW YORK.

There are 12,500 epileptics in New York State. Their number is so large that their treatment and their social condition present a problem which demands the serious consideration of physicians and sociologists. Of the total number of epileptics, 2,500 are public charges in our hospitals, asylums, and special colonies. This still leaves a goodly number who remain in their own homes, and while many of them are apparently in good condition physically, they are compelled to abandon remunerative employment on account of their liability to convulsive fits.

Under the usual methods of treatment comparatively little hope is offered to the unfortunate epileptic. If there has been established the epileptic habit of several years' duration, the cures, by the hitherto most approved methods, are generally considered to amount to not more than 8 per cent.

The object of this paper is to describe a method of treating epilepsy which has given me better results than any treatment I have heretofore used. If the medical profession can be convinced that by the use of high frequency, high potential currents, combined with x radiations, we have comparatively new agencies which will markedly improve, and in a certain percentage of cases even cure, many of the forms of epilepsy heretofore considered incurable, it certainly behooves them as conscientious physicians to give such a system a fair trial. When I speak of comparatively new therapeutical agencies, I am not unmindful of the work done in x radiations by Branth and Grad. In the use of electrical and radiant energy in the treatment of epilepsy, I do not mean that we should limit ourselves to these modalities exclusively, but that we should also utilize such of the older remedies as experience has taught us to be of service; one of these latter, namely the bromides, is indispensable in certain cases. But by the application of the elec-

trical and radiant treatment we can use less of them; in fact, in some cases do without them entirely.

In considering the treatment we should first give attention to the immediate attack, and then, if possible, treat the morbid conditions which produce the seizures. Spratling declares that, in the majority of cases, the cause of epilepsy can be traced either, 1, to malassimilation, combined with dyspepsia; 2, to a disarrangement of some portion of the body, such as the remains of an old neuritis, the scar of a gastric ulcer, an obstetric injury, etc.; 3, to too great mental activity, such as fright in childhood, overwork, or disappointment in love or ambition in youth, physical overwork, insufficient food, lack of variety in work or diversion, in those of mature years; 4, to heredity.

When the disease is due to alcoholism or fright, it is reasonable to suppose a cure may be effected by removing the cause. When an epileptic seizure is preceded by a cramp in an upper or a lower extremity, we can frequently abort the attack by pressing upon, and constricting, the part above the cramp. In other cases the patient can sometimes prevent the attack by concentrating his thoughts upon some other subject. When a convulsion is once established there is but little to do, until it runs its course, except to place the patient on his back, with his head partially bent backward. He should then be moderately restrained, so that his violent movements will not injure him. The clothing should be loosened about the neck and waist, and if in a room, the window should be opened to give a free circulation of fresh air. During the sleeping stage, the head should be bent sideways so that the tongue will not fall back and obstruct the breathing. The sleep after the attack should not be disturbed, and when the patient awakens he should receive nourishment in a concentrated form.

In the treatment of chronic epilepsy we should first look for any exciting or reflex cause and remove it. Among the reflex causes which may be responsible for epileptic seizures are worms, intestinal parasites, or autointoxication. An adherent prepuce, in either sex, producing irritations of the genital organs, foreign bodies in the ears, closure of the Eustachian tube, producing pressure on the internal ear, foreign bodies in the nose, or nasopharyngeal polypi, defects of vision, eye strain, injuries to the scalp or skull, all enter into the ætiology of epilepsy. The removal of such conditions not infrequently alleviates or cures the distressing malady in a remarkable manner.

Nearly all the drugs of the pharmacopœia have

been used at one time or another in the treatment of epilepsy. Since 1851, when Dr. Leacock first used bromides, they have been the sheet anchor of the drug treatment. The bromides produce a marked sedative effect on the nervous and circulatory systems, first by diminishing the excitability of the nerve centres, and then by equalizing the circulation and relieving the congestion.

We now come to the electrotherapeutic treatment of epilepsy. The galvanic and faradaic currents of electricity have been used in former years, but with little success. If Hughlings Jackson's theories regarding the nervous system are correct, it is reasonable to suppose that high frequency, high potential electric currents will have a beneficial effect on the nerve centres, and indirectly on epilepsy. Jackson believes that the nervous system is divided into three "levels" of sensory motor centres, the low, middle, and high. The low level is practically identical with the spinal system. Its centres are mostly automatic. The middle level is made up of the subconscious centres. The highest levels correspond to centres situated in anterior cerebral and occipital regions, the former being supposed to contain the sensory, and the latter the motor centres. It is thought that all parts of the body are represented in this highest level, in centres of great complexity. It is here that the phenomenon of consciousness arises, and while containing the highest sensory and motor centre, this level includes also the centre of intelligence and of the mind generally.

Dr. C. E. Riggs says that epilepsy may be considered a paroxysmal discharging disease of the highest nerve centre level as described by Hughlings Jackson. His theory as to how epilepsy is produced seems so plausible that I quote it here: "The lesions of epilepsy arise from nutritive, molecular disturbances, which may be inherited, or the result of stress of growth and development. They render that part of the nervous system unstable. The nerve centres, which are regarded as accumulators in which nervous energy is stored, instead of giving off their energy in response to due stimulus, liberate it irregularly and explosively. . . . But as the higher centres are also the seat of the 'organ of the mind,' we should expect lesions of these centres also to produce psychological phenomena, and this in fact is exactly what happens in epilepsy proper."

If Riggs's theory is correct, it appears likely that the proper application of high frequency, high potential currents will have a marked nutritional effect on the brain, and thus restore the

motor and sensory nerve centres to their normal function. When high frequency currents are applied to the human body, we find that, owing to the great frequency of the oscillation, even up to several million alternations a second, neither the nerves nor the muscles are excited, but great activity arises in the tissues. This is shown by a greater absorption of oxygen, and an increased production of carbonic acid gas.

The effects on the nervous system are certainly marked. Freund states that subjects of melancholia and hypochondriasis are much benefited by this method of treatment. Other foreign observers have shown that the functional neuroses, such as hysteria and neurasthenia, also respond to these high frequency currents. Personally I agree with the authorities already quoted—but I go a step further to state that decidedly beneficial and curative effects are obtained in epilepsy by the use of high frequency currents, combined with the x radiations. In some cases I used the high frequency current and the x radiation alone, and in others I combined it with the sodium bromide, using from 15 to 60 grains per diem, depending upon the severity of the case. All cases, either of grand or petit mal, were treated in much the same manner. Those of more than three years' standing gave the best results when the high frequency current and the x radiations were combined with small doses of sodium bromide, in females increasing (doubling or trebling) the amount of bromide just before and during the menstrual period.

As a rule, each patient is treated every other day, first receiving x radiation from five to ten minutes from a high tube. This is placed about six to ten inches above the head, so that the rays strike directly upon the anterior and occipital part of the brain (Jackson's centres of high level). After the x radiation the patient is subjected to the influence of a high frequency current, applied over the brain for ten minutes, and for five minutes over the spine. In this manner I have treated the different forms of epilepsy, but I found the best results were obtained by using the combined treatment of x radiation and high frequency currents with small doses of bromides. By this latter method, at least 25 per cent. of petit mal may be considered tentatively cured, 20 per cent. of Jacksonian epilepsy, and 12 per cent. of grand mal. All cases were improved more or less, not only in regard to the frequency of the epileptic seizure, but also in regard to their severity. In addition to this the general, mental, and physical condition was very much improved. As these experiments have

been continued for less than a year, sufficient time has not elapsed to say how much permanent value there is to this method of treatment. Nevertheless, such progress has been made in the cases treated that I believe that we are on the right road to get the best results in the treatment of epilepsy. The cases which I here report are typical of the improvement which can be obtained by the combined treatment, namely, the physical and chemical action of high frequency electric currents and the use in selected cases of sodium bromide, from 15 to 60 grains a day.

CASE VII.—A. G., woman, aged 32 years; began treatment October 10, 1903. Previous history: Twelve years previously, patient had gone in bathing during the menstrual period. This was followed by an excessive menorrhagia, which the patient was not expected to survive. Immediately following the bath, she had had an epileptic seizure, and these attacks had been constant ever since. For the first three years she had a profound convulsion every night. Nine years ago she married, and had had three children (all healthy). The past year the frequency of the fits had been growing less, sometimes twice or three times a week, but lately, and for a few months before she came under my observation, she had had epileptic seizures nearly every night, with occasional attacks of petit mal in daytime. The profound convulsion began with a spasm of the left hand, which gradually moved up to the left ear. The patient usually took hold of the left hand with the right hand, but if both hands were drawn up to the head, then the convulsions began immediately. Her sister said if she was able to grasp the left wrist before the convulsion, she could frequently abort it. Her treatment has been that already outlined, namely, the electricity and x radiations, without bromides.

October 14th, in my office, the patient said a weakness was coming over her, after which she had a slight spasm of the left side of mouth, followed by some mutterings and inability to answer questions. Pupils dilated, skin moist, and great pallor of the face. This attack lasted about three minutes. Upon inquiry I found she had this latter form of seizure two or three times a month, especially if overtired, or if she had had heavy epileptic attacks the night before.

November 14th: Patient has had three treatments a week for six weeks, with the exception of one week, when she was confined to the house with a severe cold. Her mother accompanied her on this visit, and reported that the patient's mentality had improved, she was more sensible and intelligent, her memory was better, and her physical condition improved.

During the past month she had not had a spasm in the left hand, and the epileptic seizures of which she had had from 40 to 60 a month had now been reduced to sixteen. During the month of December she was free from epileptic seizures, except during the menstrual period, and for the past six weeks she had had but one fit—only an occasional cramp in her hand, and no petit mal.

Taking it all in all, she was better physically and mentally, having increased in weight, and improved in memory and general intelligence. She had not been so well or so free from epileptic attacks in eleven years.

CASE XII.—Female, aged 27 years. Grand mal at night, petit mal in daytime. First fit occurred six years previously. The seizure began without marked aura, although patient said there was a slight spasmodic condition of the mouth. For the first three years the profound seizure usually took place at night, and then each successive night for two or three nights. After this she would be free from seizures for three or four weeks. At the end of three years the type of seizure changed; the aura usually began with spasm of the right hand, and wide opening of the eyes. The true convulsion followed, but this always took place at night while she was in bed; but in the daytime she had from ten to twelve attacks of petit mal a month. Treatment: x radiations, high frequency currents, and sodium bromide, fifteen grains, three times a day.

I am inclined to believe that the high frequency currents have some chemical effect on the bromide, possibly liberating a larger quantity of the bromine as the solution of the salt circulates in the brain, and thus the drug in smaller quantities has a more pronounced therapeutical effect in controlling the epileptic seizures.

At any rate, the patients upon whom I have tried it, combined the bromide with the electrical and radiant treatment, respond more quickly than those who have not received the bromide. This last case, after three and one half months' treatment, is very much better, the grand mal seizures are less frequent, and the petit mal attacks rare, usually one during or after the menstrual period.

CONCLUSIONS.

Epilepsy is a serious disease, and in its treatment all reflex irritative disturbances should be first eliminated. In using high frequency, high potential currents, we need not refrain from employing any or all old time remedies which we have found to afford even temporary relief. By the use of high frequency, high potential electric currents, we have a therapeutical agent, which (1) acts as a nerve sedative, (2) controls local congestion, and (3) promotes the normal functional activity of the nerve centres. In addition to this, it is not unlikely, in those patients who take the bromides, that this electric modality sets free a larger amount of bromine in those areas of the brain where the lesion of epilepsy is likely to be located. By this means, possibly in some way as yet unknown to us, it exhibits its remedial influence by controlling the seizures or ameliorating the condition to such an extent that the patient feels warranted in calling himself practically cured.

240 WEST ONE HUNDRED AND SECOND STREET.

THE OPEN AIR TREATMENT AT HOME FOR TUBERCULOUS PATIENTS, WITH A DESCRIPTION OF A WINDOW TENT AND A HALF TENT.*

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To give the tuberculous patients the greatest amount of pure, fresh air for the greatest possible number of hours in the twenty-four, is the object of modern phthisiotherapy. This constant exposure to the fresh, pure air is, of course, obtainable in the ideal way in the specially constructed sanatorium where the patients recline on comfortable chairs in the open rest cure gallery during the day, and the beds are moved on to the open veranda at night.

To provide the same advantages as far as possible for the large number of consumptives who for various reasons cannot go to a sanatorium, many appliances have been devised. In country homes suitable extensions can often be made with relatively little expense when the patient or his



FIG. 1.—Sleeping shack.

relatives own the house. Again in the country it is often possible, even for the poorer patient now owning a house, to build a so called sleeping shack, which should preferably have southern

* Read before the Medical Society of the County of New York, at a regular meeting.

exposure. It could then serve as a rest cure gallery by day and as an open air sleeping place at night. As the illustration shows, the construction is very simple and not costly. A number of



FIG. 2.—Half tent for the rest cure in the open air.

such shacks are in use even in sanatoria. The photograph represented here (Fig. 1) is of one of the shacks of Dr. Millett's Sanatorium, at Bridgewater, Mass.

In large cities, particularly in the homes of the poor, the flat roof and the fire escape have frequently been used for the purpose of giving the open air treatment during the day. We can hardly recommend the use of the fire escape, as to have it encumbered might endanger the lives of the other inmates in case of fire; but a steamer chair, placed on the roof, will answer the purpose of a costly typical sanatorium reclining chair; a large umbrella will answer the purpose of the protective awning.

For patients in better circumstances, who have a little garden, a yard, or a convenient flat roof, a half tent, such as we show here (Fig. 2), may advantageously replace the rest cure gallery of the sanatorium. This half tent is composed of a

frame of steel tubing, which can be folded together when not in use (Fig. 3). Over this frame strong sail duck is stretched and secured by snap buttons on the inside, so as to completely protect

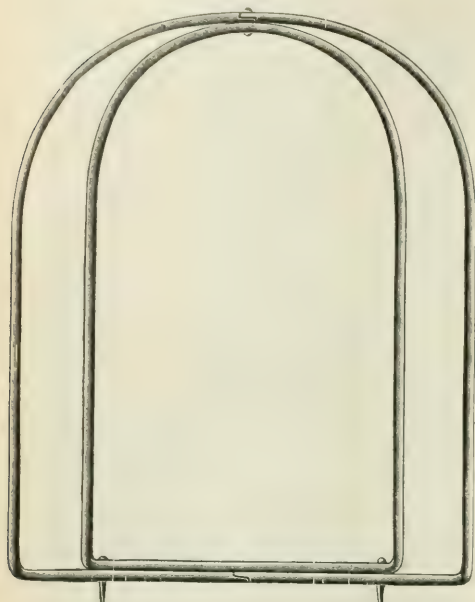


FIG. 3.—Frame of half tent folded.

the patient against wind and sun. To prevent the tent from being overturned by the wind, the frame has ground spikes holding it securely. The reclining chair is placed in this half tent in such a manner that the floor bracing, attached to the frame, is held down by the chair and thus adds to its security.

The Kny-Scheerer Company have been good enough to construct a reclining chair for me. It is intended for outdoor use, and is made of bent enameled steel tubing, with woven wire springs, top and back (Fig. 4). It has the characteristic knee bend, which should be a feature of all good sanatorium chairs, so as to make the prolonged sojourn of a patient on the chair as restful as possible. The back can be adjusted to any inclination which renders the patient most comfortable. The arm rest can be folded back to make it easy

and convenient for the patient to get into the chair. The tops of the arm rests are of wood, so that the metal will not chill the patient in cold weather, and a mattress is placed over the back as well as over the seat. Half tent and chair should be placed as nearly as possible so that the patient may be exposed to the sun, with his head shaded, and at the same time sheltered from the wind. This chair, being constructed of metal, is somewhat more expensive than the ordinary bamboo chair, but it has the advantage of many times greater durability, not being affected by either extreme heat, cold, or moisture.

Sleeping outdoors in cold weather is perhaps not practised anywhere but in sanatoria, and still it is our conviction that nothing will increase the patient's chances for recovery as much as sleeping at night in a pure, cool atmosphere. An ingenious device for that purpose has recently been described in *Outdoor Life*,¹ under the name of aerarium. It is to be used in connection with Dr. Dunham's bed, which is a cot constructed so that the head of it protrudes through the window. This aerarium is a long, double outside awning so arranged as to keep up a rising current of air without draughts over the head of the patient. From the description it seems that the arrangement is excellent, since it can be applied by a carpenter to any window in a short time.

Those of us familiar with the conditions of the consumptive poor in a large city will, however, agree on the difficulty of making such a device practical and popular among this class of patients. In a New York tenement house, for ex-

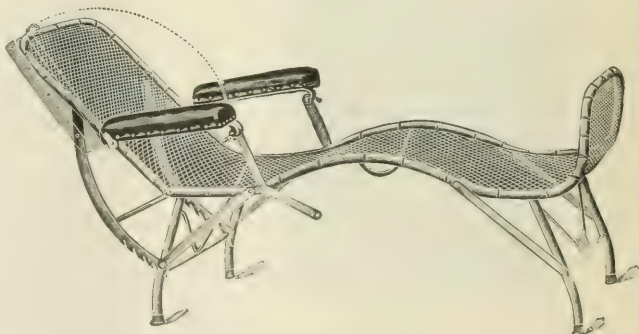


FIG. 4.—Reclining chair of steel tubing for the open air rest cure.

ample, the protruding of a cot through the window would attract unpleasant attention, and with the phthisiophobia that exists in many minds, the

¹ *The Outdoor Life*, October, 1904; published at the Adirondack Cottage Sanatorium, Trudeau P. O., N. Y.

unfortunate sufferer might be obliged to seek other quarters. The cost of the aerarium will also bring it beyond the reach of the poor, and since the device is patented, it would be imprudent to endeavor to copy it with a view of producing a cheaper apparatus.

The writers of this article have endeavored, by presenting to the profession the window tent for the open air treatment at home, to overcome the objections indicated.

The window tent is an awning which instead of being placed outside of the window is attached to the inside of the room. It is so constructed that air from the room cannot enter nor mix with the air in the tent. The patient lying on the bed, which is placed parallel with the window, has his head and shoulders resting in the tent (Figs. 5 and 6). By following the description closely it will be seen that the ventilation is as nearly perfect as can be produced with so cheap a device.

In the lower half of an American window is

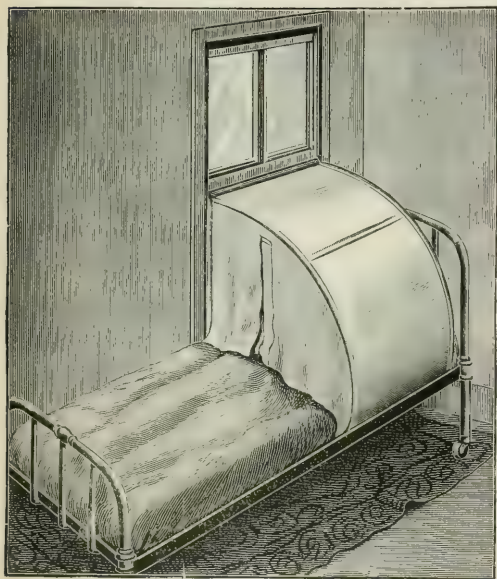


FIG. 5.—Window tent for the open air treatment at home.

placed the frame to which is attached the awning, stretched over a quarter circle, with a radius of 40 inches.² The frame of the tent does not quite fill the lower half of the window; a space of about three inches is left for the escape of the

² When there is a recess, so that the bed placed parallel to the window cannot be moved close to the window sill, the tent has to be made correspondingly longer and the bottom flaps made long enough to reach under the mattress.

warm air in the room. By lowering the window this space can be reduced to one inch or less, according to need. On extremely cold and windy nights there need not be left any open space at all above the tent frame. The patient's breath will rise to the top of the tent and the form of the

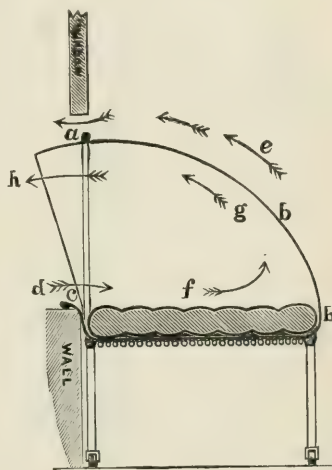


FIG. 6.—Cut of window tent, showing ventilation.

tent aids in the ventilation. The awning is made of stout duck and is waterproof.

The patient enters the tent through a flap which can be made either on the right or the left side of the tent. The lower edges of the canvas that come at the head and side of the bed are long enough to be tucked well under the mattress to exclude the air from the room and protect the patient from draught. The flap is so constructed as to admit of easy access to the patient.

The change of hot and cold air in the window tent takes place in the following manner: *a b* represent the roof of the window tent, it rests on the bed at *b'* and is attached to the window on points *a* and *c*. Now, *d* is the outside air and *e* is the air in the warm room. If *e* is warmer than *d* then the roof of the tent will be warm and will in turn warm that portion of the outside air *d*, which is in contact with the roof *a b*. This warmer air will go in the direction of *b a* and pass out of the tent at its apex *a*. New air from the outside will, of course, take its place, entering in the direction of *d f*, insuring a constant changing of air. The patient's own expired air rising toward the roof of the tent adds to the circulating current of air—*d f g h*.

In order to protect the patient from storms the roof of the tent has been extended slightly be-

yond the window, and a roller curtain has been placed in the window itself. This curtain running from above downwards can be lowered at the patient's convenience. The protruding portion or peak of the tent is, however, not always essential, particularly if the house has a sufficient projection over the window, or the patient's room is located under the eaves in the upper story. If the peak becomes necessary it is best to arrange it, by the aid of hinges, so that it can be folded down and the whole tent can be moved a few inches into the room to facilitate the closing of the window if desirable. This withdrawing the tent for the purpose of closing the window is essential in order that the room may become warm for the patient to dress or to take his cold sponging.

The patient's body is kept thoroughly warm. He only receives the air in his face; the cot can be placed by the window to suit his preference for sleeping on his right or left side, so that he has the air most of the time in his face. A second advantage of this arrangement is that it will not attract any attention from the outside. Thirdly, it can be placed alongside of the window which will be much more convenient for the majority of the poor who have small rooms. If, however, the bed must be placed at a right angle to the window, the flap can be made in the middle of the tent. When the aerarium referred to is used the bed has to extend about one third out of the window and must, of course, invariably be placed at a right angle to the window sill.

The raising of the bed, if such is necessary, to the height of the window sill is a matter of little expense. If the bed is of iron, a few additional inches of iron piping can be attached to the legs by any plumber, or one handy with tools; raising a wooden bed can be accomplished with equal facility. The frame of the window tent can be made to fit any window. Owing to the simplicity of the window tent, it can be manufactured for about half of the cost of that of the aerarium.

As a standard size we find the frame 30 by 30 inches most convenient. If the window tent is to serve the patient only during the night, bed and window tent can be moved away from the window during the day and the window closed. In cases where the recess of the window permits, the tent can be constructed so as to allow the closing of the window at any time.

This window tent will, of course, be of great service to the consumptive sufferer in winter. If he is feverish, or his stay in bed is advisable, he can spend his entire time in the win-

dow tent. If the people are poor, and the room where the consumptive sufferer lies serves as living room for the rest of the family, the fact that the well members need not shiver and yet the patient can take his open air treatment, is of vital importance in many respect. While the room will not be quite as warm as if the window was entirely closed, it will be much warmer than if there was no tent in front of the open window.

Laying aside the economic advantages to a poor family when not being obliged to heat more than one room, the patient feels that he does not deprive his loved ones of comfort and warmth and that he is less a burden and hindrance to their happiness. The other members of the family, on the other hand, feel that they can give to the patient all the air he needs and that he himself need not suffer for their comfort.

In winter, the patient's bed must be covered with a sufficient number of blankets to assure his absolute comfort and warmth throughout the night. Still, this covering should not be so heavy as to press down upon the body and make the patient feel uncomfortable and tire him. The light and tightly woven blanket is a better protection than the loosely woven one. To the poor, whose disposal of blankets is alas! often very limited, it

may be valuable advice to tell them to put several layers of newspapers between the coverings. *Outdoor Life*, of December, recommends to have a dozen layers of newspapers sewed between two layers of flannel. This will certainly make a light and warm covering. From the same journal I reproduce a woolen helmet which the patient, in addition to a sweater, may use in extremely cold weather (Fig. 7).

Some patients will complain that the bright light awakens them in the morning too early and that they have difficulty in going to sleep again. In such instances I counsel the patient to have some light weight, but dark colored material (such as black lisle thread hose), to put over his eyes, and this usually suffices to obviate the inconvenience caused by the bright light.



FIG. 7.—Woolen helmet for sleeping outdoors in cold weather.

The pulmonary invalid should be in communication with his nurse, relative, or friend, who takes care of him, by a bell. He should, of course, have a cuspidor handy to receive his expectoration. I have found that a tightly closing pocket flask, which can be manipulated with one hand, and when not in use placed under the pillow, is the most suitable. The patient can expectorate into such a flask without uncovering himself. I show here my latest model which differs from the former ones by its greater simplicity and durability (Figs. 8 and 9). The flask is made of metal and is, of course, unbreakable; it is oval, about $2\frac{1}{2}$ inches in height and $2\frac{1}{4}$ inches in its largest diameter. It is made according to the principle of the irreversible inkstand, and hot water suffices for its thorough cleaning. It seems to me that any kind of cuspidor which had to stand on the window sill would not be as safe, as there is always a danger of its falling out of the window. A urinal should also be at the bedside so that the patient will not have to leave the bed in the night.

Besides the fact that the patient feels easier when he knows that the rest of his family are not in discomfort because he must be exposed to the cold, there is another advantage in this window tent arrangement whereby the patient's physical and mental condition will be benefited. His pro-



FIG. 8.—Metal pocket sputum flask manipulated with one hand.

longed rest cure in bed will be more endurable when he is permitted to look out on the street and watch life there than when obliged to gaze at the four walls of his room, or simply at the awning, as would be the case with the aerarium.

When arranging for the rest cure on the reclining chair during the day in his half tent in the garden, on the veranda, in the sleeping shack, on the roof, or on a balcony, one should always bear in mind that it is much more agreeable and conducive to the well being of the patient when taking the cure, to have a pleasant view to look upon. In building sanatoria, the greatest attention is paid to the proper selection of the place

for rest cure gallery or veranda. The more pleasing and entertaining the outlook from these places the more certain is one to keep the patients quiet and restful.

It may be asked what results have been attained with the new device. It has not been long enough in use nor tried by a large enough num-



FIG. 9.—Pocket sputum flask taken apart for cleaning.

ber of people to make any positive statement in this respect. One of the writers recommended it to a young tuberculous physician of Brooklyn whom he had the privilege to treat. After very few days of sleeping in the window tent the young doctor assured us that his cough and expectoration had diminished, that his temperature had gone down to almost normal, and that he would not exchange his present mode of sleeping for any other kind, whether sick or well. In a few other cases the results have thus far been equally satisfactory.

There is lastly one more advantage to be derived from the use of this apparatus that is not to be underestimated. Patients who can usually be persuaded with difficulty to sleep with the window wide open will not hesitate when they have this tent as an inducement.

In conclusion, we wish to give a few indications regarding the rest cure and to warn particularly against overdoing it. In the experience of the authors, lying for hours and hours on the back, even in the open air, has resulted in a number of cases in a hypostatic congestion of the lungs. One should always guard against this when prescribing the rest cure in bed or on the veranda. It should be insisted upon that the patient change his position from time to time and take frequent deep inspirations. If the patient is afebrile, or but very slightly feverish, he can rise

from his chair every half hour, or every hour, to take some breathing exercises with movement of the arms, such as has been suggested by one of us in previous publications on the subject.³ This doing something every half hour will make the enforced idleness less monotonous and unpleasant to the majority of patients.

The afebrile patient should, of course, also have some walking exercises, and even the slightly feverish patient should take short walks when his temperature is normal. A good way of determining the amount of exercises we may allow a tuberculous patient is to take his rectal temperature before and after exercising. If, for example, the patient can walk for half an hour with only such slight increase of temperature as must be considered physiological after such exercise, he may the next day walk a little further. If, however, the increase of temperature is pathological, it is an indication that the patient has overdone and he must exercise less the next day. A temperature of about a hundred degrees is an indication for absolute rest. We should, of course, allow the patient to read during his rest cure during the day; but the conscientious phthisiotherapist will even select suitable literature, for in our experience we have seen the temperature rise in otherwise afebrile patients as a result of reading exciting novels and detective stories. All needle work which demands stooping over should be strictly prohibited to women patients.

It goes without saying that one does not wish to expose the patient for eight or nine hours to the cool atmosphere on one of the coldest nights of our eastern winters the first time he tries it. The patient should be gradually accustomed to the exposure to night and day air. In winter he should never be placed in the window tent or on the veranda at night without having been gradually exposed to the open air during the day. The tuberculous patient who has not been accustomed to the open air treatment should therefore at first be placed on the reclining chair in front of the open window or on the veranda during the warmest hours of the day, and preferably when the sun shines. The number of hours of exposure to the open air should then be gradually increased, and after a week or ten days one may begin with a few hours of sleeping in the window tent or on the veranda at night time. The patient will usually have improved from this

³ S. A. Knopf; *Pulmonary Tuberculosis; Its Modern Prophylaxes and the Treatment in Special Institutions and at Home*. F. Blakiston's Son & Co., Philadelphia, publ.

S. A. Knopf; *Tuberculosis as a Disease of the Masses, and How to Combat It*. International Prize Essay. M. Firestack, New York, publisher.

S. A. Knopf; *Lecture on Respiratory Exercises*, delivered before the Medical School of Johns Hopkins University.

judicious aerotherapy so that he will himself be anxious to try sleeping outdoors the entire night. The dread of serious consequences that some patients have when exposed to the cold air for the first time, must always be taken into consideration, and here perhaps more than in any other phase of the management of tuberculous patients, tact and firmness on the part of the physician will accomplish all the desired results.

Whether the patient sleeps on the veranda, in a room with the windows wide open, or in the window tent, I wish to emphasize the point that in winter he should always dress and undress in a warm room and also take his massage and his hydrotherapeutic applications, be they simply friction with cold water, ablutions, or complete douches, in a room with a temperature of at least 72° F.

One more point must be considered. Is this open air treatment by day and by night feasible in all climes? We believe that we can conscientiously answer this question by saying that there are to our minds no regions in the United States where this treatment cannot be carried out. The best proof that it is feasible in our own climate, even in our own city, has been demonstrated by the results obtained at the Riverside Sanatorium on North Brother Island, at the Phthisis Infirmary at Blackwell's Island, and in the tents on the Bellevue Hospital grounds. Even the formerly so much dreaded New England night air has lost its terror to the phthisiotherapist through the admirable work of Dr. Millet, of Brockton, Mass.

That equally good results can be obtained in nearly all climes by the open air treatment for children suffering from tuberculous joint and bone diseases, has been demonstrated in the various European sanatoria for such children. In our own country this has been confirmed recently by the excellent results obtained in the Seaside Tent Camp at Seabreeze, which was established last summer by the Association for Improving the Condition of the Poor of this city.⁴

Let us hope that some philanthropists will arise, or that our health and charity departments will be provided with sufficient funds ere long to give the thousands of consumptive poor adults and tuberculous children of this city sufficient facilities to make use of God's fresh, pure air by day and by night. With ample facilities for curing the curable and taking care of the hopeless tuberculous poor, we will make great strides toward the solution of the tuberculosis problem.

⁴ Williams; *The Fresh Air Treatment of Surgical Tuberculosis*, *Medical Record*, January 28, 1905.

RESECTION OF GANGRENOUS INTESTINE DUE TO A VOLVULUS FOLLOWING A SECOND ATTACK OF APPENDICITIS. INTESTINAL OBSTRUCTION CAUSED BY UNOPERATED APPENDICITIS.

(Concluded from page 371.)

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Thirty-three cases are appended to this article. Analyzing them, we find the following facts: Volvuli occurred in six patients, of whom four died and two recovered; kinks occurred in four, of whom three died, and one recovered, and bands occurred in 23, of whom 8 died, and 15 recovered. Out of 33 patients, 15, or 45.5 per cent., died, while 18, or 54.5 per cent., recovered. This is a startling mortality certainly, and is cause for searching investigation on the part of both physician and surgeon, in order to determine what can be done to lessen this appalling result. By consulting the table of the length of time that the obstruction had existed before the operation, we find that this was given in 19 cases, the average of which was four and a half days. Seven patients were operated upon within three days with a mortality of two, or 28.5 per cent., while twelve were operated upon after four days, with a mortality of eight, or 66.6 per cent.! The lesson is obvious: early operation is the only salvation for these patients, and the burden of responsibility rests with the general practitioner, who always sees these patients first. The slightest suspicion of obstruction, which is raised at once by the failure of medical measures, should be the signal for immediate consultation with a surgeon upon whom, then, will rest the responsibility of operating or not. Nothing is more gratifying and certain in surgery than the prompt recovery after early operation of a patient with a simple mechanical obstruction.

In fifteen of the cases the number of previous attacks is specified. In nine cases there was but one attack of appendicitis. In four cases there were four attacks, and in two there were three attacks of previous appendicitis.

Analysis of the cases is as follows:

Cause of obstruction.	No. of cases.	Gangrene of bowel.	Died.	Recovered
Volvulus	6	1	4	2
Kink	4	2	3	1
Band	23	4	8	15
Totals	33	7 (21.2 %)	15 (45.5 %)	18 (54.5 %)
Gangrenous cases.....	7	1	4	3
Appendix acting as band	11	..	5	6

Length of time obstruction had existed before operation; average was 4½ days.

	Number of cases.	Recovered.	Died.
One day.....	1	1	..
Two days.....	4	2	2
Three days.....	2	2	..
Four days.....	3	..	3
Five days.....	2	..	2
Six days.....	4	3	1
Seven days.....	1	..	1
Eight days.....	1	1	..
Ten days.....	1	..	1
	19	9	10

A boy, seven years of age, was admitted to the Presbyterian Hospital on September 5, 1904, with the following history: One year ago he had had an attack somewhat similar to the present one, sharp abdominal pain in the lower right side of the abdomen, nausea and vomiting, prostration, and constipation for five days. Was in bed fifteen days then. Perfectly well until four days ago, when he awoke in the night with sharp, right abdominal pain, and he vomited. His bowels had not moved the preceding day and he had had no appetite. The next day the pain continued; he was prostrated, and he vomited twice. Bowels did not move. The third day, which was the day before admission, he vomited again, and his father said that the vomitus looked yellow and had a fecal odor. His physician had given him an enema that day, with a small fecal movement as the result. On the day of admission the prostration, fecal vomiting, and constipation continued.

Examination on admission showed a well-developed boy, but apathetic, prostrated, with sunken eyes, and drawn face. Vomitus fecaloid. Temperature 101.5°. Lungs normal. Heart's action rapid, 140, and weak. Liver dullness much decreased, almost obliterated. Edge not felt. Spleen not felt. The abdomen is large, prominent, symmetrically distended all over. There is tympany everywhere over the abdomen equally, extending up into the lung resonance to the fourth rib. It is universally rigid, but more marked in the lower right quadrant. It is also slightly tender everywhere, but markedly so over an area the size of a medium sized saucer at the appendix site. Under the lower end of the right rectus there is an indefinite resistance as of a tumor, but it is difficult to diagnosticate accurately on account of the rigidity. No other tumors or masses.

There was dullness in the flanks, but this was not proved to be movable. Slight peristaltic sounds heard over abdomen with stethoscope. Rectal examination elicited tenderness and bulging, but no definite mass could be made out. The patient lay on the back with the knees drawn up, and appeared to be in considerable abdominal pain. Leucocytes 10,000. Marked indicanuria. The diagnosis was at once made of appendicitis with probable general peritonitis, the fecal vomiting being due either to intestinal paralysis or to a mechanical obstruction. The patient was at once taken to the operating room, four days after the onset of the trouble.

Operation at 9 p. m., September 5, 1904, gas and ether being administered. Intermuscular incision over the appendix site. On opening the peritoneum, bloody, clear serum escaped with slight fecal odor. On pushing away a fairly normal

coil of small intestine, a blackish coil came into view. There were no adhesions. Vertical incision over the middle of the right rectus, whose fibres were split. Distended normal small intestine presented. Over toward the right a mass of black, distended small intestine was delivered through the wound. The following conditions were with difficulty made out: The appendix was swollen, red, and from its tip on manipulation a little pus exuded. It was tightly adherent to, and had wound itself transversely about the small intestine. At this point the black area began. Near the base of the appendix on the small intestine a tough adhesion ran across to a second loop of small intestine. This adhesion was evidently of long standing. The portion of small intestine, included between the two adherent points, had twisted completely about itself, with the adhesion as its centre, producing interruption to both the blood current and the faecal stream. The gangrenous gut had not yet lost its glistening character, its walls were oedematous, and it was distended. There was no perforation anywhere. The appendix was rapidly ablated. The boy's condition at this point became alarming and a saline intravenous infusion was begun. In view of his condition it was decided to make an artificial anus after excision of the gangrenous intestine. Two large clamps were placed on the healthy gut just beyond each extremity of the gangrenous portion of the gut and the bowel was divided between the clamps at these two points.

Clamps were placed along the oedematous mesentery, which was then divided beyond the clamps. The gut excised measured 23 inches. The pedicles in the clamps on the mesentery were tied with catgut. The clamp on the lower bowel was seen to be at the ileocaecal opening. The mesocaecum was too short to allow this end to be brought into the median wound, so the clamp, closing the caecal opening, was pushed through the intermuscular appendix wound, and the caecum brought through to the level of the skin, where it was stitched to the muscles by some catgut stitches. The clamp was not removed from the opening into the bowel. The upper part of the median wound was closed by through and through sutures of silk passed with a handle needle. The clamp closing the proximal small intestinal opening was brought into the lower portion of the median wound, and the gut was sutured to the muscles, an inch of intestine being made to protrude beyond the level of the skin. Complete closure of the remainder of the abdominal wound. Holding the protruding intestine up with forceps, a rectal tube was inserted into the lumen of the small gut for five or six inches, and the gut was tied snugly about the tube with a circular suture of silk. In this way it was hoped to prevent soiling of the wounds. There was an immediate escape of gas and slight amount of fluid faeces from the end of the tube. Gastric lavage was given on the table, and a large amount of dark, faecaloid fluid was brought away. Time of operation, one hour. As a result of the infusion of 1,000 c. c. of salt solution the pulse, from being imperceptible, became 140, but weak.

The patient did not vomit that night. The next morning the clamp was removed from the caecum and a solution of soap suds was injected into the ascending colon. The pulse was 140, and the temperature 101.5°. During the night, from the rubber tube draining the proximal small intestine, a small amount of fluid faeces escaped into a bottle, placed at the side of the bed to receive it. The patient vomited faecal material the second night after the operation, so gastric lavage was given, following which half an ounce of magnesium sulphate was left in the stomach, at 10 p. m. At the same time a solution containing an ounce of the milk of magnesia; turpentine, half an ounce; and two ounces of olive oil, were injected into the small intestine fistula. Every six hours thereafter a nutrient enema, containing in addition half an ounce of whiskey, was injected into the caecal opening. During the night there was a large amount of fluid faeces drained into the bottle from the small intestine, and faeces were also passed from the rectum.

September 7th, the second day after the operation, the patient's condition was poor; temperature, 103.5°; pulse, 140, and weak. He continued to vomit, at intervals, faecal material, and was delirious. Gastric lavage and a hypodermoclysis of 500 c. c. of salt solution were given at 9 p. m. Nutrient enemata were continued through the distal fistula.

On the morning of September 8th, the third day after the operation, the condition was much worse; pulse, 150, and weaker; temperature, 104°. Patient vomited faecal material containing curds and melon seeds. Much fluid faeces escaped from the small intestinal fistula. Two intravenous infusions were given during the day and night, but the patient did not rally and died at 3 a. m. No autopsy was allowed.

Death was due either to the sepsis caused by peritonitis, or to the poisoning caused by absorption from the putrid bowel contents. This peritonitis in its turn may have been set up by the passage of bacteria through the walls of the gangrenous gut, which themselves were not perforated at any point. The appendix was not ruptured or gangrenous, so that the peritonitis was not caused by the appendicular inflammation. There was no growth from the culture taken at the time of operation, but in the haste of the operation it may have been badly taken. The continuance of faecal vomiting after the operation was probably due to paralysis of the intestines, caused by the peritonitis, or by overdistention.

The obstruction in this case was due to the adhesions caused by the previous attack of inflammation of the appendix. The present appendicular attack must have been purely a coincidence. Indirectly, however, the volvulus may have been precipitated by the increased tympan-

itic distention and increased peristalsis of the small intestines due to the acute appendicitis.

This case testifies, as do the 32 others in this article, how necessary it is to bear in mind the possibility of a mechanical obstruction, dependent upon the adhesions resulting from a previous attack of appendicitis. If the diagnosis could not have been made earlier, at least the onset of faecal vomiting in this case, twenty-four hours before admission to the hospital, should have been the signal for an immediate operation, in which case the result would undoubtedly have been very different; instead of which the medical attendant lost valuable time in vainly trying to get the bowels to move. The only possible rational treatment of faecal vomiting is the surgeon's knife, and that, too, at the very earliest possible moment.

In the *Archiv für klin. Chir.*, Vol. LXXIII, page 231, the following three cases of intestinal obstruction with gangrenous intestine, following the attacks of appendicitis, are given:

1. A man, sixty-eight years of age, had years before recovered from a severe attack of appendicitis. Symptoms of obstruction suddenly developed. Operation showed that a loop of small intestine was adherent to the tip of the appendix, both together being adherent to the pelvic brim. The intestine was kinked so as to obstruct its lumen. Loosening of this adhesion. Post mortem examination three days later showed gangrene of this loosened adhesion and perforative peritonitis. 2. A man, forty years of age, had had several previous attacks of appendicitis. Symptoms of obstruction had lasted for five days. Operation showed a band stretching from the right parietal peritonæum to the mesoappendix and forming a tense bridge in front of the cæcum. Under this band a loop of the lower end of the ileum had slipped and had become strangulated. This loop, half a metre long, was gangrenous. After dividing the adhesion the loop was brought into the wound and attached there extraperitoneally. Death in six hours. 3. The third patient, a man fifty-three years old, had had twenty years before a severe attack of appendicitis. Five years previously he had had an attack of acute ileus which had finally yielded to high enemata. Constipation and attacks of intestinal colic were frequent since then. Symptoms of obstruction appeared for eight days previous to operation, which revealed adhesions in the cæcal region. At the level of the parietal peritonæum a loop of small intestine several inches above the junction with the cæcum is seen to be kinked to a right angle, and at the acutest point of the angle there is a gangrenous area out of two perforations in which fluid faeces escaped. The gangrenous area with the appendix was resected. Death in two days from increasing peritonitis.

L. Bérard (*Bull. méd.*, Paris, 1902, XVI, 286-288) successfully operated in a case of obstruc-

tion, seven years after an undoubted case of appendicitis, where he found many adhesions and a complex volvulus.

Broca writes a very interesting article in the *Gaz. hebdomadaire de méd. et de chir.*, 1901, XLVIII, 445-450: A patient had had seven years previously a severe attack of appendicitis, which was treated medically and from which he recovered perfectly. July 7, 1900, he was seized very suddenly with all the symptoms of obstruction, for which he was operated on in twenty-four hours. Median laparotomy. Band found attached by one end to the intestine, and by the other to the pelvic wall, causing bending and compression of the loop, the two extremities of which were adherent. Division of the band and separation of the adhesions. A second compressing band was found in the right iliac fossa. Recovery.

J. B. Murphy (*Chicago Clinical Review*, 1895, V, 645) reports that in June, 1895, a patient had a severe attack of appendicitis from which he was in bed four days. Following this he had several other attacks of the same difficulty. In January, 1896, after an attack of complete obstruction, he was operated upon. On separating a mass of adherent intestines, there was found an almost completely flexed loop. Recovery.

G. Marion (*Gazette des hôpitaux*, Paris, 1900, page 1439) reports two cases: The first patient had had a number of years before an appendicitis, for which there had been no operation. In July, 1900, operation for obstruction of several days' duration. The small intestines were found plastered to the cæcum in an almost inextricable mass. Death. Case V.—This patient had had three antecedent attacks of appendicitis, the last one a month previously. Obstruction existed for four days. Operation.—In cæcal region many dense adhesions. Artificial anus. Death. Autopsy showed, in the mass of adherent intestines about the cæcum, a volvulus absolutely constricting the bowel.

Hermes, in the *Deutsche med. Wochenschrift*, 1901, page 368, reports the case of a twenty-two year old girl who for a long time, had had various disturbances of the stomach and bowels. She was suddenly seized with severe pains in the abdomen, shock, tenderness, vomiting, etc. The diagnosis lay between perforative peritonitis and ileus. Median laparotomy revealed bloody, serous exudate in the peritoneal cavity and dilated intestines. No lesion was discoverable in the stomach or gall bladder regions. Collapsed intestine was found in the cæcal region, where it was discovered that a loop of small intestine, about 30 cm. long, had become completely constricted by an appendix which was adherent by its tip to the cæcum. Resection of the appendix, in whose tip there was found a small encapsulated empyema. Recovery.

Courvoisier (*Archiv. für klin. Chir.*, Vol. LXVI, page 470) reports a similar case: A woman, fifty-seven years of age, had had two previous attacks of appendicitis, the last six years before. Symptoms of intestinal obstruction had existed for four days. After eventration in the right region there was found a much dilated loop of small intestine,

to whose base the tip of a fibrously degenerated appendix was attached. In the niche between this dilated loop and the cæcum there lay a completely collapsed piece of small intestine, strangulated by this overlying appendix. The direct continuation of this collapsed intestine was found to be the dilated loop first met with. There was found in addition a twist of 180° of the intestine above the bridge. No gangrene. Ablation of the appendix. Death in twelve days from pneumonia. Courvoisier also reports a case of a ten year old boy who two years before had had appendicitis. Obstruction for three days. Operation disclosed a band joining two portions of intestine together. A horseshoe shaped loop had insinuated itself under this band and this loop had become twisted 180° about its mesentery. No gangrene. Recovery.

Weir (*Medical Record*, 1903, Vol. LIII, page 801) mentions an instance of strangulation of intestine beneath a bridge caused by the adherent appendix. Fortunately operation was performed before the strangulated intestine had become gangrenous, so that the removal of the appendix was followed by a relief of all the symptoms.

Delore (*Société des sciences médicales, Lyon médical*, 1902, No. 32) reports a case of chronic obstruction caused by a band and adhesions, due to an attack of peritonitis, six months previously. Recovery.

Cuiti (*Rivista critica di clinica medica*, 1902, No. 2) found a piece of small intestine, 90 cm. in length, strangulated and gangrenous beneath an adherent appendix, the site of a previous inflammatory attack. Resection. Drainage. Recovery.

Brown (*Lancet*, October 12, 1901) reports the resection of three feet of gangrenous intestine, due to a band, the result of a previous attack of appendicitis. Recovery.

Hepner (*Beiträge zur klin. Chir.*, 1902, Vol. XXXVI, page 306) reports a case, following an attack of appendicitis three years previously. Obstruction for two days. Patient in bad condition. Artificial anus formed. Necropsy revealed a firm band, 20 cm. above the valve of Bauhini, which ran from the intestine to the parietal serosa and produced a complete kink in the intestine.

Crook (*Memphis Medical Monthly*, February, 1904, page 60) gives the case of a girl, aged ten years, who had had in September, 1902, typhoid fever, during the course of which she had a severe attack, lasting for several days, of pain, with vomiting and tenderness over the appendix. After recovery from the fever, she had slight recurrences about once a month of the pain and vomiting. In February, 1903, she had a second undoubted attack of appendicitis. A third attack in April, 1903, kept her in bed for two weeks. On May 17th, one hour after eating a hearty meal, she was seized with agonizing pain in the umbilical region which shot over toward the right side. This was followed by nausea and vomiting. Constipation became complete. Operation on the sixth day of the illness. The entire con-

tents of the right iliac fossa were found matted together and bound by firm adhesions, amounting in some instances to fibrous bands. The appendix was turned on itself and firmly adherent to the under surface of the caput coli. The colon was firmly bound to the posterior abdominal wall, and required unusual force to free it. The appendix was removed, adhesions and bands were broken up, and intestines separated. Recovery.

Lejars (*Bull. et mém de la soc. de chir. de Paris*, Vol. XXX, No. 13, page 380) reports the case of a patient with two attacks of appendicitis at the age of fifty years. At the age of seventy-two years, with no intervening appendicitis, ileus came on, caused by multiple twists of the intestine and torsion of the mesentery, due to bands emanating from the old pericecal inflammation. The appendix was found cut in two and the distal end grafted upon the neighboring peritonæum. Death.

Potherat (*same publication as the preceding*, Vol. XXX, No. 16, page 460) reports three cases of true internal strangulation, the anatomical mechanism being identical in all: 1. Eight year old infant with a six days' occlusion. Appendix found stretched transversely from the right iliac fossa to the prevertebral region, where it was firmly adherent. Between this adhesion and the free edge of the mesentery there existed a bridge, under which a loop of small intestine had become engaged and completely compressed. 2. A man, seventy years of age, had an appendicitis in his fiftieth year. Obstruction for seven days. Very great distention. Operation showed the same arrangement as in the first case. Death. 3. Young girl. Three years previous, severe attack of appendicitis lasting twelve days. None since. Present attack existed five days before operation. Fæcaloid vomiting. Pulse, 160. Taken by her physician to have acute appendicitis. The adhesion of the inflamed appendix had led to a hiatus, under which the intestines became caught and strangulated. Death.

Ross (*Canadian Jour. of Med. and Surg.*, June, 1903, page 385). Boy was seen forty hours after the onset of symptoms of vomiting, obstinate constipation, and tenesmus. The abdomen was distended and hard. The case looked very much like one of peritonitis following perforation of the vermiform appendix, but the absence of fever and the presence of tenesmus rather pointed against this diagnosis. Operation disclosed a loop of dark colored intestine about 18 inches long which had slipped through under a band which proved to be the appendix the tip of which had become adherent to a spot on the mesentery of the small intestine. Removal of the appendix and freeing of the bowel. Recovery.

Dr. Joseph A. Blake has kindly given me the following case, the result of recurring appendicitis: At the time of operation, the girl, aged eighteen, was also suffering from acute appendicitis in the third day of the attack. Operation disclosed the appendix acutely inflamed, stricture, distended, and fresh adhesions. A loop of ileum, twelve inches long, was found strangulated under a band (adhesion), and gangren-

ous. Appendectomy: resection of gut; end to end union with the Murphy button. Recovery.

Dr. F. H. Markoe (*Annals of Surgery*, Vol. XIX) reports a case of acute obstruction occurring in the course of acute appendicitis, in which the obstruction was due to an adhesion between a perforated and inflamed appendix and a coil of small intestine which had become acutely strangulated. Death resulted from an extension of the already existing peritonitis.

Makins (*Lancet*, January 16, 1904, page 157). A girl, six years of age, with vomiting and constipation of six days' duration. Normal temperature, pulse 114. Upper part of the small intestine much dilated, and below this a loop was found strangulated behind the appendix, which was bulbous at its extremity and adherent to the anterior abdominal wall. Recovery.

Kocher, in the article which was quoted in the beginning of this paper, reports two cases, both due to bands from old adhesions, resulting from previous attacks of unoperated appendicitis. One case had had symptoms of obstruction for ten days and gangrenous gut was found. This case finally recovered, although convalescence was complicated with an abscess. The second case had a firm band binding the intestine so tightly as to completely obstruct its lumen. Recovery.

David MacEwan (*Brit. Med. Journal*, June 4, 1904, page 1310). A woman, twenty-eight years of age. Vomiting and constipation for six days. Pulse, 140, and weak; temperature, 97.6°. Complained of frequent paroxysmal pain above and to the right of the navel, extending round to the back. Abdomen moderately distended and showed marked bulging in the iliac regions. It became tense during the attacks of pain, and peristalsis was visible. Tenderness was marked on deep palpation, but no tumor could be felt. No result from large enemata. She had had no previous serious illnesses. Operation. In the right iliac fossa, a loop of bowel was found to be snared under the vermiform appendix, which was firmly adherent by its free extremity to the mesentery, close to the ileum, and about three inches from the lower end of the latter. There were no signs of recent inflammation of the appendix. The implicated portion of bowel was easily liberated and the appendix was then removed. The latter was above the average length and, for about an inch at its extremity, it was impervious and cordlike. Recovery.

O'Brien (*St. Paul Med. Journal*, 1903, page 618) reports the case of a man who gave a history of much previous digestive disturbances extending over many years. He was suddenly seized after luncheon with violent pain in the left lumbar region. He had a drawn, cold, ashy face, wet with perspiration; pulse, 74; temperature, 98°; nauseated. The next day he vomited greenish material; temperature, 99°; pulse, 56. Operation disclosed a large amount of fluid, and a knuckle of dark, almost black, intestine. This loop was followed up for four inches to an inflammatory ring of omentum. After releasing the constriction, the color came back into the gut. The appendix

was found glued to the cæcum and obliterated. Recovery.

Lapeyre (*Rev. de chir.*, 1903, page 608) reports three cases. The first patient had had brief, painful, abdominal crises. In this case the appendix itself was the strangulating agent. Death. The second case was due to old appendicitis, but its mechanism was not discovered at operation. Death. The third case showed a volvulus of a small intestinal loop, which had passed in front of the great omentum, which was itself buried in the midst of a mass of intestines. The great omentum occupied this abnormal position by reason of adhesions, which fixed its inferior angles to both iliac fossæ. The adhesion to the right was particularly firm. The diseased appendix had become sheathed with infiltrated and diseased omentum. Recovery.

For the purpose of completing the entire subject of intestinal obstruction, due either to previous unoperated appendicitis, or following an operation for appendicitis, I have appended conclusions drawn from the study of the 86 cases of obstruction, following appendicitis operations, published in the *Medical News* of September 3 and 10, 1904:

1. The rarity of intestinal obstruction in comparison with the innumerable operations for appendicitis is noteworthy.

2. Obstruction may follow the interval operation. Eight cases, or nine per cent., belong to this category.

3. Obstruction is most apt to follow appendicitis with abscess formation. Sixty-nine, or eighty-one per cent., were of this class. Hence the greater necessity for early operation.

4. Mechanical obstruction may come on at any time after the appendicitis operation, when the diagnosis from that due to peritonitis may present great difficulties. When in doubt operate, for many patients have undoubtedly died unoperated upon, with an unrecognized, mechanical obstruction (with or without peritonitis) where the erroneous diagnosis was made of simple, uncomplicated peritonitis.

5. Obstruction may occur years after the original attack or operation (e. g., ten cases occurred two years after the operation), when it may come on suddenly in perfect health, or preceded by a period with symptoms denoting partial (chronic) occlusion, the right interpretation of which symptoms from a prophylactic standpoint is of the greatest importance.

6. There may be several attacks of true mechanical obstruction. In the 86 cases, several attacks occurred in five, or 0.8 per cent., of the 57 patients who survived the first operation for obstruction.

7. Of the 86 patients, 57, or 66.3 per cent., recovered after operations for occlusions; 29, or 33.7 per cent., died.

8. The small intestine was occluded in all of the fifty cases where it was noted. The causes were given in 53 patients, as follows: constriction by bands in 28 patients; volvuli in ten; kinkings or angulations in eleven; and internal herniæ in four cases.

9. Gangrenous bowel was encountered in five cases, necessitating resection, resulting in three recoveries.

Résumé of the 33 cases of intestinal obstruction following attacks of unoperated appendicitis, reported in this article:

1. Volvuli occurred in six patients of whom four died, and two recovered: there were kinks in four, of whom three died, and one recovered: bands occurred in twenty-three, of whom eight died, and fifteen recovered.

2. Of 33 patients, 15, or 45.5 per cent., died, while 18, or 54.5 per cent., recovered.

3. Of seven operated upon within three days, two died, or 28.5 per cent., while twelve were operated on after four days, with a mortality of eight, or 66.6 per cent.

4. These statistics point a forcible moral: Operation must be performed earlier on these patients! The burden of responsibility rests with the general practitioner, who always sees these patients first, to summon at once a surgeon, when, after a short trial, medical measures fail to relieve.

5. Seven patients, or 21.27 per cent., had gangrenous intestine, four of whom died, and three recovered.

6. The appendix itself acted as the obstructive band in eleven cases.

7. Prophylaxis consists in carefully regulating the diet of every patient for several months after an attack of appendicitis. Constipation and attacks of colic should be promptly and vigorously treated and anxiously watched. Abdominal massage may be used to release adhesions due to the antecedent periappendicular inflammation.

8. Symptoms due to chronic obstruction should be distinguished from intestinal indigestion and treated accordingly.

Addenda.—Since I wrote the foregoing article, a thesis has appeared by Maurice Garayon, presented at the University of Lyons, entitled *Des acclusions intestinales d'origine appendiculaire*. In this are reported 19 cases, eleven of which had followed attacks of unoperated appendicitis, with seven recoveries and four deaths, and eight cases followed operations for appendicitis, six of which

ended in recovery and two in death. Three additional cases also are reported in the *Archiv für klin. Chir.*, Vol. LXXIII, Heft 3, page 804. Two followed unoperated appendicitis with one recovery, while one case was subsequent to an operation for appendix abscess, there being gangrenous intestine found at the time of operation for obstruction. Following this latter operation, a fecal fistula developed, the attempt to close this two months later resulting in death. Six cases of obstruction in children are recorded in the *Archiv für Kinderheilkunde*, Bd. XXXIX, Heft 4-6, page 247. Three of these cases of obstruction followed attacks of unoperated appendicitis, with two deaths and one recovery after operations for the obstructions. Three were subsequent to appendicitis operations, all the latter patients dying.

50 EAST FIFTY-THIRD STREET.

RETARDED DEVELOPMENT OF SPEECH IN YOUNG CHILDREN.*

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The normal child begins to understand spoken words during the closing months of the first year, and begins to make intelligent use of them soon after the middle of the second year. If these beginnings of the development of speech do not appear promptly in the order named a careful search should be made for the cause of the delay. We first look for structural irregularities in the peripheral organs of speech, the tongue, palate, lips, teeth, nostrils, and pharynx. Is there free nasal respiration, and are there no mechanical obstructions to the action of the organs of speech? Then we look for defects in the nerve supply of these peripheral organs. A slight paretic condition of the nerves of the tongue, palate, or lips will often result in very marked defects of speech. Closely related to the peripheral organs is the central or cerebral speech mechanism, and even more closely related to the latter are the intellectual centres of the brain, so that, as Max Muller has said, "language and thought are inseparable. To think is to speak low. To speak is to think aloud." Faulty hearing power will also naturally suggest itself, and in many cases the first suspicion of deafness may be aroused by the retarded development of speech.

If a child does not hear words spoken, he will not understand them, and if he does not understand

* Read before the Medical Society of the State of Pennsylvania, in Pittsburgh.

he will not use them. There will be no development of speech and there will be, in consequence, no development of all that portion of the brain and nervous system which presides over the faculty of speech. The intellectual centres, also, being deprived of the stimulus which comes from the use of spoken and written language, will share in the tardy development, and we shall have a feeble minded as well as a deaf child, the former condition being a natural consequence of the latter. The moral nature also becomes perverted. The child is out of harmony with his environment. He does not understand what is expected of him. The nervous energy that should be expended in normal activity is wasted or misdirected. He grows sullen and morose, or develops tantrums. In either case he generally enlists the sympathy of the various members of the household, who proceed to spoil him by granting his every wish, and withholding all forms of discipline. He frequently becomes vindictive and destructive, and requires most careful supervision.

The cause of the condition may be by no means easy to determine, and the diagnosis and prognosis are equally difficult. Is the child mentally deficient because of some organic cerebral defect, or is he merely mentally undeveloped because of his inability to hear and use articulate speech. Only the other day I saw a child in an institution for imbeciles and idiots, who had no organic defect of the brain, but who had failed to develop intellectually because she was hard of hearing and could not talk. Many similar cases doubtless find their way into such institutions because of mistakes in diagnosis, and thus fail to receive appropriate treatment. On the other hand our regular schools have many inattentive and backward children whose only defect is partial deafness. Dr. James F. McKernon, of New York, reports having examined, in a single institution, 154 children, ranging from four and a half to sixteen years of age, and having found 30 unsuspected cases of deafness. This would seem to emphasize the importance of a thorough examination of the hearing of school children in order that remedial agents may be employed, in cases of incipient deafness, before the condition becomes unalterably established, and the speech becomes impaired.

It must be remembered that partial deafness in young children or deafness for only a few sounds is sufficient to interfere with the normal development of speech. As a rule the child speaks the language that he hears, and defects of speech always suggest a corresponding defect of hearing. If the defect of hearing is so marked as to render only a few sounds audible, the child naturally fails to get the meaning of spoken words and sentences,

and, as a result, he will soon cease to make practical use of them. Failing to understand general conversation, he gradually stops listening, and the brain finally loses its power to comprehend the meaning of spoken language. While there may not be absolute deafness for all sounds and noises there is a kind of intellectual deafness which renders conversation inaudible and meaningless.

By way of illustration I beg leave to report and exhibit a case that has recently come under my observation through the courtesy of Dr. William M. Beach, of Pittsburgh.

One year ago this child, Sarah M., aged 5 years, could not understand or use spoken language. She could say, at dictation, a few words, such as *mamma*, *papa*, *baby*, but she never used them voluntarily, and she showed no appreciation whatever of their meaning. When spoken to she was perfectly indifferent. If her attention was claimed she would look up into your face without changing her expression, or comprehending in the slightest degree what was being said to her. She did not seem to know even her own name. On the other hand, she was very skillful in pantomime. She could make her every want known by this method of communication, and she could understand its use in others. For example, when asked, on one occasion, if she would like to have a paper and pencil to write with, she gave no sign of comprehension, but when the paper and pencil were shown to her her face immediately lighted up, she came forward, took them and began at once to make little connected characters. When it was suggested to the mother that the child might be deaf she declared that it could hardly be so, for she gave positive evidence of hearing and enjoying instrumental music.

Physically the patient is somewhat below par. She is well formed but undersized, weighing only three pounds at birth and thirty pounds now at 6 years of age. In her first year she had measles, pneumonia, and two attacks of whooping cough, and, in her fifth year, bronchitis and la grippe with an acute unilateral otitis media. She takes cold easily and each attack is attended by more or less congestion in the region of the drum membranes. She did not walk until she was two and a half years of age, and it was thought that her delayed speech development was due to her slow physical development, and that her talking like her walking would come with time, and, to use a common expression, she would grow out of the difficulty, a thing by the way which never happens. There is no such thing as growing out of a defect of speech. One must get out or be helped out.

After a careful study of the case, covering a period of more than a week, it was found that the patient could hear and enjoy musical sounds, but that she had no conception whatever of the meaning of a single syllable of speech. Her own name had no meaning to her. The words *mamma* and *papa* failed to designate these individuals, and yet there were evidences of at least a partial hearing of the sounds of which the words are composed. The patient could hear, "but hearing could not understand," and failing in the appreciation of auditory

speech she was rapidly developing so called visual speech. The eye was taking the place of the ear in conversation, and she herself spoke by means of pantomime. The condition was of gradual onset and development, and probably the result of faulty or partial hearing due to a defective auditory apparatus, which in turn was the result of her various illnesses, accompanied by ear complications, during her second year, when the cerebral zone of speech undergoes its most important developmental changes.

Assuming the diagnosis to be correct the practical question as to treatment was, how should we proceed to develop the patient's perceptive faculties of speech? How could we teach the child to understand the meaning of words and sentences which she could only partially hear and which she was gradually ceasing to hear altogether because they had no meaning to her, and because she therefore had no use for them? Naturally the treatment suggested was two fold, first, the improvement, as far as possible, of the peripheral organs of hearing by the well known methods used for this purpose, and, second, the training of the central auditory and speech mechanisms, by whatever means in our power, and the substitution of the use of the auditory for the visual mechanism which was being employed for the reception of language.

Local applications were made to the nasopharynx for the relief of a slight catarrhal condition in this region, and gentle inflation of the middle ears was performed, with massage of the drum membranes through the external auditory canal by means of the electric masseur. Increased hearing power invariably followed this treatment. In order to develop the central auditory and speech mechanisms, galvanism was applied to the head and an effort was made to discourage all forms of visual perception by excluding, as far as possible, lip reading and pantomime, and encouraging the use of the faculties of hearing and oral articulation. All this was not so easy as it seems. The patient, as I have said, was unused to any form of discipline, and was not disposed to change her habits without some protest. Her prejudices, however, were gradually overcome, so that she soon began to take kindly to every phase of the treatment, even the local measures employed for the relief of her hearing. Her training was of the most rigid sort. She was taken away from her mother, and given over to a teacher, who followed my directions in all respects. She was brought to my office on alternate days for treatment and suggestions as to training. The greatest difficulty was encountered in our efforts to have her try to utter articulate sounds, and our first attempts were met with absolute failure. It will be remembered that she had no auditory impressions of speech and so a beginning had to be made through the tactile sense in the same manner as deaf mutes are taught to speak. After a few sounds had been made in this way and their symbols recognized, as for instance the vowels *a* and *o*, short words were given and their significance explained by means of pantomime. She was then taught the names of ordinary things about her, and gradually required to ask for things that she wanted by repeating the names. In this way she acquired a little vocabulary of words that she could use, but could not hear when used by

others, and it remained to teach her to hear and to understand their meaning.

Dr. Victor Urbantschitsch, of Vienna, was I think the first to call attention to the importance of teaching the partially deaf to hear by the development of latent hearing power in the cerebral zone of language. It is well known that if we deprive a person of one of his physical senses the remaining senses will develop greater acuteness. The blind, for instance, learn to hear more acutely because of their blindness, and similarly this child had learned to see more clearly because of her deafness, and she was rapidly growing to depend upon her vision to do for her things that her hearing should do. Naturally, on the same principle, if her vision was curtailed, her hearing should improve with practice, and this is just what happened. She was not allowed to look at the lips of persons speaking. All forms of pantomime were gradually excluded from her life. If she wanted an article of food she had to ask for it or at least try to name it, and she went without many a good thing at first rather than conform with this requirement. Her teacher was instructed not to understand her former methods of making her wishes known, and she was, therefore, compelled to speak or go without things that she had been accustomed to have. In this way she soon became interested in words and in their meaning, and she began to give attention to them and to listen. It was found that after she really knew a word and its meaning she could hear it if only whispered near her ear, and the Urbantschitsch method of repeating words and sentences frequently and distinctly close to the ears, to develop their auditory impressions in the brain, was pursued with gratifying results. It was found that loudness was not necessary, and that distinctness, using the natural forms of speech, as far as possible, was of greater importance.

No electrical device for magnifying the sounds of speech was used for the reason that, so far as I know, nothing has yet been perfected to a sufficient degree to make it practicable. The metallic character of the reproduction of speech in graphophones as now constructed renders them useless and in some instances probably harmful for this purpose. It is quite possible, however, that electric appliances will in time prove to be of great value in this line of work, but at present nothing can equal the natural speaking voice of the teacher.

Our patient was under this special training for about ten months, and the results have been most satisfactory. She is now learning to hear and to understand, and she is also learning to talk. Articulate speech has, for the most part, taken the place of pantomime as a mode of expression, and her speech is quite intelligible and well modulated. Equally marked also is her improvement morally, mentally, and intellectually. Her nature is changing completely from that of obstinacy to amiability, and her mentality is already on a par with that of the average child. A new world of thought has been opened up to her, and her enjoyment of life is already far greater than that of other children of her age. Her training is now being carried on successfully by her mother at home, and we have every reason to hope for still greater improvement in the future. Her hearing may never be acute, but it is

already of great value to her, and her speech, as you see, differs but little in many respects from that of the normal child.

CONCLUSIONS.

First.—Retarded development of speech in young children may be the result of structural irregularities in the peripheral organs, impaired respiration due to nasal, postnasal, and pharyngeal obstructions, paresis of the nerves supplying the organs of speech, and not infrequently to some disturbance of hearing not necessarily amounting to absolute deafness.

Second.—Retarded development of speech always results in defective mentality.

Third.—The treatment consists in the removal of any obstruction that may exist in the peripheral organs and in the systematic training of the auditory and speech centres by the use of specially prepared vocal exercises.

Fourth.—A child may be taught to hear in exactly the same way as he is taught to read and write.

1627 WALNUT STREET.

ACTIVE AND PASSIVE EXERCISE IN THE TREATMENT OF SYPHILIS.

By NATHAN T. BEERS, M. D.,
BROOKLYN,

MEMBER OF THE AMERICAN UROLOGICAL ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, MEDICAL SOCIETY OF THE COUNTY OF KINGS, LONG ISLAND MEDICAL SOCIETY; LIFE FELLOW OF THE SOCIETY OF SCIENCE, LETTERS, AND ARTS, LONDON, ENGLAND.

Some months ago, in one of the weekly journals, the opportunity was given to enjoy some very interesting observations on the beneficial effects derived from active, out of door exercise in the treatment of syphilis. The writer was an English gentleman whose practice included a majority of the students in one of the large British universities, and I sincerely regret being unable at the present moment to lay my hand upon the article in order to accord the credit due him as well as to quote him exactly in his remarks. However, my notes made at the time, will give a general idea of his views.

He has observed in his practice among the students that the athletes under treatment for syphilis require much less treatment and suffer fewer secondary symptoms than the sedentary students suffering from the same disease and taking the same course of treatment. He finds that the active, out of door man will stand the largest doses of mercury and iodine, when required to do so, with little or no discomfort or show of poisoning, and seems to pass to a satisfactory and permanent cure without interruption. On the other hand, the sedentary

student, although he may be most persistent and earnest in his treatment, usually does poorly, suffers much from annoying secondaries, and soon becomes saturated with the drugs used. The writer lays this saturation at the door of incomplete elimination of the drugs employed.

During the past few years in which I have confined myself to special work, I have continually observed, both in private and in clinical cases of syphilis, the truth of our English brother's deductions. I have seen many cases which were doing poorly even under the fullest and most persistent treatment, clear up nicely after a prolonged vacation in the open air or on the patient's changing from a sedentary life to one of activity in the open. The importance of this factor in the eradication of syphilis cannot, in my opinion, be overestimated. We see constantly the good effects of air and sunshine in tuberculosis, a disease not greatly unlike syphilis in some of its manifestations; and, while all of the text books speak of the value of active, out of door exercise and sunshine in the treatment of syphilis, there are but few of us who make it a point to bring the importance of these valuable adjuncts in the treatment of the disease forcefully before the patients' minds.

That mercury and iodine are active irritants in the human system cannot be disputed. We have been taught for many years to follow a dose of calomel, given for the relief of hepatic congestion, or what not, with a draught of some saline water; and yet the poor syphilitic is stuffed full of mercury in ever increasing doses until the system rebels, without thought of its potent effect for bad.

In writing of the causes of arteriosclerosis, Dr. Drennen, of Hot Springs, Ark., in the *Journal of the American Medical Association*, speaks very plainly of the effects of uneliminated mercury in the human system, and I take this opportunity of quoting a part of his paper. He says:

"I have long been persuaded that arteriosclerosis does not depend on any specific irritant for its production, but in all cases a combination of elements enters as causative factors. Any agent or combination of agents that is continuously left to circulate within the vessels, which is foreign to normal cell life, will sooner or later be followed by the very changes now under consideration, no matter whether said agent or agents be alcohol, lead, syphilis, autointoxication, or otherwise. To me it is passing strange that a drug like mercury, which is more commonly used in the treatment of syphilis than any other, and has been for ages past, has not been considered one of the chief agents in the production of arteriosclerosis. When we come to consider the fact, it would be almost marvelous if

at times we did not recognize the possibility, and even the very strong probability, of such being true, when we know so well the method commonly adopted by the profession at large to-day in the administration of mercury for the relief of syphilis.

"What has been the custom and teaching of some of our best writers regarding this subject for the past quarter of a century? Have we not been led to believe that the so-called tonic treatment of syphilis with mercury was the only royal road to success? Has it not been the practice of many physicians to prescribe mercury for a period of two years, practically without interruption?

"I maintain that mercury is a metallic poison and altogether foreign to normal cell production, and when it is thrown into the vessels, and there left to circulate for many months, and even years, whether done on the advice of a physician or through self prescribing, we shall find an agent that is just as capable of producing arteriosclerosis as syphilis or any other agent.

"So many times has it happened that patients have come to my office who have been under continuous syphilitic treatment for many years, and, after having given a complete history of the affair, draw from their pockets a little bottle of mercury pills, or of some other pharmaceutical preparation, and relate with painstaking care just how much of this very much abused drug they have been taking during the past three or five years—daily, as the case may be—practically without interruption. It is common enough, I assure you, to warrant me in the belief that to-day more persons are treating themselves for syphilis than are under treatment by regular physicians. With this reckless, senseless, and indiscriminate use of a drug like mercury, need we expect otherwise than to find arteriosclerosis resulting, particularly so when combined with one of man's oldest and most treacherous enemies, syphilis?"

While too much attention and study cannot be devoted to the introduction of mercury into the system, at least an equal amount should be expended in securing its dissemination throughout the tissues and its thorough and final elimination. This point cannot be too strongly emphasized. The proper treatment and the subsequent health of the patient depend almost as largely upon the elimination of the drug as upon its introduction. We find many patients, who, although saturated with the drug, are receiving no relief whatsoever from their symptoms, but are rather tending toward retrogression and debility. The slightest increase in their tonic dose seems to add to their trouble and they promptly develop poisoning symptoms. These cases are

almost invariably seen in sedentary patients. A short course of saline laxatives combined with some form of regular, out of door exercise, such as, horse-back riding, walking trips into the country, out of door games, or a sea trip, stopping the mercury entirely, will very shortly bring back the ruddy flush of health to the cheek, dispel the "blues," and leave the patient well prepared for further treatment when indicated.

The question is often asked, What shall we do with those cases in which active exercise in the open air is impossible,—where the patient cannot or will not follow the doctor's advice? The answer is simple: massage. Here it is that massage offers its greatest advantages. A cold dip in the tub, a brisk rub down with a rough towel, and an hour of thorough massage with Swedish movements administered by a man who understands his work, if taken regularly and for even a short period, will prove very valuable in handling these cases. The circulation is thoroughly aroused to perform its functions, the tissues receive their proper nourishment, quiet sleep is assured, and the patient enjoys a feeling of well being wholly satisfactory to both the doctor and himself. When necessary the administration of mercury or iodine may be reinaugurated and the doses run up to surprising quantities without the slightest distress or discomforting results.

On seeing a case of syphilis for the first time, I make every effort to impress upon the mind of the patient the importance of air, sunshine, and exercise in his treatment. And on each succeeding visit the advice is repeated until he is convinced that his cure depends in a great measure upon his own conduct. When the importance of an active, out of door life is thoroughly impressed upon the patient's mind, he will usually become an ardent supporter of your theory and active in his own welfare. It is usual for these primary cases to undergo, during the first few weeks succeeding a positive diagnosis of their disease, a most harassing depression of spirits, and the physician who supplies the patient with something to do for himself during this period goes a long way toward gaining the confidence of his patient.

Look into your patient's habits; study his surroundings; advise him regarding his food and clothing, his bathing and his sleep. Limit his tobacco, interdict alcohol, and eliminate harmful companions, both male and female. Instruct him in his personal hygiene and acquaint him of his dangers to others with whom he daily comes in contact. If he is inclined toward athletics, foster the spirit to the best of your ability. Encourage him in golf, tennis, riding, bathing, fishing, baseball, rowing, and, best of all, walking across country. Induce

him to walk everywhere he goes, winter or summer, fair weather or foul. When cold weather comes on, advise indoor exercise with dumbbells twice daily until a free perspiration is started, then a quick bath in cold water followed by a brisk rub down with a rough towel. If within the limits of the patient's purse, horseback riding, even indoors, may be found very beneficial in the winter months, if taken regularly. Many of the clubs offer splendid opportunities for indoor exercise on their hand ball courts.

In the case of sedentary patients, every effort must be made to change their habits and surroundings. The clerk who has no time from his desk for exercise, may often times exchange his job with the collector. The delivery wagon offers plenty of air and sunshine for the poor store keeper who is not proud. Where a man is confined to his office or at the bench all day, induce him to spend his evenings in long walks between supper and bedtime. Give him a pedometer and insist upon his submitting to you a record of his daily exercise. His Sundays may be spent to the best advantage in the country.

It is not my purpose or intention to discuss in this short paper the treatment of syphilis by medication. My desire is simply to remind those who are called upon to treat the disease, of the far reaching benefits to be derived by combining with the orthodox medication *regular* active, or passive exercise.

Few diseases offer better possibilities for a cure than syphilis when properly and systematically treated. General practitioners are often prone to look upon syphilis lightly. Their treatment of the disease is tentative. The old mixed treatment prescription and the protoiodide pill are often used improperly, and while their benefits are most gratifying at times, the results are rarely permanent. And yet the doctor is not wholly to blame; these patients are usually "short stayers," and it is almost impossible—especially so in chronic cases—to impress upon them the importance of systematic treatment. In all cases of syphilis, seen privately, a yearly contract is advisable, the patient paying for his treatment quarterly in advance. The doctor is thus enabled to watch the case carefully and regulate the treatment, and the patient is more assured of the probability of his cure.

For the first year or more, I believe the mercury is best introduced by means of inunctions. The entire body, including the head, hands, and feet, is divided into sections and each section rubbed consecutively daily until the "gums are touched" or the patient's bowels, becoming irritable, give hint of saturation. I have found the average number of rubs required to be about sixty, but some cases

will stand as high as eighty or ninety. The patient is allowed to bathe before each inunction if he so desires. Going over the section to be anointed with a little ether, just before applying the ointment, greatly facilitates its absorption. I prefer an ointment composed of very pure oil of sweet almonds, wax, gelatin, soap, and water, containing fifty per cent. of mercury. This preparation contains none of the greasy elements which make the use of the old official "blue ointment" so objectionable to many. It has no odor, keeps well, and its application is accomplished with a few moments of rubbing. On the hands, feet, and face the white mercurial ointment is used, preferably before retiring, when required in the first weeks of the secondaries.

During the first year of the disease, three complete series of inunctions usually suffice to accomplish the best results, no other medication being used in the general treatment. The first series is given daily, while in the second and third, every other day usually works best. The physician should insist upon the inunctions being administered by a competent assistant.

1265 BEDFORD AVENUE.

REPORTS OF TWO CASES OF CURED GRAVES'S DISEASE.*

By GERALD BERTRAM WEBB, M. D.,

COLORADO SPRINGS.

I am reporting briefly the histories of two cases of Graves's disease, cured by a method which I think is somewhat unusual.

I will relate them just as they came to me, and I will give the theoretical ideas I carried into practice, just as they entered my mind.

The treatment of the first case occurred in the year 1900.

Mrs. P., a widow, aged 45 years. Occupation, boarding house keeper. Patient had suffered from Graves's disease for nine months. She had been under numerous physicians, and had tried various treatments and various climates with no improvement.

Family history: Nothing of importance. Later I found a son to be a hemophilic.

History of case: Patient related that the disease had started with feelings of intense heat, a palpitating heart, and insatiable thirst. These symptoms had been followed seven weeks later by the goitre and exophthalmos, the latter being accompanied with burning pain in the eyes.

In her earlier history there was little of importance to note, beyond severe nervous and mental strains, and periodical distressing headaches. These headaches had been absent during the course of disease, but returned when the patient became well.

* Read before the El Paso County Medical Society.

Menstruation was normal, and is so to this day, the patient being now fifty years old.

The patient presented markedly the prominent symptoms of Graves's disease, goitre, exophthalmos, tachycardia, and tremor; many minor ones were also present. She had a singularly alert mind and her memory was exceptionally good, enabling her to memorize with greater ease than either before or since the disease. She was exceedingly restless, irritable, and fidgety.

When I was summoned to attend the patient she was suffering from a most severe, watery lenteric diarrhoea, a dozen movements an hour being by no means unusual. It was impossible to count her pulse, the palpitation of the heart being so great. Her condition seemed critical.

Whilst observing the patient, I was struck by the great waste of nervous energy going on, due to the tremor and jactitation of the extremities. The thought came to me, whilst putting the Graves's disease itself from my mind, that could I stop this leak in the nervous energy reservoir, she might improve. Going further, I revolved the question, why could not the whole disease be due to a neurasthenic condition, in one who had forced herself along with a determined will, when the nervous system had been exhausted and should have been relaxed; it was so evident that many voluntary nerves were acting in an involuntary manner, and involuntary nerves were out of their automatic gear, resulting in disordered functions and the consciousness to the patient of organs not heretofore noticed.

The patient seemed to have lost the power to guide her voluntary nerves, and was obeying every dictate these sent to her.

Knowing that a cardinal part of the cure of neurasthenia depends on a patient controlling her voluntary nervous system first, and that then the automatic or involuntary system will right itself in time, I sat down beside her and proved to her that the tremor was due to a lack of mental control. In a few minutes she was able to exercise the necessary control, and I was able to get her fully relaxed.

Then realizing the too wide awake and active state of her brain, with her mind running in every direction, I selected simple inspiring poems to be memorized. Personal experience had taught me that it was far easier to relax the body than the mind, and that if the brain continued its unchecked, riotous behavior, little good was gained by bodily relaxation. Every day, at certain hours exactly I instructed the patient to recite these poems to herself, and to concentrate her whole being in them. From the first improvement was marked, and in a few weeks she was wonderfully changed. However, it was nearly a year before she was quite herself again. In the light of my second case I cannot but feel that the length of time taken in her cure could have been materially shortened, could I have isolated her from her family and cares.

CASE II.—After a lapse of four years, with no new encounter with Graves's disease, I was consulted in January, 1904, by a second case.

Mrs. Z., a widow, aged 40 years; boarding

house keeper; had suffered from Graves's disease for nine months. She had received advice and treatment from several physicians.

History of case: As in the former, nervous and mental strains had been frequent and severe. All her life she had endured periodic painful headaches. Menstruation was normal and is so to this day. The patient related that in April, 1903, she had experienced a sudden loss of flesh; this was followed two months later by the exophthalmic goitre symptoms. She also had had attacks of severe watery diarrhoea, when her temperature would register 103° . Examination revealed all the chief symptoms of the disease, namely, goitre, exophthalmos, tachycardia, and tremor.

Recalling my former case, I was especially struck with the fidgetiness and tremor, and that the mind was very alert. But this time there was also a condition of absent mindedness, which was characterized by a sudden downward and sideways fixed stare of the eyes, whilst conversing. Again the idea recurred to me, that could I check so much leakage of nervous energy from the reservoir of nervous matter, the Graves's symptoms might disappear with the neurasthenic.

My treatment was very similar to that employed in the first case. A placebo was administered. Absolute relaxation for mind and body was to be methodically carried out. Moderate exercise, cold baths, the cold water to be applied especially to the nape of the neck. Improvement came immediately, but owing to illness in her family, the patient was unable to do justice to the treatment.

After about three months, I isolated her from her family and removed her to a ranch a few miles from town. Here in a few weeks all the remaining symptoms entirely disappeared. In undergoing her cure, the patient's weight increased from 70 pounds to 117 pounds, a gain of 47 pounds.

Finding that piano playing and horseback exercise were pursuits that absorbed the patient, I allowed them in moderation, the latter in spite of the fact that she had been warned by a physician that she might fall dead any minute if she exercised much. The headaches of her earlier history have never returned in so severe a form, and during the course of the disease were entirely absent.

In summing up these two cases you will have noticed many resemblances. Both were in their forties, both were widows, and both were boarding house keepers (at which occupation they are again engaged), consequently both had been severely tossed by the tempests of life. In spite of severe headaches and great restlessness, both had kept to their work, although with their nervous systems almost bankrupt. Neither had reached the climacteric, nor has either yet. I may add that both still retain an unusual aspect of the eyes, a probable sequel to the stretching.

My theory in regard to the origin of Graves's disease in these women is, that it resulted from nervous exhaustion, and that the escape of nerv-

ous energy needed blocking, as proved in both cases by the result of the treatment practised. To help bear out my theory is the fact we all know, that the early diagnosis of Graves's disease from neurasthenia is often impossible.

The treatment, based on the theoretical cause, I have termed a recreation nerve cure. The term "rest cure" I have always felt to be a misnomer, for my best results in the cure of nervous patients have always been brought about by keeping them the busiest people in town. To use a quotation, the author of which I cannot recall:

Lack of occupation is not rest,

A mind unoccupied is a mind distressed.

The choice of diversions for such recreation is of paramount importance, and keeping in mind another quotation,

The pleasures we delight in phisic pain

instruct such patients to occupy themselves in moderation with pastimes which will absorb them body and mind.

Teach method, relaxation, and control. These three will lead to the cure of these patients. While in textbooks of medicine little is known of the cure of a disease, much is written. An instance we can all remember is the disease of diphtheria, on which pages of treatment are now replaced by a few lines. I believe in future this simple method by which I have successfully cured two cases of Graves's disease, will replace the many surgical and medical treatments advocated.

1222-NORTH CASCADE AVENUE.

(In the discussion which followed, Dr. Friedman, an oculist, reported to the society that examination of the eyes of the first case, during the last year, had revealed beginning optic nerve atrophy in each eye.

In reply to questions, the essayist stated that Longfellow's Psalm of Life and Light of Stars were favorite poems selected for patients to memorize.

He considered, too, that the ordinary treatments would of necessity fail because of the attention they attracted to the very organs it was best for the patients to ignore.)

Graduate Nurses from the Massachusetts General Hospital, Boston.—The following young women have received diplomas from this institution.

Edith E. De Land, Nellie J. Harvey, Helen G. Cody, Aletta A. Clark, Olga E. Ahler, Izah Mitchell, Amy O. Gamage, Violet L. Kirke, Justina A. Briggs, Annie C. Carstensen, Catharine Beattie, Olive B. Golding, Mary S. Doherty, Mary E. Smyth, Miriam B. Holder, Maud E. Retallick, Nellie M. Ford, Nellie A. Stevens, Mary R. Walch, Katharine R. Moloney. Those who received diplomas for the thirteen months' postgraduate course were: Hanna R. Hogan, Mabel J. Seaver, Gertrude B. Hislop, Lena B. Tompkins, Mary A. MacNeil, Grace P. Hurlburt, Emma A. Armstrong, Jessie L. Brown.

URÆMIA WITH PERICARDITIS; CLINICAL AND PATHOLOGICAL REPORTS.

By HENRY S. WIEDER, M. D.,

PHILADELPHIA,

AND

HAROLD L. SPRINGER, M. D.,

WILMINGTON, DEL.,

FORMERLY RESIDENT PHYSICIANS OF THE PRESBYTERIAN HOSPITAL OF PHILADELPHIA.

The following is a brief report of the clinical history and the pathological findings of a case of uræmia with pericarditis:

The case of uræmia and pericarditis occurred in a man 50 years of age, stationary engineer by occupation. His mother died probably of alcoholism. He, himself, had had measles, varioloid, mumps, and gout. In July, 1902, he had an attack of gout starting in the great toe of the right foot. He had always been a heavy drinker. This attack of gout confined him to bed for ten weeks, and he stated that from that time he started to decline in strength, although his appetite was good. He would have œdema of the legs for several weeks at a time, easily became dyspnoëic, passed urine frequently, and complained of vertigo.

Physical examination on admission to the hospital: Gouty nose, puffed face, tongue dry and parched, with whitish fur upon it.

Lungs: Expansion very poor. Tactile fremitus decreased over the base of the lungs posteriorly. Breath sounds almost inaudible, and vocal resonance decreased over the base of the lungs posteriorly. Lungs hyperresonant elsewhere.

Heart: Impulse visible in the fifth interspace, palpable in the fourth, fifth, and sixth interspaces, apex sixth interspace one inch within the anterior axillary line. Impulse weak and sharp with slight roughening. The boundaries were hard to determine, but as obtained they were: Upper border in the second interspace, right border one and one half inches to the right of the sternum. The left border passed about one inch above the nipple. On auscultation the first sound was rather quick and of poor muscular tone. At the base the sounds were accentuated and reduplicated. No murmurs were heard, although they had been heard previous to admission.

Liver: Sixth rib to two fingers' breadth below the costal margin.

Epigastrium tender with marked resistance, muscles being very rigid.

Blood: Hæmoglobin 45 per cent. R. B. C., 2,020,000. Leucocytes, 7,000.

A couple of days after admission patient developed pain over the præcordium and a coarse, rasping, superficial friction rub was heard in the fifth interspace to the left of the sternum. It was heard loudest during systole, but partially also during diastole. His temperature rose from 97° to 101° on May 19, 1903, and remained up for two days. He became very restless, could not sleep, and was obstinately constipated. His urine once showed a trace of albumin and on another

occasion was negative; at no time were casts found in a sedimented specimen, although we have since learned that they were found prior to admission in a centrifugated specimen. The urine amounts ran between 64 and 72 fluid ounces.

On the day of his death he became very nervous and said that he feared an attack of delirium tremens. He had considerable pain over his heart, his pulse was poor, and his urine greatly decreased in amount. His condition grew gradually worse until he had a convulsion. He became deeply cyanosed and his pulse very weak. His breathing was stertorous. When he recovered from the convulsion, his pulse gained in volume and he was bled 18 fluid ounces. No paralyzes were present. He continued to get worse, no treatment availing, and he died the same night.

NECROPSY REPORT.

There was no fluid in the abdomen. Relations of the abdominal viscera were normal.

There were 18 ounces of a clear yellow fluid in each pleural cavity. There were no pleural adhesions except at the right apex. In the right apex were several old scars apparently the result of tuberculosis. The bronchial lymph glands were not enlarged.

Pericardium: There was considerable inflammation around the pericardium, the cavity of which contained two ounces of a clear, yellow fluid. The epicardium and the parietal layer of the pericardium were generally adherent, from deposits of fresh fibrin, which covered a large portion of the heart. The fibrin was particularly marked around the great vessels.

Heart: The heart was nearly covered by the left lung which was adherent to the pericardium by fresh adhesions. The left ventricle measured 25 mm. in thickness, was somewhat friable and yellow, and showed some spots of fibrous tissue. The mitral valves were somewhat puckered and the chordæ tendineæ were thick and apparently short. The aortic valve showed a marked degree of atheroma. The three edges of the tricuspid valve were white and puckered, but the orifices of the valve were not contracted. The right ventricle and the right auricle were considerably dilated, and the right ventricle measured 8 mm. in thickness. Weight of the heart, 1,100 gms.

The intestines, adrenals, and pancreas were normal.

The liver was somewhat fatty and pale, but not enlarged.

The stomach showed a moderate degree of hypertrophic gastritis.

Both kidneys were small, especially the left one. They were much scarred. Weight of the right, 120 grammes; left, 90 grammes. The capsules were adherent. There were numerous small cysts throughout the cortex upon section. The cortex was very much contracted.

Pathological Diagnosis.—Hypertrophy and dilatation of the heart. Atheroma of the mitral and tricuspid valves. Acute pericarditis. Fatty and contracted kidneys. Fatty liver.

Cause of Death.—Uremia.

MICROSCOPICAL REPORT.

Kidney: The epithelial cells of the tubules were granular and in some places detached. Many glomeruli were replaced by fibrous tissue and the capsules of Bowman were quite thickened. Cysts were scattered throughout the section varying in size, and the entire organ showed a marked degree of passive congestion.

Liver: This also showed chronic passive congestion to a marked degree and at places fatty degeneration had begun.

Correspondence.

LETTER FROM TORONTO.

Christian Scientists before the Toronto Courts.—The Ontario Board of Health.—Medical Government Officers.—Absentees.—The House Staff of the Toronto General Hospital.

TORONTO, February 18, 1905.

Several Christian Scientists have again been before the Toronto courts. This time the case was that of a young man with typhoid fever and complicating pneumonia at the end. Although the corporation for which this young man worked sent their physician to attend him, he was fast in the clutches of the Christian Scientists, and the medical man was only permitted to see him two or three times. Warnings by him were unheeded, so at last the case was reported to the authorities of the law, and the doctor in question ceased all visits. The police magistrate of Toronto has sent those implicated to be tried before the Assize Court. Another doctor became involved, having been called in just prior to death and issued a certificate of pneumonia. As this was not the first time that the latter physician had issued certificates of death to people dying under Christian Science want of treatment, he came in for some rather sharp criticism in different quarters. We are glad, however, to report that the Toronto Medical Society, of which he is a member, has exonerated him from any unprofessional conduct, considering his action in the light of an error of judgment. No doubt our professional brother will take this seriously to heart and refrain altogether in the future from issuing any more certificates for the Christian Science devotees.

The regular quarterly meeting of the Ontario Board of Health was held in Toronto a short time ago, and from the report of the secretary we gather that there were in the year 1904 25,415 deaths in Ontario, as compared with 25,267 for the previous year, thus giving a rate of 12.8 per 1,000, as against 12.6 in 1903. A noteworthy feature of the report was that the deaths due to preventable causes had decreased by 340, or nearly

10 per cent. This decrease occurred in cases of scarlet fever, which were 400 fewer than for the previous year; diphtheria, 40 fewer; smallpox, 17; whooping cough, 58. Typhoid fever increased by 99 and tuberculosis by 95. The secretary states in his report that the use of antidiphtheritic serum has had no appreciable effect on the death rate from diphtheria, which is higher than in 1903. An effort will be made to have tuberculosis placed on the list of notifiable diseases, as this is a very proper and important step to take in preventing the spread of the disease. The number of deaths from tuberculosis showed an increase from 2,072 in 1903 to 2,168 in 1904. The bacteriologist for the board stated that during the past year a number of patent medicines, foods, and beef extracts had been carefully examined in his department, and in the case of the former a large amount of alcohol had been found, but he had found the foods and beef extracts freer from deleterious ingredients than had been expected. The board has under their consideration the establishment of a bacteriological laboratory at London, Ontario, in connection with the Medical Faculty of the Western University there.

The province of Ontario has recently passed through a general election, and there has been a change of government which, owing to the fact that there are three medical men in the new cabinet, may prove of some value to the medical profession in this Province. Dr. Robert Allan Pyne, who for many years has been the efficient registrar of the Ontario College of Physicians and Surgeons, has been returned for East Toronto by a very large majority and has entered the government as Minister of Education. His duties in connection with this office will be so heavy for some time to come that he will probably relinquish soon the registrarship of the Medical Council. Dr. Réaume, of Windsor, Ont., has also entered the cabinet of the Honorable Mr. Whitney as Minister of Public Works. He will retire altogether from practice. Dr. W. A. Willoughby, of Colborne, is also a cabinet member, but without for the present a portfolio.

The Toronto physicians do not believe in all work and no play. Spring, summer, autumn, or winter, some of them are away enjoying themselves, seeking a short respite from the cares and worries of professional life. At the present time Dr. J. F. W. Ross is in southern California; Dr. George McDonagh is in southern Italy; Dr. W. H. B. Aikins has gone to Vienna; Dr. Breffney O'Reilly is with Dr. Osler in Baltimore; Dr. W. P. Caven is in Atlantic City. Some who have been away and have returned are Dr. Campbell

Meyers, who has been for some months in Europe; Dr. William Oldright, who was at the Havana meeting of the American Public Health Association; and Dr. E. Herbert Adams and Dr. Walter Maybury, who have been investigating the climate of Jamaica.

The eight members of the house staff of the Toronto General Hospital of 1892-'3 recently had a reunion in this city. Those present were the following: Dr. H. B. Anderson, Dr. H. A. Bruce, Dr. Frederick Fenton, and Dr. H. C. Parsons, of Toronto; Dr. J. N. E. Brown, Territorial secretary, of Dawson, Yukon Territory; Dr. Middleboro, of Owen Sound; Dr. A. S. Tilley, of Bowmanville, Ont.; and Dr. H. J. Way, of Chicago. Dr. Charles O'Reilly, the medical superintendent of the hospital, was present, and stated that he was glad to know that four of these had taken English degrees and two the F. R. C. S. by examination since their graduation. Since 1876, when he was appointed superintendent of the hospital, 220 house surgeons had passed under his tuition, and he was very glad to say that but eight of them had gone beyond in the twenty-eight years since that time.

Therapeutical Notes.

Dangers of the Use of Hydrogen Dioxide in Otolology.—Bruder, of Paris, is cited in *Semaine médicale*, for September 25, 1904, as stating that not only may an unpleasant maceration of the tissues of the external ear follow the use of hydrogen dioxide in otological practice, although the instillation of a little oil of petrolatum will prevent this, but that he has seen excessive swelling of cholesteatomata ensue on its application to these growths; so great, indeed, as to produce prohibitive pain and vertigo.

Laurens, of Paris, attributes a death among his patients to the transmission of infection by bubbles of oxygen from the same agent, from the lateral sinus upon which he had operated for phlebitis, to the meninges of the cerebellum. The patient died comatose after suffering from intense headache and high fever.

Treatment of Infantile Syphilis.—Levisaur (*Journal des praticiens*, No. 28, 1904; *Journal of Cutaneous Diseases*, February, 1905) states that infants stand mercurial inunctions very nicely. Two grammes of blue ointment should be rubbed in every morning for five minutes by aid of a piece of flannel. Beginning on the abdomen a different region is selected for each day. This treatment is carried out for one month, then stopped for one week and taken up again after this rest. Local lesions should be dressed with ammoniated mercury salve (10 per cent.). One year of inunctions is followed by the administration of potassium iodide (10 grains, three times a day) for three weeks. Every three months inunctions are again given for two weeks.

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AND

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NEW YORK, SATURDAY, MARCH 4, 1905.

DR. WILLIAM OSLER ON SENILITY.

On Wednesday of last week, in a valedictory address at the Johns Hopkins University, Baltimore, Dr. Osler, who is soon to take up the work of a professor in the medical faculty of the University of Oxford, England, put forth certain statements which have led to widespread comment, mostly unfavorable, on the part of the newspapers. Some of the reports that have appeared in print have put him in a false light. For example, he has been made to seem to approve of the suggestion that men who have reached the age of sixty—and therefore have in his opinion generally outlived their usefulness and even tend in their further career to prove detrimental to the world's progress—should be put to death with chloroform. It is true that he jocularly mentioned a discussion of this suggestion in a certain book of fiction, but that he was not speaking seriously on this point ought to have been plain from his frequent allusions to his own close approach to the age of sixty. In a telegraphic dispatch to the editor of this journal, dated February 27th, he says: "Contradict emphatically that I advised chloroforming men at sixty. I said that man's best work was done before forty, and at sixty he should retire." In a subsequent com-

munication he says that the whole matter of the chloroforming was a joke.

It is no more than fair to say the foregoing, but there remain very positive expressions of opinion by Dr. Osler, expressions that he stands by. The pith of them is given in the second sentence of his dispatch. We do not believe that he is correct in this matter, and we are quite sure that some of the examples of medical men that he adduced as illustrating the tenability of his position do not bear him out in the least. Among the names mentioned were those of Virchow and Bichat. When we recall the tremendous importance commonly attached to the work done by Virchow up almost to the very end of his long life, we cannot admit that his career illustrates Dr. Osler's belief. As for Bichat, it is true that he did his work while he was young, but he died young, and we shall never know what he might have accomplished had he lived to old age.

But it seems to us that the radical fallacy of Dr. Osler's doctrine is shown by something that he looks upon as confirming it. He holds that up to the age of forty a man should devote himself to acquiring knowledge as to matters of fact, and that not until after that age should he attempt to generalize. Observation, then, according to him, is the proper pursuit of a man at the height of his powers, while deduction is allowable only when he has begun to degenerate; in other words, the acquisition of knowledge calls for mental powers superior to those that suffice for systematizing that knowledge and employing it as a basis for teaching and for the formation of theories. The senses, then, are higher than the intellect. If he holds to such a notion as this, it is no wonder that Dr. Osler chimed in with the threadbare belittling of American medicine because of the small part it has thus far taken in original investigation. There are some of us who think it a higher intellectual function to make the best possible use of recorded observations than to do actual laboratory work. From this point of view and from that of their tendency to discourage middle-aged men, we think that some of Dr. Osler's remarks are to be regretted.

CHEERING WORDS FOR HOME BOUND CONSUMPTIVES.

For nearly four years now a most interesting experiment has been in progress on Ward's Island, in the city of New York, and it may fairly be said to have passed the stage of experiment and become an established feature of practice in the Manhattan State Hospital, East, under the enlightened and progressive management of Dr A. E. Macdonald. It is that of treating the consumptive insane in tents. Dr. Macdonald's account of the experience has been published by the Charity Organization Society, in its *Directory of Institutions and Societies dealing with Tuberculosis in the United States and Canada*, and by the National Association for the Study and Prevention of Tuberculosis. It has now been issued in pamphlet form.

It was at first supposed that the camp treatment would be practicable in the mild season only, but it has been found exceedingly satisfactory to continue it through the entire year. "The Ward's Island camp," says Dr. Macdonald, "is but a few feet above the tide water level, its site is swept in winter by winds of high velocity, coming over the ice bound waters of the rivers and the sound which surround it, and it suffers as much as, or more than, any other part of the city of New York from the trying changes of temperature and humidity which are so characteristic of its climate." And he asks: "If, in spite of all these drawbacks, what has been done can be done, and that for insane patients, what may not be hoped from the extension of the same methods to the ordinary consumptive of sound mind, anxious for recovery, and capable of giving intelligent assistance in the struggle?"

It was feared at the outset that both the patients and their friends would protest against the open air treatment, but such protests have been very few, and, indeed, the cry now is for the early vernal restoration to it of the few who were returned to the buildings for the winter. The effect on the tuberculous trouble has been most gratifying—indeed, in one instance a man's weight was doubled—and both the patients and the nurses in the camps have enjoyed almost complete immunity from other pulmonary disease; not a single case of pneumonia has occurred among them

during the period, and colds have been unknown. In several instances the patients' mental condition has been much ameliorated and in a few wholly restored to the normal.

TUBERCULOUS INSANITY.

The Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis, of Philadelphia, has recently issued its *First Annual Report*, a volume of 265 octavo pages. The report presents an account of the institute's first year of work in its temporary quarters in Pine Street. Very appropriately, the lectures given to the public under the auspices of the institute are appended to the body of the report. The entire contents of the volume abundantly show the utility of the institute from the very day of the opening of its building, and are of exceeding interest to students of tuberculous disease, but we can here notice with any approach to detail only one of the features of Dr. D. J. McCarthy's report on the neurological work, the one in which he deals with the insane conditions met with in the tuberculous.

Peculiar mental states associated with tuberculous disease have excited attention from remote times, but Clouston seems to have been the first to treat of the tuberculous insanities systematically, and certain forms appear to have escaped his observation. Among 1,674 tuberculous subjects, Dr. McCarthy has observed ten who showed insanity. In four instances it was of the parietic type, in two it was set down as dementia præcox, in two it was delusional, and in two it was hysterical. He thinks that the insane states met with in tuberculous disease may be divided into two groups, one peculiar to the disease itself and the other including the usual types of insanity occasioned by a lowered state of nutrition.

A patient with tuberculous disease, says Dr. McCarthy, may know that his case is absolutely hopeless, and yet he may be happy and contented, and this, too, in spite of very decided physical suffering. He is apt to have expansive ideas and distinct delusions of grandeur. Such cases are classed by him as of the parietic type. "Speech," he says, "was tremulous and often distinctly parietic and stuttering in type." He further says: "There was a distinct tremor of the tongue and

of the hands, and in some cases this was so marked as to dominate the clinical picture."

ADENOIDS IN THE NEGRO.

In an article on Hypertrophy of the Pharyngeal Tonsil recently published in one of the medical journals the statement was made that this pathological condition did not exist in the negro race. As I have frequently seen this form of hypertrophy in the nasopharynx of negro patients in the free clinics of our Southern cities, it will be interesting to compare the frequency of adenoids in the negro and in the white race. One of the elements of uncertainty in this comparison is the increasing rarity of the negro as a racial type. In the first place, although there is a popular belief that "all coons look alike," there are as many types of the African negro as there are types of the Caucasian, differing in their physical characteristics as clearly as the French from the German or the Russian from the Italian. In the second place, through intermarriage with lighter races, the negro is losing much of his distinctive type, and more so with each generation.

Some years ago, in an article entitled *The Comparative Pathology of the Negro in Diseases of the Nose, Throat, and Ear, from an Analysis of 11,855 Cases* (*Annals of Ophthalmology and Otolaryngology*, Vol. iv, No. 4), the writer called attention to the comparative immunity of the negro to many diseases of the nose, throat, and ear. In this analysis hypertrophy of the pharyngeal tonsil was found in 982 cases of whites as compared with 219 in the negro, the latter thus forming only 22 per cent. of the total number of cases. In this tabulated list, however, the term "negro" was not limited to the pure African type, on account of the difficulties already referred to, but, approximately speaking, about one fourth of the number were sufficiently black to pass for this type. This would reduce the percentage of adenoids in the negro proper to about $6\frac{1}{2}$ per cent. of the total number of cases of adenoids.

While the white population of New Orleans, where these statistics were made, is about three times as great as the colored, still this is offset by the fact that a much larger percentage of the

negro population takes advantage of the free clinics, so that the foregoing figures give a fairly correct ratio of the proportional frequency of adenoids in the white, and in the negro race living in the Southern States.

In connection with this pathological condition, we must not overlook certain anatomical differences between the whites and the negroes which have an important bearing on this subject. The negro normally has broad, patulous nostrils which render him much less apt to suffer from the effects of a postnasal obstruction than the white. In white children suffering from adenoids there is more or less arrest in the development of the nasal organs, and this, added to the difficulties of the already impeded nasal breathing, soon develops other complications which bring the patient to the attention of the physician. In the negro, however, the roomy nostrils allow fair nasal breathing in spite of a considerable hypertrophy of the pharyngeal tonsil, so that the complications are much less frequent, and the cases are therefore less likely to come under observation.

In this connection, it is interesting to note that, in the cases analyzed in the report already referred to, a deformed nasal septum was ten times, and deaf-mutism sixteen times, as frequent among the white as among the colored patients.

WILLIAM SCHEPPEGRELL.

A CENSORSHIP OF PROPRIETARY REMEDIES.

There was provided at a meeting of the Board of Trustees of the American Medical Association, held on February 3rd, an advisory board to be known as the Council on Pharmacy and Chemistry of the American Medical Association. The object of the formation of this council, as we learn from a circular of information issued by Dr. Simmons, is to establish a kind of censorship over the proprietary preparations, synthetical chemicals, and trade mark specialties offered to the medical profession, and the eventual publication of a list of such remedies as conform to the requirements of this council in a book to bear the title *New and Non-official Remedies*. This book is intended to stand as a supplement to the *Pharmacopæia*, and the latter publication will be followed as regards plan and arrangement. The ten rules which have been formulated for the guidance of the Council on Pharmacy and Chemistry are printed in our news columns, and in so far as

any rule can be formulated for the distinction of objectionable from non-objectionable preparations, these rules seem to us to be quite satisfactory. The composition of the council is one which gives assurance of really expert and sane advice; but even with the best intention and with the most expert administration, the establishment of such a censorship is likely to prove a source of serious contention, and will undoubtedly involve the association in trouble of a kind that it has been heretofore free from.

ORGANOTHERAPY.

The idea of supplying from the healthy organs of animals some deficiency in the secretory organs of man is a very ancient one. Travelers tell us of the custom which prevails among certain tribes of African savages of appropriating the organs of animals possessed of courageous, ferocious, or bloodthirsty attributes, in order to imbue themselves with the peculiar characteristics of the animal selected. It is hardly to be supposed that the alchemists of the Middle Ages proceeded on so empirical a method or were guided by the same sort of intuition possessed by the savages, but the one curiously reflects the other and the resemblance in methods is striking, being almost as great as that between present day organotherapy and the organotherapy of the period of the Renaissance. Mr. Thomas J. Keenan, the associate editor of the *American Druggist*, in a paper read before the Kings County Pharmaceutical Society, and published in the February 27th issue of his journal, instances a number of mediæval preparations of animal origin and points to an interesting contrast between them and the later additions to our modern *materia medica* for which Dr. Brown-Séquard, Dr. W. A. Hammond, and the pharmaceutical manufacturers are responsible. He enumerates a large number of remedies of recent introduction, which consist either of the substance of the internal organs of animals, of the active principles of these, or of synthetic chemical compounds intended to represent them, and his paper forms a valuable contribution to the literature of medicine.

ERGOPHOBIA.

In the *British Medical Journal* for February 11, 1905, W. D. Spanton, F. R. C. S., states that he has coined the word *ergophobia* to express the growing dislike of exertion among British workmen. Our readers will remember that we used this word, believing it to be original, in our issue of October 10, 1903, and were subsequently informed that it had been in use for a quarter of a

century in the hospital reports of a New Jersey institution. The *New York Medical Journal* and *Philadelphia Medical Journal* was, however, the first to print the word.

THE BABY'S BATH TUB.

We wish we could feel at all sure that the manufacturers of babies' bath tubs would amend a senseless feature of their method of construction, namely, that of affixing the handles to the sides of the tubs, which makes it almost impossible to convey a tub filled with water from one room to another without spilling more or less of the contents. The handles ought to be placed at the ends.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 6th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association (annual); Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, March 7th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association; Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, March 8th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, March 9th.—New York Academy of Medicine (Section in Pediatrics); New York Academy of Medicine (Section in Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, March 10th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn, N. Y.; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, March 11th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. A. P. Grinnell, of Burlington, Vt., to 500 Fifth Avenue. Telephone number, 5335—38th.

NEW YORK.

Flushing Hospital and Dispensary.—It is believed that the three days' fair held in Flushing for the benefit of this institution will enable the promoters to turn over at least \$10,000 to help the hospital.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending February 25, 1905:

	February 25. Cases.	Deaths.	February 18. Cases.	Deaths.
Measles.....	292	5	209	8
Diphtheria and croup.....	258	45	272	47
Scarlet fever.....	261	14	225	20
Smallpox.....	5	1	1	1
Chickenpox.....	121	1	132	1
Tuberculosis.....	318	164	339	171
Typhoid fever.....	28	10	23	4
Cerebrospinal meningitis.....	49	4	40	4
	1,283	288	1,201	291

Manhattan Eye, Ear, and Throat Hospital.

The directors of the Manhattan Eye, Ear, and Throat Hospital have decided to proceed with the building of the costly wing of the institution, recently designed, but the consideration of which was temporarily set aside on account of the expense. Owing, however, to the donation of \$25,000 to the project by Mr. Frank Tilford, one of the directors, the latter have concluded that it will be safe to construct the proposed wing, relying upon the generosity of the public to make up any possible deficiency.

The German Charity Ball, recently held, distributed a surplus of more than \$10,000 among the following charities: German Hospital, \$2,200; St. Mark's Hospital, \$1,400; St. Francis's Hospital, \$1,400; German Polyclinic, \$1,400; German Society, \$1,400; Isabella Home, \$1,100; Wartburg Orphan Asylum, \$1,100; German Ladies' Aid Society, \$1,100; West Side Dispensary, \$1,000.

Orthopædic Dispensary and Hospital.—An appeal has been issued on behalf of this institution for an immediate gift of \$1,400 to enlarge the staff of nurses. It is hoped also to get ten subscribers who will supply \$1,000 a year each for five years to the endowment fund. Other subscriptions to this fund are, however, earnestly solicited. It is hoped, also, that the number of annual subscribers will be largely increased.

The Medical Society of the Borough of the Bronx.—Meetings held the second Wednesday of the month at the Bronxland Hotel, corner of One Hundred and Thirty-fourth Street and Willis Avenue. A stated meeting will be held on Wednesday, March 8th, at 8.15 p. m. Programme: Executive session; scientific session: Presentation of Cases, Reports, Instruments, etc.; papers: The Acid Intoxication Complicating Pregnancy, by Henry McM. Painter, M. D.; The Management of Puerperal Sepsis, by James D. Vorhees, M. D.; The Diagnosis and Treatment of Gastric Ulcer, by Charles H. Nammack, M. D. W. H. Kahrs, M. D., secretary.

Academy of Medicine.—The section in otology will meet on Thursday, March 9th, at 8.15 p. m. Order: Presentation of Cases: Tuberculosis of the Middle Ear in an Infant; Radical Operation: Cure, by L. M. Hurd, M. D.; Demonstration of Charts for Teaching Otology, by F. Whiting, M. D.; Exhibition of a Gland Removed from Surface of Mastoid, Simulating Mastoiditis, by J. F. McKernon, M. D.; Report of an Obscure Case of Deafness, by J. E. Sheppard, M. D.; papers: A

Few Remarks on the Proper Treatment of a Running Ear, by H. A. Alderton, M. D.; A Condensed Report of a Case of Streptococcic Otitis Media, Followed by Mastoiditis; Operation; General Septicæmia; Death, by C. G. Coakley, M. D. Emil Gruening, M. D., chairman; W. H. Haskin, M. D., secretary, 42 East Forty-first Street.

Manhattan State Hospital, West, Ward's Island, Clinics.—A clinic in mental and nervous diseases will be given by Dr. Emmet C. Dent every Friday at 3.30 p. m. during the next few months. The subjects comprise the following: Manic Depressive, Dementia Paralytica, Infection Psychosis, Exhaustion Psychosis, Intoxication Psychosis, Organic Dementia, Paranoia, General Neuroses, Defective Mental Development. Weekly clinics are also held Tuesdays at 2.30 p. m. in Gastrointestinal Diseases, and Thursday at the same hour in Gynecology. Special clinics will be given on Epilepsy by Dr. William H. Thomson; Surgery of the Stomach, by Dr. Robert T. Morris; Diagnosis in Heart Disease, with Clinical Demonstrations of Various Valvular Lesions, American Adaptations of the Nauheim Treatment, Resistance Movements, Baths with Demonstrations, by Dr. Thomas E. Satterthwaite; The Dry Carbonic Acid Bath, Carbonic Acid in Mucous Colic, etc., by Dr. Achilles Rose; Intestinal Irrigation and Its Indications with Suggestions as to Antiseptics, by Dr. Douglas H. Stewart, etc.

PHILADELPHIA.

American Therapeutic Society.—The sixth annual meeting of the American Therapeutic Society will be held in Philadelphia on May 4th, 5th, and 6th. Dr. John V. Shoemaker, of 1519 Walnut Street, is chairman of the committee of arrangements. The headquarters of the society will be at the Bellevue-Stratford Hotel.

Medical Alumni Meet.—The Philadelphia Alumni Society of the medical department of the University of Pennsylvania met at the Bourse on Saturday evening, February 18th, at 8.15. Professor Angelo Heilprin delivered a lecture on his Martinique experiences at the time of the eruption of Mount Pelée. A collation followed the lecture.

Scientific Society Meetings for the Week Ending March 11, 1905.—Monday, March 6th, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, March 7th, Academy of Natural Sciences. Wednesday, March 8th, Philadelphia County Medical Society. Thursday, March 9th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, March 10th, Northern Medical Association; West Philadelphia Medical Association. Saturday, March 11th, West Philadelphia Branch, Philadelphia County Medical Society.

The Frankford Hospital was organized in the spring and early summer of 1903. It is situated

at the southwest corner of Sellers and Penn Streets, Frankford, in a district without hospital accommodation. The nearest institutions of a like nature are the Episcopal Hospital, three and one half miles south; the Jewish Hospital, three miles west; and St. Mary's Hospital, three miles southeast. According to the first report, which has just been issued, and which covers the activities of the institution for the first fifteen months of its existence, a total of 12,359 patients have been treated in its different departments as follows: surgical wards, 77; medical wards, 27; accident ward, 405; surgical dispensary, 2,066; medical dispensary, 245; eye dispensary, 167; ear, nose, and throat dispensary, 89. The trustees have recently rented a three story brick house near the hospital, which has been fitted up for dispensary work and for a nurses' home. This allows an increase of fourteen beds in the capacity of the hospital. The finances of the institution appear to be in satisfactory condition.

Deaths.—Dr. J. B. Howard Gittings died at his home, 4013 Chestnut Street, on February 9th. Dr. Gittings graduated from the medical department of the University of Pennsylvania in 1863. He had practised in West Philadelphia ever since his graduation. He was a member of the Medical Society of the State of Pennsylvania and of the Philadelphia County Medical Society.

Dr. Frank Cowan died in Greensburg, Pa., on February 12th, aged 61 years. Dr. Cowan had been an extensive traveler, having encircled the globe twice during the '80's.

Dr. Alexander Ramsay died at his home, 103 East Lehigh Avenue, of pneumonia on February 12th. Dr. Ramsay graduated from the Medical-Chirurgical College in 1893. He was a member of the Medical Society of the State of Pennsylvania and of the Philadelphia County Medical Society. Dr. Ramsay was 54 years of age.

Dr. John Ruddolph Frailey, a dentist, died at his home, 5138 Lancaster Avenue, on February 21st, aged 72 years.

Dr. Alonzo I. Hunt, of Hamilton Square, N. J., died from pneumonia on February 13th, aged 34 years. Dr. Hunt graduated from the medical department of the University of Pennsylvania in 1894.

Charitable Bequests.—By the will of Mary C. Dulles, who died on January 30, 1904, the Presbyterian Hospital receives \$2,000 for improvements to the Margaret Welsh Dulles Memorial. The Presbyterian Orphanage receives \$2,500; the Children's Seashore Home at Atlantic City, N. J., receives \$1,000, and the Day Nursery receives \$1,000.

By the will of Dundas F. Pratt the bulk of his estate, valued at \$77,000, is devised to the Hayes Mechanics' Home.

By the will of Ellen K. Mitchell the Pennsylvania Hospital receives \$5,000 to endow a free bed. The bed is endowed in memory of Major David Lennox, his wife, Lacy Lukens, and their niece, Sarah Lukens.

By the will of Isaac Roskam the following bequests are made: Jewish Hospital Association, \$5,000 for a free bed in the name of Isaac Ros-

kam; United Hebrew Charities, \$2,500; Jewish Foster Home and Orphan Asylum, \$2,000; National Jewish Hospital for Consumptives, Denver, Col., \$2,000; Home for Hebrew Orphans, \$500; Free Hospital for Poor Consumptives, White Haven, \$1,000; Pennsylvania Society to Protect Children from Cruelty, \$500.

Statistics of the Bureau of Health.—During January, 1905, the division of medical inspection of the bureau of health made 2,932 inspections, exclusive of schools, and ordered 536 fumigations. Ninety-seven cases were submitted to special diagnosis. Five thousand one hundred and fifty-four visits were made to schools and 1,111 children were excluded. Seven hundred and sixty-eight cultures were taken; 123 injections of antitoxine given, and 1,551 vaccinations done. In the division of milk inspection 3,809 inspections are recorded, affecting 103,140 quarts of milk, of which 342 quarts were condensed. One hundred and twenty-seven chemical examinations were made and 238 microscopic examinations. In the bacteriological laboratory 2,295 diphtheria cultures were examined, 346 specimens of blood for the serum diagnosis of typhoid fever, 240 specimens of milk, 112 specimens of sputum were examined, and 1,676 bottles of antitoxine were supplied. The following is the census of the Municipal Hospital:

	Remaining from December.	Received.	Discharged.	Died.	Re- maining.
Diphtheria	54	101	72	18	65
Scarlet fever.....	113	44	30	5	122
Smallpox	3	0	2	0	1
Other diseases....	0	1	0	1	0

The Health of the City.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending February 18, 1905:

	Cases.	Deaths.
Typhoid fever.....	98	13
Scarlet fever.....	37	6
Chickenpox	65	0
Diphtheria	89	11
Cerebrospinal meningitis.....	1	0
Measles	21	2
Whooping cough.....	8	4
Tuberculosis of the lungs.....	38	63
Pneumonia	113	102
Erysipelas	11	0

The total death rate for the week was 599, in an estimated population of 1,438,318, corresponding to an annual death rate of 21.66 per 1,000 population. The total infant mortality was 100; under one year, 77; between one and two years, 23. There were 36 still births; 26 males and 10 females. The following deaths were reported from other transmissible diseases: Tuberculosis other than tuberculosis of the lungs, 8; dysentery, 2; diarrhoea and enteritis under two years, 6. The temperatures have been low, varying from a minimum of 6° on the 14th and 16th to a maximum of 43° on the 12th. On the 13th the temperature dropped from 34° at 8 a. m. to 18° at 8 p. m., and at 8 a. m. on the 14th the thermometer registered 7°. Many cases of injury from falls on icy pavements were treated in the city hospitals.

GENERAL.

The Presbyterian Hospital, of Chicago, has received the sum of \$15,000 through the will of the late Harriet A. Jones.

St. John's Riverside Hospital, Yonkers, N. Y.—This institution has received \$5,000 through the will of the late Congressman Norton P. Otis.

To Dr. Arnold Stedman, of Denver, a dinner was tendered by his fellow practitioners of that city on February 23rd in honor of Dr. Stedman's birthday.

The Ulster County, N. Y., Medical Association.—At a meeting of this organization on February 20th the following officers were elected: President, J. L. Preston; vice-president, Frederick Hühne; secretary, Mary Gage Day; treasurer, Alice Divine, of Ellenville.

Frances E. Willard National Temperance Hospital, Chicago.—This "temperance" hospital has recently erected a new building to accommodate seventy-five patients. Its various wards have been furnished by individuals in the branch societies of the W. C. T. U.

Phipps Dispensary, Baltimore.—The new tuberculosis dispensary of Johns Hopkins Hospital, for which Henry Phipps, of Pittsburgh, gave \$20,000, was formally opened on February 21st, Dr. H. M. Biggs, of New York, making the opening address in which he spoke of the coming loss to Baltimore of Dr. Osler.

Precautions to Be Taken During the Inauguration Ceremonies.—The authorities of the hospitals of Washington, D. C., have arranged for a special ambulance service and have taken other precautions against the accidents that are supposed to be inseparable from the ceremonies attending the Presidential inauguration, which takes place to-day.

Typhoid Fever in England.—It is stated that an epidemic of typhoid fever in Lincoln, Eng., has already involved over six hundred cases, and the business in the town is entirely suspended. In addition to the Lincoln Hospital, four auxiliary hospitals have been created in the halls of the city, providing 340 beds in all. The mayor has opened a fund for relief and has called for doctors from all over England. The London County Council has sent experts to combat the disease.

A Censorship of Proprietary Remedies.—A Council on Pharmacy and Chemistry of the American Medical Association has been formed, which is to publish a list of the various medicinal preparations offered to physicians, which are not included in the United States Pharmacopœia, or other standard text books or formularies. This council will act under the following rules governing the admission to the proposed book of reference, which is to be known by the title *New and Non-official Remedies*:

RULE 1.—No article shall be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article are furnished for publication. (Sufficient information should be supplied to permit the council to verify the statements made regarding the article and to determine its status from time to time.)

RULE 2.—No chemical compound will be admitted unless information is furnished regarding test, identity, purity, and strength, and, if a synthetic compound, a rational formula.

RULE 3.—No article that is advertised to the public will be admitted; but this rule will not apply to disinfectants, cosmetics, foods, and mineral waters, except when advertised in an objectionable manner.

RULE 4.—No article will be admitted whose label, package, or circular, accompanying the package, contains the names of diseases, in the treatment of which the article is indicated. The therapeutical indications, properties, and doses may be stated. (This rule does not apply to vaccines and antitoxins, nor to advertising in medical journals, nor to literature distributed solely to physicians.)

RULE 5.—No article will be admitted or retained about which the manufacturer, or his agents, make false or misleading statements regarding the country of origin, raw material from which made, method of collection or preparation.

RULE 6.—No article will be admitted or retained about whose therapeutic value the manufacturer, or his agents, make unwarranted, exaggerated, or misleading statements.

RULE 7.—Labels on articles containing "heroic" or "poisonous" substances, should show the amounts of such ingredients in a given quantity of the product.

RULE 8.—Every article should have a name, or title, indicative of its chemical composition, or pharmaceutical character, in addition to its trade name, when such trade name is not sufficiently descriptive.

RULE 9.—If the name of an article is registered, or the label copyrighted, the date of registration should be furnished the council.

RULE 10.—If the article is patented—either process or product—the number and date of such patent or patents should be furnished. If patented in other countries, the name of each country in which patent is held should be supplied, together with the name under which the article is there registered.

This council, which was created at the meeting of the Board of Trustees, held February 3rd, was organized at a meeting held at Pittsburgh, February 11th, and has issued a circular to the manufacturing pharmacists and chemists of the United States and others concerned, dated February 28th, from which the foregoing facts are drawn. Following is a list of the members of the council:

Dr. Arthur R. Cushny, professor of pharmacology in the Department of Medicine and Surgery of the University of Michigan, and recently called to the professorship of pharmacology in the Medical Department of University College, London; Mr. C. Lewis Diehl, professor of pharmacy in the Louisville (Ky.) College of Pharmacy, vice-chairman of the Committee on Revision of the United States Pharmacopœia, chairman of the Committee of Revision of the National Formulary, and for twenty-eight years reporter of the progress of pharmacy for the American Pharmaceutical Association; Dr. C. S. N. Hallberg, professor of pharmacy in the University of Illinois School of Pharmacy, member of the Committee of Revision of the United States Pharmacopœia, member of the Committee on Revision of the National Formulary, and for five years secretary of the Section on Pharmacology of the American Medical Association; Dr. Robert A. Hatcher, professor of pharmacology in Cornell University Medical School, and joint author of *A Text Book of Materia Medica*, by Hatcher and Sollmann; Dr. Lyman F. Kebler, chief of the drug laboratory of the Department of Agriculture at Washington, D. C.; Dr. J. H. Long, professor of chemistry in Northwestern University Medical School; Dr. Frederick G. Novy, professor of hygiene and physiological chemistry in the Department of Medicine and Surgery of the University of Michigan; Dr. William A. Puckner, professor of chemistry in the University of Illinois School of Pharmacy; Dr. Samuel P. Sadler, professor of chemistry in the Philadelphia College of Pharmacy, author of *A Text Book on Chemistry*, associate editor of the United States Dispensatory, and member of the Committee of Revision of the United States Pharmacopœia; Dr. Julius O. Schlatterbeck, professor of pharmacognosy in the University of Michigan School of Pharmacy; Dr. Torald Sollmann, professor of pharmacology in Western Reserve University; Dr. Julius Steiglitz, associate professor of chemistry in the University of Chicago, and the author of several works on chemistry; Mr. Martin I. Wilbert, apothecary to the German Hospital of Philadelphia; and Dr. H. W. Wiley, chief of the Bureau of Chemistry of the Department of Agriculture, Washington, D. C.

Mortality of Michigan During January, 1905.—The total number of deaths reported to the Department of State for the month of January was 3,084, corresponding to a death rate of 14.2 per 1,000 population. This rate is higher than that for the preceding month, which was 13.0 per 1,000, but lower than that for January, 1904, which was 14.7 per 1,000. By ages, there were 573 deaths of infants under one year of age; 181 deaths of children aged one to four years, and 960 deaths of elderly persons aged 65 years and over. Important causes of deaths were as follows: Tuberculosis of lungs, 188; other forms of tuberculosis, 34; typhoid fever, 37; diphtheria and croup, 56; scarlet fever, 16; measles, 14; whooping cough, 3; pneumonia, 352; diarrhoeal diseases of infants under two years of age, 54; meningitis, 38; influenza, 120; cancer, 142; accidents and violence, 139. There was an unusually large number of deaths from smallpox during the month, distributed as follows: One in Battle Creek City, Calhoun county; two in Hillsdale City, Hillsdale county; five in Jackson City, and two in Columbia township, Jackson county.

A Dettweiler Foundation.—To honor the memory and the works of the late Geheimrath Dr. Peter Dettweiler, the founder of the Falkenstein Sanatorium and the first people's sanatorium at Ruppertsheim, it has been decided, by his friends, admirers, patients, and pupils, to establish an institution bearing his name, which shall be a home for physicians who have served in sanatoria for consumptives, and who have become invalidated by disease, accident, or old age. For the collection of funds and the final arrangements a committee has been formed under the patronage of H. R. H., the Princess Friedrich Carl of Hesse. This committee is composed of many of the foremost men and women of the German empire. Of the medical men who have signed the appeal for funds we read such names as Besold, the successor to Dettweiler; Professor Kurschmann, of Leipzig; Professor Flügge, of Breslau; Professor B. Fränkel, Professor von Leyden, and Professor Pannwitz, of Berlin; General Dr. von Leuthold, physician to the Emperor; Professor Schmidt, of Frankfurt, etc. Contributions are to be addressed to Grunelius and Company, bankers, 16 Gr. Galus Strasse, Frankfurt on the Main.

National Convention of American Medical Association at the Lewis and Clark Exposition.—The greatest gathering of medical men ever held west of the Rocky Mountains will be that during the Lewis and Clark Exposition at Portland, Ore., this summer, when the American Medical Association will meet in convention. It is expected that at least 2,500 doctors will attend, and that these will bring with them their wives, families, and guests, to the number of 5,000 more. The sessions of the association will be held from July 11th to July 14th, inclusive. Dr. K. A. J. Mackenzie and other physicians have organized the work of preparing for the visitors and the plans already formed provide for a number of most attractive features. Social entertainments will be on a large and elaborate scale. Trips up and down the Columbia River, where the scenery rivals any

in the world, are among these. To enable delegates to appreciate thoroughly the river scenery it has been arranged to hold one day's session on barges, which will be hauled by steamers down the Willamette River, a distance of eleven miles, to the Columbia, and then for a considerable distance up that world famous stream. Facilities for such an excursion are of the best, the river steamers being powerful and safe and the barges fitted with every arrangement for the comfort of tourists. The general sessions of the body will be held at the exposition grounds, in Festival Hall, a building erected especially for such purposes, and other meetings will be held at various places throughout the city. The various sections of the association—medical, gynaecology, surgery and anatomy, obstetrics, ophthalmology, diseases of children, nervous and mental diseases, cutaneous medicine and surgery, laryngology and otology, materia medica, pharmacy and therapeutics, pathology and physiology—will be provided with suitable separate accommodations. A special meeting place will be furnished house delegates, consisting of 100 or more members, who will transact the business affairs of the body. Arrangements are being made for rooms and board for the visiting medical men, and no difficulty is anticipated in securing suitable accommodations. Portland is amply provided with scores of first class hotels and hundreds of family boarding houses. Besides these the houses of Portlanders will be thrown open for the accommodation of visitors. A hotel within the grounds will accommodate 600. The railroad companies are lending assistance to the Lewis and Clark Fair project with an enthusiasm that has not characterized their attitude toward earlier expositions, and have provided lower rates from distant points than were ever before offered for a similar event. Under the schedule already made out, a person living in the Mississippi Valley may come to Portland and return for \$45. The rate for the round trip is \$52.50 from St. Louis and \$56.50 from Chicago, and one fare from points farther east. The tickets sold will be good for ninety days, and will provide almost unlimited stop-over privileges.

Obituary Notes.—Dr. E. C. O'Brien, one of the best known physicians in Buffalo, died February 26th, aged 65 years. He graduated from the medical department of the University of Buffalo in 1867, and served later as curator of the university. Dr. O'Brien served five times as health physician of Buffalo, and was nominated by President Cleveland as health officer of the port of New York, but failed of confirmation.

Dr. George Lederman Hyslop, a graduate of the medical department of New York University of 1850, died at his home, 153 East Forty-sixth Street, on February 25th, after a four days' illness of heart disease. He was 79 years old, and had practised in New York for fifty-four years. Four years ago he retired from practice. Dr. Hyslop was a founder of Demilt Dispensary, and during the cholera epidemic in New York in 1849 served as a volunteer at the cholera hospital.

Dr. Elihu Russell Houghton died in New York on February 20th. He was a graduate of Am-

herst College, and received his degree of M. D. from Bellevue Hospital Medical College in 1888. He had served in the navy, immigration service, and Marine Hospital Service.

Dr. Mortimer W. Shaw, of 118 Cedar Street, New York, died in Middletown, N. Y., on February 22nd, of pneumonia, aged 37 years. He graduated from Long Island College Hospital in 1892.

Dr. William E. Griffiths, who died in Brooklyn on February 20th, served throughout the Civil War on the U. S. S. *Colorado*. He took his medical course in the College of Physicians and Surgeons, of New York, graduating in 1868, and for more than thirty years practised in Brooklyn. During the Franco-Prussian war he was studying in Berlin, and spent some time in the ambulance service of the Bavarian army. Dr. Griffiths was visiting surgeon to St. Mary's Hospital, was for several years on the board of health and was a member of several medical societies and clubs. He was 63 years old.

Dr. John Stafford, one of the oldest physicians in the country, died in Rochester, N. Y., February 24th. Had he lived, he would have been 100 years old on March 15th. Dr. Stafford was a native of Manchester, Ontario County, and graduated from Hobart College. He studied medicine with a physician and was licensed to practice by the board of censors. He practised in Manchester until 1875, when he removed to Rochester.

Dr. John H. Claiborne, a widely known Southern physician, died in Petersburg, Va., on February 24th, after a brief illness. During the occupancy of Petersburg by Lee's troops in 1864, Dr. Claiborne was senior surgeon to the hospitals in the city. He was a fellow of the Southern Surgical and Gynecological Association, of the American Medical Association, a fellow of the American Health Association, and of the Boston Gynecological Association, and a fellow elect of Victoria Institute of Great Britain.

Dr. E. S. Freed, of Chambersburg, Pa., committed suicide in his office on February 27th by shooting.

Dr. John W. Lawson, former Congressman from the Second Virginia District, died at his home in Smithfield, Va., February 21, aged 68 years. Dr. Lawson was chairman of the board of visitors of the College of William and Mary, and was president of the Smithfield female institute.

Dr. James E. Crisfield, of Dansville, N. Y., died in Jacksonville, Fla., February 21. He was the oldest practising physician in Livingston County, and had been prominent in political circles.

Dr. Israel T. Hunt, a well known Boston physician, fell from a window in his home, February 16th, and was dead when found. His grandfather was Israel Hunt, who was prominent at the battle of Bunker Hill. Dr. Hunt was a surgeon during the Civil War, and for many years past had been prominent as an insurance examiner. He was 65 years old.

Dr. Spencer Van Dalsen died at his home in Paterson, N. J., February 16th, of pneumonia, aged 52 years. He graduated from the College of Physicians and Surgeons, New York, in 1876.

Statement of Mortality in Chicago for the Week Ending February 25, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905, and of 1,932,315 for 1904:

	Feb. 25, 1905	Feb. 18, 1905	Feb. 27, 1904
Total deaths, all causes.....	637	630	674
Annual death rate per 1,000.....	16.73	16.50	18.24
By sexes.....			
Males.....	377	351	364
Females.....	260	279	310
By ages.....			
Under 1 year.....	168	149	109
Between 1 and 5 years.....	75	64	64
Over 60 years.....	122	116	171
Principal causes of death.....			
Acute intestinal diseases.....	30	25	28
Apoplexy.....	14	15	17
Bright's disease.....	28	36	37
Bronchitis.....	41	35	37
Consumption.....	71	73	79
Cancer.....	23	21	32
Convulsions.....	19	20	11
Diphtheria.....	8	6	5
Heart diseases.....	36	45	60
Influenza.....	10	8	9
Measles.....	3	1	0
Nervous diseases.....	31	27	21
Pneumonia.....	135	136	151
Scarlet fever.....	0	3	9
Smallpox.....	2	4	0
Suicide.....	4	10	10
Typhoid fever.....	2	2	10
Violence (other than suicide).....	18	24	36
Whooping cough.....	7	3	0
All other causes.....	151	136	132

Although seven more deaths were reported during the week than during the week of the 18th the indications of the state of Chicago's health are more reassuring than at any time since last November. During the last four weeks there have been 2,351 deaths from all causes reported and the annual mortality rate is 15.40 per 1,000 of population. During the corresponding four weeks last year there were 2,522 deaths, or 171 more, reported, and the annual mortality rate was 17.46, or 11.7 per cent. higher. One of the principal causes of this reduction is the lesser prevalence and fatality of pneumonia this winter than last. In the first 56 days of last year there were 1,151 deaths from pneumonia; during the corresponding period this year there have been 1,019, or 132 fewer. On the other hand, there have been 39 more deaths from consumption, and the ratio of consumption deaths (551) to deaths from all causes (4,838) has increased since the first of the year to 11.3 per cent. as compared with 10.4 per cent. last year. The following comparative statement of consumption and pneumonia mortality in Chicago and in New York is an extension of the table in the Bulletin of January 28th. The period covered is between October 1, 1904, and February 25, 1905:

Total deaths.	Consumption.	CHICAGO. Per cent.	Pneumonia.	Per cent.
10,723	1,226	11.4	1,819	16.9
28,774	3,302	NEW YORK. 11.4	5,016	17.4

The population of Chicago for 1905, as computed by the United States Census Bureau, is 1,990,750. The estimated population of New York is 3,945,191, or not quite twice that of Chicago. Multiplying by two Chicago's figures of total deaths, deaths from consumption, and deaths from pneumonia shows excesses of 7,328 total deaths, 850 consumption deaths and 1,378 pneumonia deaths for New York over Chicago.

Pith of Current Literature

FORTSCHRITTE DER MEDIZIN.

December 1, 1904.

1. Rapid Dilatation of the Cervix with Bossi's Dilator,
By EHRLICH.
2. Puerperal Thrombosis with Embolism. Pulmonary Dis-
ease in Puerperal Women, By RICHTER.

1. **The Rapid Dilatation of the Cervix With Bossi's Dilator.**—Ehrlich discusses the advantages and disadvantages of this powerful instrument. He thinks the objections to its use are often founded upon misunderstanding and misapprehension as to its value. He reports 30 cases in which it has been used with advantage. The most important indications for its employment are eclampsia, fever during labor, tetanus of the uterus, deferred delivery in consequence of contracted pelvis, premature separation of the normally implanted placenta, and induced labor in consequence of contracted pelvis. Labor was repeatedly induced by means of this instrument, in Leopold's clinic, easily and without danger. An urgent indication for interference on account of possible danger to the pelvis of the mother or the child is a condition which must be present in order to justify its use. Such a condition is of greater significance than the period of pregnancy which may have been reached, or than the question as to whether the patient is a primipara or a multipara. Leopold has never seen any serious injury to the cervix from its use whether the cervix was shortened or whether it retained its ordinary outline. In the latter condition, however, this dilator must not be used unless the indications are imperative. If patience is exercised in producing dilatation with this instrument, and Bossi's directions for its use are carefully followed, there will probably be no more extensive injury to the uterus than would happen in any case of operative interference for the termination of labor. Operation by means of the forceps is preferable to turning and extraction after this instrument has been used. This instrument certainly marks an advance in obstetric art, at least for private practice, while the vaginal Cæsarean section, symphyseotomy, or deep incisions of the cervix may still be preferable for hospital practice.

2. **Puerperal Thrombosis and Embolism.**—Richter has investigated the clinical history of 16,000 puerperal cases in Leopold's clinic, finding as a result 20 cases in which there was embolism, 78 of thrombosis, and 18 of puerperal pulmonary disease. A fatal result attended 60 per cent. of the cases of embolism, this result occurring almost always with the first attack. Inasmuch as embolism can be prevented in many instances, it is very important to have some guiding symptom which may excite suspicion of impending embolism when thrombosis is present. Such a sign is to be found in the increased pulse rate to which attention was called by Mahler, and which Richter found of positive significance in 63 per cent. of cases, while in 34 per cent. it was

not of positive value on account of coexisting fever. In the cases of pulmonary embolism it was a determining factor in 42 per cent. of the cases, and lacked significance in 52 per cent. The increased pulse rate is of greater determining importance in thrombosis than increase in the temperature, or hyperæmia in the loin and in the abdominal wall, or than pains in the hips and sides, all of which have been mentioned by writers as significant. The increase in the pulse rate indicates that on account of the closure of the veins by thrombosis and the necessity for a free collateral circulation there is increased antagonism to the heart action. It also indicates that with the degeneration of the heart which is common among puerperal women the increase of work which is imposed upon the heart can only be compensated by more frequent contractions. The ordinary opinion that there is greater danger from thrombosis of the pelvic veins than from thrombosis of the veins in the lower extremities is believed to be incorrect, and that on the contrary the latter is the more dangerous for larger thrombi are more likely to be separated in the latter condition and produce a fatal result. In the veins of the pelvis only small thrombi are usually liberated. The small emboli which may be liberated in the lungs give rise to symptoms which may indicate irritation of the pleura, pneumonia, bronchitis, or infarcts. When thrombosis is suspected the proper prophylactic measures will consist in absolute rest, bandaging of the varicose extremities, and careful nursing.

December 20, 1904.

1. Serum Treatment of Puerperal Fever, By BUMM.
2. The Theory of Pernicious Anæmia,
By LITTEN and MICHAELIS.
3. The Diagnosis of Pregnancy During Its First Half,
By SARWEY.
4. Spinal Analgesia in Gynæcology and Obstetrics,
By STOLZ.
5. Lumbar Puncture in Eclampsia, By KROENIG.

1. **The Serum Treatment in Puerperal Fever.**—Bumm remarks that no serum has as yet been produced which causes any apparent result in cases in which the disease has invaded the tissues which are beyond those which were the original seat of the infection. On the other hand, he thinks there is no doubt of the efficiency of serum for cases in which the streptococci have not passed beyond the endometrium. He thinks this is also true even if the streptococci have invaded the blood, provided they have not also produced lesions and formed foci for development in the organs. Experiments upon animals have shown that the prospects of recovery become more encouraging the earlier the injection is made after the reception of the infectious material. The dosage should be regulated by the severity of the infection, the size of the patient (animal), and by the time that has elapsed since the infection was communicated. Bumm prefers the subcutaneous use of the serum, in large doses, to its intravenous injection. He administers it at the conclusion of severe labors, if there is disease of the placenta, if there is decomposition of the liquor amnii, and

if fever has been present during labor. He reports an experience of nine cases in which the serum was injected. In all of these there was a decided fall in the temperature, and an increase in the polynuclear leucocytes in the serous discharge from the uterus, this being interpreted as an indication of improvement in the patient's condition.

2. **The Theory of Pernicious Anæmia.**—Litten and Michaelis have deduced the following as the result of a series of experiments which they performed: 1. The serum of pernicious anæmia has neither an agglutinating nor a solvent action upon the blood corpuscles of the patient, either in the body or in a test tube. 2. Neither does the serum show any solvent action upon the blood corpuscles when the Landsteiner method is employed. 3. This want of ability to dissolve the blood corpuscles of the blood of which a given specimen of serum forms a part does not depend upon the absence of the so called complement. 4. The serum of pernicious anæmia also fails to dissolve the blood corpuscles in other specimens of blood, of which it does not form a part, but it does have an agglutinating effect in many such cases. 5. This last mentioned peculiarity is not entirely characteristic, however, of the blood of pernicious anæmia. 6. The inability of the serum to dissolve the corpuscles in blood of which it does not form a part is not due to a want of complement. The authors conclude that it has not been proved, up to the present time, that the blood poison which is supposed to be present in pernicious anæmia is a complex hæmolyisin in the sense in which it has been described by Bordet and Ehrlich.

3. **The Diagnosis of Pregnancy During Its First Half.**—Sarwey recalls the usual signs of pregnancy, cessation of the menses, enlargement and boggy consistency of the uterus, pigmentation, colostrum, etc. But these, or a portion of them, are often wanting, especially in multiparæ. Even the sound of the foetal movements which, according to Olshausen, can be heard at the end of the fourth month frequently fails to be appreciated by the ear of the listener. The author desires to add to these signs one which he has found of great assistance, namely, the foetal heart sounds which he has been able to distinguish as early as the thirteenth week of pregnancy. In a series of ten cases which were examined between the thirteenth and eighteenth weeks of pregnancy he did not fail to find the foetal heart sounds in a single instance. These sounds change their position very frequently, hence it may be necessary to search for them over the entire area of the uterus. They are most readily determined, as a rule, in the vicinity of the lower uterine segment. A sensitive ear, absolute quiet on the part of the patient, and patience on the part of the examiner are indispensable conditions to the detection of the foetal sounds. Their volume will also be more or less regulated, as a matter of course, by the conductivity of the tissues between the examiner's ear and the foetal heart.

5. **Lumbar Puncture in Eclampsia.**—Krönig

observes that so long as the pathogenesis of eclampsia remains obscure the repeated analysis of its symptoms becomes justifiable. The enormously high blood pressure during eclampsia makes the supposition of high pressure of the cerebrospinal fluid in the subarachnoid space extremely probable. The question which the author proposed was whether the removal of a sufficient quantity of this fluid and the consequent reduction of pressure would have a therapeutic effect. Three cases of eclampsia were treated by lumbar puncture, the blood pressure in each being more than four times the normal. The quantity of fluid removed was 37.5 centimetres in one case and more than this in the others, the blood then resuming its normal pressure. Whether this was the means of cure in these cases cannot be stated with certainty, since in two of them the vaginal Cæsarean section was also performed.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 22, 1905.

1. The Importance of Concealed Hæmorrhages in the Digestive Canal,
By ETTORE TEDESCHI.
2. Unilateral Isolated Paralysis of the Oculomotors in Syphilis,
By G. FAZIO.
3. Contribution to the Treatment of Angular Ankylosis of the Knee by Gordon Buck's Method,
By MATTEO GAPUANO.
4. A Case of Cachectic Aphthæ Treated with Antidiphtheritic Serum,
By FRANCESCO ZUCCALA.
5. The Medical Treatment of Lateral Onychia,
By ALBERTO GASPARINI.

1. **"Occult" Intestinal Hæmorrhages.**—Tedeschi emphasizes the clinical importance of the hæmorrhages which may occur in the digestive tract without being manifest either in the gastric contents or in the fæces, and which have been styled "occult" or "concealed" hæmorrhages by Boas. In order to detect such hæmorrhages it is essential to examine the stomach contents and the fæces for traces of blood or blood pigment. The examination of the fæces is the more important of the two, and yet it is most often neglected, because heretofore we have not had a good way of detecting small amounts of blood. The author describes the following method which he has worked out for this purpose, and in which he employs chiefly the suggestion given by Rossel and by Weber, but with modifications of his own. From 20 to 25 c.c. of pulpaceous fæces are taken and to this sample from 15 to 20 c.c. of neutral ether are added. The mixture is shaken gently and repeatedly in order to remove the bulk of the fat, avoiding the formation of an emulsion which might interfere with subsequent steps. To the fæces are then added from five to seven c.c. of acetic acid, the mixture is shaken, and some more ether is added; the mixture is again shaken and allowed to stand. To the acetic ether extract a few drops of oil of turpentine (old) are added, together with a few drops of freshly prepared tincture of guaiac. A pinch of recently triturated guaiac resin is also added; the mixture is gently shaken in a test tube, and allowed to stand. A violet blue color will appear

if blood pigments are present. Aloin may also be used in this test instead of guaiac, and in that case a 70 per cent. solution of aloin in alcohol is prepared and fifteen drops of it are added to the acetic ether extract after the turpentine has been added. The presence of blood will then be manifested by a cherry color. If there is no blood the color is at first red, but changes to yellow. The aloin test is more delicate and simpler than the guaiac test. The diet of the patient should be looked after, before the test, as an ingestion of two hundred grammes of rare beef (steak) will give a positive test. The administration of iron also gives a positive result. The author found that it is necessary to take from ten to fifteen c.c. of blood into the stomach in order to produce the color reaction described. The new test will be of importance in latent cancer of the stomach, in ulcer of the stomach appearing masked as a simple anæmia, in ankylostomiasis, etc.

3. Ankylosis of the Knee.—Gapuano prefers Gordon Buck's osteotomy to all other methods of treating osseous ankylosis of the knee. In fibrous ankyloses of this joint, gradual reduction of the deformity by means of apparatus is tedious, painful, and untrustworthy. The best treatment for such cases is forcible reduction under anæsthesia. In cases in which chloroform cannot be given, gradual reduction by apparatus may be tried as a last resort. Forcible reduction under narcosis is assisted greatly by tenotomy of the tendons around the popliteal space. This tenotomy is best done "in the open," and not subcutaneously, as thus we are best able to avoid the external popliteal nerve. Osteotomy, according to Rhea Barton, has the advantage of leaving the epiphyses intact, and thus not interfering with the growth of the limb; but, on the other hand, it is apt to be followed by relapses of the deformity. The best method is that of Gordon Buck, which makes a straight and solid limb, but, of course, the epiphyseal cartilages must be carefully preserved in performing this operation in young subjects. It is the method of election in cases complicated with fistulæ and abscesses.

4. "Cachectic Aphtha" Cured With Diphtheria Antitoxine.—Zuccala describes a case of "cachectic aphtha" in an infant, in which he was able to effect a rapid cure, after all else had failed, by the injection of diphtheria antitoxine in a single dose of one thousand units. By "cachectic aphtha" he means the growth on the frenum of the tongue which appears in children, is accompanied by marked cachexia, and is of unknown origin, though possibly infectious.¹ Synonyms of this affection are: Cardarelli's cachectic aphtha and Riga's disease. There was a pearly gray, flat ulcer on the under surface of the tongue which extended upward over the apex of the organ, and would not heal in spite of cauterization, etc. The child was desperately cachectic, and on the point of death when the injection was given. Within two days it picked up remarkably and recovered completely two weeks later. Locally, a solution

of potassium permanganate was used in the form of applications with a brush.

5. Simple Treatment for Ingrown Toenail.—Gasparini uses with success a very simple treatment for ingrown toenails in cases in which operation is for some reason impossible. He applies a soap poultice to the affected toe for twenty-four hours, and then lifts the edge of the nail from its bed as much as possible. He powders some burnt alum into the space between the nail and the ulcerated or granulating nail bed, and then inserts a piece of absorbent cotton between these surfaces, pushing the cotton as far inward and backward as possible. The patients are quickly relieved of their pain, and the treatment is repeated for several days. He was able to obtain cures within a week. Afterwards the nail is scraped to make it thinner and to reduce its pressure on the nail bed, and the patients are cautioned to observe the strictest cleanliness, and to wear a strip of cotton in the ungual fold.

ROUSSKY VRATCH.

January 8, 1905

1. Sodium Perborate, By P. G. MELIKOFF and L. V. PISARZHEVSKI.
2. The Antiseptic Properties of Sodium Perborate, with Some Observations on Its Therapeutical Uses, By D. P. KISCHEVSKY.
3. Volume Meter for Anthropometric Measurements in Pathologicoanatomical Investigations, By TH. Z. OMELTCHENKO.
4. Acinesia Alginoessa, By M. O. SCHAEKEVITSCH.
5. Röntgen Rays in Trachoma, By A. G. VASSIUTINSKY.

1. Sodium Perborate.—Melikoff and Pisarzhevski prepare sodium borate by adding caustic soda solutions to commercial hydrogen peroxide solutions until a flocculent precipitate takes place. The latter is then filtered off and the filtrate is used for the preparation of perborate compounds. For this purpose, the authors take 100 grammes of borax and dissolve it in 900 c.c. of water, to which 28.5 c.c. of sodium hydrate have been previously added. The mixture is allowed to cool for several hours, when crystals of sodium perborate will be found deposited at the bottom of the vessel. A better product is obtained by employing the chemically pure hydrogen peroxide. The crystals are obtained by siphoning the supernatant fluid and drying in the air or the oven. If kept dry in the form of a powder, sodium perborate can be kept indefinitely. It contains 10.3 per cent. of active oxygen, and corresponds to 22 per cent. of hydrogen peroxide. Perborate is soluble in water, and the watery solution has an alkaline reaction.

2. Therapeutics of Sodium Perborate.—Kischencki investigated the bactericidal and other properties of sodium perborate, the new compound of hydrogen peroxide described in the preceding article. He found that, in general, sodium perborate corresponds to hydrogen peroxide, but it has several features which are distinctly superior. The perborate can be used externally in the dry form for example in the treatment of

¹ It was also described by the Italian clinician Fede, who styled it "sublingual fibroma."—Ed.

ulcers. The watery solutions of sodium perborate have an alkaline reaction, which renders them suitable in the treatment of catarrhal conditions of the mucous membranes. For bactericidal purposes the saturated solutions of sodium perborate may be used, which contain an excess of the compound in suspension. It is only lately that manufacturers have been able to make a strong solution of hydrogen peroxide that would keep and could be sold in proper receptacles. On the other hand, sodium perborate can be kept very easily in the solid form, and solutions of any strength can be prepared whenever needed.

3. Volume Meter for Anthropometry, Etc.—Omeltchenko describes a new apparatus for the measurement of volumes of organs, etc. The apparatus consists of a metallic box arranged so that the amount of water displaced by an organ can be accurately measured. For this purpose the box is provided with a series of stop cocks at different levels.

4. Acinesia Algiноessa.—Schaikevich thinks that acinesia algiноessa (inability to move due to pain) is a symptom complex which is most often observed in the course of the psychoneuroses, and represents either an aggravation or a complication of the symptoms of the original disorder. The pains which are complained of in this condition are illusory, and the limitation in the power of voluntary motion is hypochondriacal in origin. The entire clinical picture of acinesia algiноessa is related to that of hypochondria, and the condition is probably a variety of hypochondria.

5. Röntgen Rays in Trachoma.—Vassutin-sky obtained favorable effects upon trachoma by means of the Röntgen rays. These rays diminished the infiltration, caused the disappearance of the granulations and of the pannus, and produced a pronounced improvement in the subjective signs of the malady. As a rule, however, trachomatous granulations disappeared but slowly under the influence of Röntgen therapy. The rays proved to be harmless in treating the eyes, and no evil effects were noted in any case, nor was pain experienced by the patients. The author thinks that the rays are of service in cases in which ordinary methods of treatment fail.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 25, 1905.

1. The Registration of Vital Statistics in the United States. What the Census Bureau is Doing to Improve It, By CRESSY L. WILBUR.
2. Some Typhoid Epidemics Studied by Laboratory Methods, By WILLIAM ROYAL STOKES.
3. Some Uncommon Forms of Multiple Neuritis, Including Four Cases of Puerperal Origin, By WHARTON SINKLER.
4. A Clinical Study of Hemiplegia in the Adult, By THEODORE H. WEISENBURG.
5. A Case of Locomotor Ataxia with a Tremor Resembling that of Paralysis Agitans, By JOHN H. W. RHEIN.
6. Have Drug Addictions a Pathological Basis? By ALBERT E. STERNE.
7. Fat Embolism of the Lung Following Fracture. With Report of Two Cases, By F. GREGORY CONNELL.

8. Dangers from Indiscriminate Use of Cathartics in Acute Intestinal Conditions, By M. L. HARRIS.
9. Immunity. Chapter V.
3. See this *Journal*, Vol. LXXX, page 187.
4. See this *Journal*, Vol. LXXX, page 185.
- 5 and 6. See this *Journal*, Vol. LXXX, page 232.
7. See this *Journal*, Vol. LXXX, page 87.

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 23, 1905.

1. Eye Strain as a Factor in Functional Nervous Disabilities, By MYLES STANDISH.
2. Eye Strain as a Factor to Be Considered in Children Backward in Their Studies, By ALLEN GREENWOOD.
3. Eye Strain Considered as a Factor in the Production of Lateral Curvature of the Spine, By HENRY W. KILBURN.
4. Eye Strain and Reflex Phenomena of Nasal Origin, By HENRY H. HASKELL.
5. In What Cases Should Eye Strain Be Suspected? By EDWIN E. JACK.
6. Difficulties Encountered in the Prescription of Glasses, By FRED M. SPALDING.

1. Eye Strain and Nervous Disabilities.—Standish favors the views championed by Gould regarding the possible baneful effects of eye strain. He does not pretend to know whether the eminent gentlemen who figure in *Biographic Clinics* suffered from eye strain or not. Their symptoms could very well have been due to eye strain, but there is no evidence to show that they might not have had some other origin.

2. Eye Strain and Backward Children.—Greenwood believes that many backward children owe their incapacity to eye strain. Even really feeble minded children are often benefited by properly fitting glasses. Therefore all children backward in their studies and all feeble minded children should have their eyes carefully examined.

3. Eye Strain and Spinal Curvature.—Kilburn asserts his belief that an uncorrected refractive error is capable of inducing scoliosis, and that scoliosis is capable of producing myopia. Therefore in every case of marked tilting of the head to one side, or of increasing myopia or diminishing hypermetropia, the spine should be examined, and, in every case of spinal curvature, the refractive error should be carefully corrected. Eye strain and scoliosis act and react upon each other, in a vicious cycle, as do eye strain and neurasthenia. It is only by correcting both the scoliosis and the refractive error that the patient can be materially helped.

4. Eye Strain and the Nose.—Haskell calls attention to the nose as, at times, the producer or inducer of eye strain. He has seen "a hopeless nervous wreck" cured by an intranasal operation. He has notes of sixty-five cases in which refractive errors were decreased through operations upon the nose. In such cases glasses should not be prescribed until the nose has been attended to.

MEDICAL RECORD.

February 25, 1905.

1. Loss of Sight from Disuse of the Eye (Amblyopia Ex Anopsia), By B. ST. JOHN ROOSA.
2. A Review of the Recent Literature on the Relation of Human and Bovine Tuberculosis, By DAVID BOVAIRD, JR.
3. The Advantages of Performing Capital Operations in Selected Cases Without Anæsthesia, By J. J. BUCHANAN.
4. Four Cases of Chancre of the Lip, By CHARLES MALLORY WILLIAMS.
5. An Unusual Case of Pelvic Abscess, By W. H. COE.
6. Ear Complications of Scarlet Fever, and Their Treatment, By HERMAN JARECKY.
7. The Epileptic Criminal; with Report of Two Cases, By T. H. EVANS.
8. Higher Education a Cause of Physical Decay in Women, By F. W. VAN DYKE.

1. **Loss of Sight from Disuse.**—Roosa by the term *amblyopia ex anopsia*, means that condition where use of the eye has been given up, because to use it involves double vision, the maculæ luteæ being no longer in exactly corresponding positions, as is the case in any form of strabismus. He reports the following case: Recovery of sight in amblyopia ex anopsia. Convergent strabismus with amblyopia from early childhood. Operation; over effect. Second operation; cure of strabismus. Loss of fellow eye from accident. Recovery of sight in amblyopic eye. This case goes to show that the amblyopia in the deviating eye is functional and that the power of sight may be recovered. Incidentally the case furnishes evidence that the retinal perceptive layer does not cease to develop, if not used, and can be called into activity.

2. **Tuberculosis.**—Bovaird concludes: (1) Human tuberculosis can be transmitted to cattle, but with difficulty, and it seems highly improbable that such transmission plays any great part in the production of the disease among cattle. (2) Bovine tuberculosis can be transmitted to man, but the evidence that such transmission occurs under ordinary circumstances is extremely scanty and it is highly improbable that such transmission plays any important part in the spread of the disease in man.

3. **Operations Without Anæsthesia.**—Buchanan has performed a large number of operations without the aid of anæsthesia. He asserts that the pain produced by operation has been greatly exaggerated. Most patients, even those of tender years, will bear capital operations without any anæsthetic and without much complaint. The following is a partial list of operations the author has performed without anæsthesia: Appendectomy; amputation of limbs; resection of shoulder joint; laparotomy for relief of intestinal obstruction by bands; herniotomy; gastrostomy; prostatectomy; craniotomy.

6. **The Ear in Scarlet Fever.**—Jarecky wishes to emphasize the following points: (1) The necessity of paying attention to the removal of hypertrophied tonsils, adenoid vegetations, and nasal

obstructions in all young patients, so that when subjected to the strain of scarlet fever they may avoid the principal method of ear infection. (2) Owing to the rapidity with which destruction of aural tissue and extension of infection take place in this disease, as soon as the tympanum shows signs of exudation and the membrane of bulging, a paracentesis should be immediately performed. (3) Repeated examinations of the ear, especially in infants and children, should be made on account of the uncertainty of the symptoms.

7. **The Epileptic Criminal.**—Evans asserts that the two cases he reports, taken in connection with similar cases, warrant the following conclusions: "(1) The essence of crime is in the intention, and the ability not so to intend. (2) No punishment is adequate to any crime; not only restraint after a crime has been committed, but effort to hinder any such deed, is preferable always. (3) The victims of epileptics ought to have legal ground for suit against the community as well as against those in charge of the epileptic. (4) Reservations ought to be established, in which degenerates and the morally irresponsible could be colonized and treated, allowing all possible freedom of initiative for useful and safe pursuits therein. (5) Marriage of neurotics should be regulated. We can afford to lose the few sane descendants if we could also cut out their degenerate progeny. Democratic principles encourage, in this as in other matters, the average, and discourage the exceptional or abnormal—great or small. (6) All epileptics are to be viewed with suspicion. Many cases of psychic erraticism, cranks, and mistaken reformers, are to be taken as examples of epileptic psychic equivalents. The major forms of epilepsy may not prove so dangerous to the community as these veiled manifestations."

MEDICAL NEWS.

February 25, 1905.

1. The Expectant Treatment of Appendicitis. An Excursion Into the Field Between Surgery and Medicine, By A. C. BERNAYS.
2. Observations Upon the Morphology and Classification of the Mycobacterium (Bacillus) Tuberculosis, By CHARLES F. CRAIG.
3. Clinical Studies in Ureteric Meatoscopy, By WALTER C. KLOTZ.
4. Sprains of the Knee and Ankle Joints, By J. T. WILSON.
5. Syphilis of the Lung Simulating Phthisis, By WILLIAM E. HUGHES and ROBERT N. WILLSON.

1. **Appendicular Disease.**—Bernays devotes most of his space to combating the teaching of Ochsner regarding the use of purgation and enemata in the treatment of certain stages of appendicitis. The author holds: (1) That, if seen early, cases of acute appendicitis should be treated by immediate operation. (2) If operation is refused or if the best time for operating has passed then the best results will be obtained by employing regularly cathartics and copious warm enemata. The diet should be liquid, and as restricted as possible; the patient should be confined to bed and large, moist, warm, antiseptic poultices should be ap-

plied over his belly. (3) The so called interval operation is practically without mortality.

2. Tuberculosis.—Craig asserts that the so called tuberculosis bacillus is not a bacillus at all, but is in all probability an actinomyces. He has been very greatly impressed by the effect which a tropical climate seems to have upon the growth of this organism. In the sputum of tuberculous troops returning from the Philippines he has observed clubbed, budding, and branching forms of tubercle bacilli (?). The author does not believe that these morphological changes are due to degeneracy. They probably indicate very free and luxuriant development.

3. Ureteric Meatoscopy.—Klotz reports a study of twenty cases in which he noted the appearance, through a cystoscope, of the ureteral openings. No formal conclusions can be drawn. It seems probable that further studies will make it possible to often reach a correct diagnosis by a simple inspection of the ureteral orifices. A number of illustrations are given of abnormal appearances of the ureteral openings which are at times of diagnostic value.

4. Sprains of the Knee and Ankle.—Wilson's advice may be summed up as follows: (1) For sprains of not too great severity hot water applications and rest. (2) For more severe sprains, hot water applications followed by gentle massage for ten minutes and then partial fixation by means of adhesive plaster. (3) For sprains of the greatest severity, rest with local applications of evaporating lotions for the first few days, then fixation by means of a plaster dressing. In the case of the knee joint aspiration will hasten the cure.

5. Lung Syphilis.—Hughes and Willson report a case which they believe to have been lung syphilis. The patient recovered after taking potassium iodide. The diagnosis was by exclusion and the so called therapeutic test. The clinical history resembled that of bronchopneumonia.

AMERICAN MEDICINE.

February 25, 1905.

1. Relation of Pathology to Other Sciences, By J. ORTH.
2. Nephroureterectomy for Tuberculous Disease, with a Description of a New Technic,
By EDWARD REYNOLDS.
3. The Society of Sanitary and Moral Prophylaxis: Its Object and Aims, By PRINCE A. MORROW.
4. The Abuse of Purgation Before and After Operation,
By I. S. STONE.
5. On Cystoscopy, By HENRY DAWSON FURNISS.
6. Suspected Embolism of the Superior Mesenteric Artery,
By JAMES A. NYDEGGER.

2. Nephroureterectomy.—Reynolds reports seven cases of nephroureterectomy. The new expedient for facilitating the operation consists in obtaining negative pressure in the wound and so having a clear and open operative field. This is accomplished in the following manner: Thin patients are placed on the table on the side opposite to the affected kidney. They are held in this position by means of hard pillows and straps. The

incision recommended goes from the last costal cartilage to near the anterior superior spine of the pelvis. As soon as this incision is made the falling forward of the intestine and abdominal wall causes a negative pressure. The deep parts of the wound are thus held open. With very fat patients it is at times necessary to tilt the body slightly backward or to elevate the pelvis. A little experience will make it easy to select the best position for each individual case. The author reports very minutely all the details of his techniques.

4. The Abuse of Purgation.—Stone sums up his views on purgation as a routine treatment before and after operation thus: "Excessive purgation should be restricted because it is enervating to the general system. It produces great irritation to the mucous lining of the bowel. It may add to some of the dangers we are most anxious to avoid: ileus and paresis. Purgatives have very little effect in limiting the amount of extraperitoneal exudate and fluids. Instead of calomel and saline purgation, bland evacuants such as castor oil should be used before abdominal section. The use of suitable bland non-fermentative foods is desirable until just before operation in weak patients. After operation limit peristalsis; give only small quantities of food and drink by mouth. Rarely give opium. Enemata should be administered to relieve distention and cause peristalsis in downward direction. After normal peristalsis laxatives should be given as required."

5. Cystoscopy.—Furniss writes a very general article on the advantages of cystoscopy. The various forms of instruments in general use are referred to.

6. Suspected Embolism.—Nydegger reports a case of what during the patient's life was thought to be intestinal obstruction, and which at autopsy was suspected of being a case of embolism of the superior mesenteric artery. The embolus, however, was not found.

LANCET.

February 11, 1905.

1. A Case of Gangrenous Appendicitis with Subphrenic Abscess, By C. J. SYMONDS.
2. On Duodenal Ulcer: with Notes of Fifty-two Operations, By B. G. MOYNIHAN.
3. The Septic Origin of Gastric and Duodenal Ulcers, By W. B. CLARKE.
4. The Rôle of an Excessive Meat Diet in the Induction of Gout, By D. C. WATSON.
5. Carbonic Acid as a Factor in the Genesis of the Gouty State, By D. F. SHEARER.
6. The Rational Treatment of Fractures, By J. S. MELLISH.
7. Pyloroplasty: Remarks on Seventeen Cases of Pyloroplasty with After-History for Periods Varying from Ten Years to Five Years and Three Months After Operation, By R. MORISON.
8. General Gonococcal Infection, By W. H. WYNN.
9. A Hat Pin Four and Three Quarters Inches Long in the Cæcophagus Producing a False Aneurysm of the Superior Mesenteric Artery,
By H. D. ROLLESTON and T. R. C. WHIPHAM.

10. Mandibular Processes Associated with Double Harelip and Cleft Palate, By W. L. WOOLCOMBE.

2, 3. **Duodenal Ulcer.**—Moynihan's article is based on a series of 52 cases of duodenal ulcer with 4 deaths. In 7 patients the ulcer was perforating; of these, 2 died. In 22 cases there was association with gastric ulcer, and 1 death. In 23 cases duodenal ulcer alone was present, and 1 case proved fatal. Duodenal ulcer is far more frequent than has been formerly believed, and it is often associated with gastric ulcer. The symptoms are often perfectly characteristic and admit of an unhesitating diagnosis. The ulcers are usually situated in the first part of the duodenum, and are generally solitary. They may occur at any age, having been observed at the age of three days and at ninety-six years. They differ from gastric ulcer in being more common in men than in women. The symptoms are pain, hæmatemesis, and melæna. In a number of cases the ulcer remains latent for long periods. The pain is usually of a burning character, and when severe is always worse to the right of the middle line. If the pain does not come on for from two to four hours after a meal, the ulcer is either at the pylorus or very near it. Among the possible causes of pain are the irritation of the ulcer by the acid gastric juice, pyloric spasm, distention of the stomach or duodenum by gas, and the occurrence of localized peritonitis. Hæmatemesis and melæna probably occur more often than is supposed. The complications are hæmorrhage; perforation, acute, subacute, and chronic; cicatricial contraction and induration, causing stenosis of the duodenum; cicatricial contraction narrowing the ampulla of Vater and obstructing the outflow of bile and pancreatic juice; periduodenitis; cancer; compression of the portal vein; diseases of the gall bladder or bile ducts; and diseases of the pancreas. Clarke reports the case of a sailor, aged fifty-five years, suffering from a gastric ulcer of six years' standing. Six years before he had been shipwrecked, and for sixteen days had only maggoty bread to eat and putrid water to drink. A few days after being rescued he was taken with violent pains in the stomach and attacks of severe vomiting. Retrocolic gastrojejunostomy was performed. The author holds that this case strikingly confirms the suggestion of Robson and Moynihan that oral sepsis is responsible for many gastric and duodenal ulcers.

4, 5. **Gout.**—Watson has sought to determine by animal experiments whether an excessive meat diet exerted any specific action on any of the ductless glands. Rats and chickens were used: in poultry a meat diet induced hypertrophy of the thyroid gland. In rats there was a striking change in the character of the secretion, with catarrh of the epithelial lining of the vesicles. The author concludes that in human beings, as a result of the excessive use of meat, the character of the thyroid secretion is altered. This defect may be remedied by the administration of thyroid gland. He has given small doses of the extract in two inveterate cases of chronic gout, and in both the symptoms were relieved to a striking

degree. Shearer states that the one factor common to all antecedents of gout is the tendency to the production of an excess of carbonic acid in the blood. Muscular exertion increases it; alcohol and carbohydrates produce water and carbonic acid as the end products of their metabolism; nitrogenous diet increases the metabolism of carbohydrates. The sum of the small additions to the blood pressure consequent upon the excess of carbonic acid, is sufficient to account for the arterial hypertrophy. The effect of the chronic irritation of blood overcharged with carbonic acid would be increased connective tissue. The author includes arteriosclerosis and chronic interstitial nephritis with gout as conditions in which the main antecedent factor is the excess of carbonic acid in the arterial blood.

6. **Fractures.**—Mellish states that there is much room for improvement in the treatment of fractures, and urges the more extended employment of massage and as much freedom and movement as can be permitted in each individual case. Once the fractured ends of the bone have been approximated, the surgeon's chief duty is to keep the circulation of the limb in a healthy state. For this purpose the less splinting that can be done the better.

7. **Pyloroplasty.**—Morison has followed up twenty cases of pyloroplasty performed for stricture of the pylorus. One case could not be found and two were dead, one from cancer of the pylorus, and one from pulmonary tuberculosis. In the remaining seventeen cases the symptoms have recurred in three, necessitating a further operation. Of the remaining fourteen cases, in eight the result was perfect. In six, symptoms more or less painful were complained of. The author thinks pyloroplasty the best operation for stricture of the pylorus, and expresses surprise that it is falling into disuse and being replaced by gastroenterostomy. The cases suitable for pyloroplasty are those with a history of long standing stomach trouble, foul abundant vomiting towards night, thin patients with dilated stomachs and with a palpable movable nodules in the pylorus. He restricts the use of gastroenterostomy to cases of serious gastric ulceration which have resisted a trial of ordinary measures.

8. **General Gonococcal Infection.**—The author bases his remarks on three cases of gonococcal pyæmia recently observed by him. Gonorrhœa shows a great family resemblance to pneumonia, rheumatism, and cerebrospinal meningitis, in all of which a diplococcus has been proved to be the ætiological factor. In each case there is a seat of election, and the disease often becomes generalized and produces a septicæmia, the serous surfaces being especially affected. All have in common a marked leucocytosis, and one attack of one of them appears to predispose to others. In one of the author's cases, the gonococcus was obtained during life in pure culture from the blood. In the other two the diagnosis was made post mortem. In all three the primary seat of infection was the urethra. In two cases subcutaneous abscesses were present—an extremely rare

complication of gonorrhœa. The lesions and symptoms of the general infection depend mainly upon: 1. Direct infection with the gonococcus itself. 2. An absorption of a toxine—gonotoxine. 3. Mixed infection with other germs. There are no special clinical features to differentiate gonorrhœal infection from other pyæmias: a positive diagnosis can be made only by bacteriological examination of the blood or of any accessible lesions.

BRITISH MEDICAL JOURNAL.

February 11, 1905.

1. Removal of the Contents of the Anterior Triangle of the Neck in Cases of Malignant Disease of the Tongue, By H. T. BUTLIN.
2. On the Thalamus, By G. MANN.
3. On the Pathology and Treatment of Leprosy, By E. R. ROST.
4. A Second Case of Cutaneous Anthrax Successfully Treated by Scavo's Method Without Excision, By A. BOWLEY and F. W. ANDREWS.
5. The Medical Worthies of Cumberland, By H. BARNES.
6. Ergophobia, By W. D. SPANTON.

1. **Removal of Glands in Cancer of the Tongue.**—Butlin, in operating in cases of cancer of the tongue, removes the glands of the anterior triangle of the neck, on the same principle as clearing out the contents of the axilla in cancer of the breast. The glands which are apt to be diseased are the submental, the submaxillary, the inferior carotid, and the parotid or superior carotid groups. In removing the last it is almost always necessary to cut away a portion of the parotid salivary gland itself. Unfortunately we cannot rely upon only one group of glands being affected by cancer of a particular part of the tongue. The author operates upon the tongue first, and as soon as the patient is fit for the second operation, it is performed. By this is meant the patient's being able to take his food quite comfortably by mouth and the wound so far healed as to make infection of the wound in the neck improbable. This usually takes about nine days. Of 28 cases in which the glandular contents of the anterior triangle of the neck were removed, 10 were successful, and only 4 died of affection of the glands without recurrence in the mouth. Of 31 cases where the glands were not removed; only 5 were successful, and 8 died of affection of the glands without recurrence in the mouth. In every case of cancer of the tongue, even in the very earliest period, the author strongly recommends, not only removal of the disease of the tongue, but also if the disease is unilateral to have the anterior triangle completely dissected out, and if the disease of the tongue is in the middle line to have the contents of both triangles taken out.

3. **Leprosy.**—Rost claims that when the chlorine salts are removed from nutrient media, the various acid-fast bacteria (*Bacillus tuberculosis*, *b. lepra*, and *b. Lustgarten*) grow thereon with the greatest ease and rapidity. The medium is prepared by passing superheated steam over beef extract soaked in pumice stone in bottles in an autoclave. In this medium the tubercle bacillus grows in one to three days and that of leprosy in three

to five days. The characteristic appearance is a curly white stringy heavy deposit at the bottom of the tubes, very hard to shake up. By dialysis of nutrient agar a solid medium can be obtained on which the bacillus of leprosy grows at first as a white, and later as a brick red, curly, thick growth. The bacillus of leprosy when stained, may be distinguished from other acid-fast bacteria, by the following characteristics: 1. It retains the stain of acid dyes much more than the other bacteria of this class. 2. It is more irregular than the tubercle bacillus, and not curved, and is somewhat smaller. 3. It contains small oval spores within itself, which are highly refractile. 4. It has a beady appearance due to the presence of these oval spores. 5. Like the tubercle bacillus it may grow out into cultures into long branching filaments, but oval spores may alone be visible at times. 6. In the body it is found in great numbers inside epithelial cells, generally in the middle of the cells, whereas the tubercle bacillus is found in small numbers inside giant cells at the polar ends. To obtain the bacillus the fresh granulations of the ulcers of a case of leprosy are scraped and examined. If found the described medium is inoculated with a piece of tissue. The toxine of the cultivation of the leprosy bacillus is called, by the writer, "leprolin." It is prepared on similar lines to the preparation of tuberculin. It produces a powerful reaction in a case of leprosy, which may last three days or more. The temperature runs up to 104° F., and the anæsthetic areas become red, hot, and swollen. Ten c.c. of leprolin are given at a dose, and the injection causes considerable smarting, owing to the glycerine in which the leprolin is preserved. The most remarkable effect of the injections is the sudden return of sensation in the anæsthetic patches. The shooting pains are also relieved, the ulcers heal up, the subcutaneous nodules disappear, and the skin assumes a normal appearance. As a rule, the severity of the reaction may be taken as an index of the benefit that is likely to occur. The injections are usually given about once in two weeks: the writer has given over 400 injections and in every case the disease has ceased to advance, and there have never been any bad symptoms. One hundred cases are now under treatment in Burmah: four have been cured, and the great majority have been greatly benefited. It is not known how the bacillus enters the body: but the theory that it is through the consumption of badly cured fish is certainly erroneous.

4. **Anthrax.**—Bowley and Andrews report the case of a man aged thirty years, a horse hair dresser, suffering from a characteristic anthrax lesion, and from which typical anthrax bacilli were obtained. Forty c.c. of Scavo's anthrax serum were given, and its beneficial action could be noted at once. The patient was discharged cured in two weeks' time. Only nineteen hours after the injection not a single anthrax colony could be obtained from the vesicles, although previously the bacilli were abundant. Special attention is called to the increase in the œdema which follows the injection of the serum, and which may excite alarm for a little while.

Letters to the Editor.

A CONUNDRUM SOLVED.

126 EAST TWENTY-NINTH STREET,
NEW YORK, February 16, 1905.

To the Editor,

Sir: Some colleague gave me what he thought was a conundrum: Why do we say *tænia lata*, but, *tænia* being feminine, *tænia solium*?

My answer was this: *Solium* is the Latinized genitive plural of the Greek word *σόλος*, or disk. The Latins changed the ending of the Greek genitive plural, when it was *ων* into *um*, and when it was *ων* into *ium*; here, therefore *σόλων* into *solium*.

It interested me to consult the different medical lexicons, and they cause me some amusement in their attempted explanations of *tænia solium*. French lexicographers translated it *ver solitaire*, and some Latin scholar has given the name *tænia solitaria*. He was horrified of the supposed incorrectness of "*solium*," but the most profound nonsense I found in a German lexicon. Here it reads: *Solium* is a throne or an easy chair or a sarcophagus, in later Latin it means sole, while sole was *solum* in classical Latin. He also brings the Arabic *sosl* and the Syriac *schuschl* into play; it would then be an armed tapeworm, but he confesses that this explanation is rather forced.

Looking at the picture of *tænia solium* in Foster's Dictionary, I become at once convinced that *tænia solium*, a tapeworm composed of disks, was certainly an ideally correct name. A. ROSE.

"THE ABUSE OF WATER DRINKING IN DIS-
EASE."

MEXICO CITY, February 8, 1905.

To the Editor,

Sir: In regard to Dr. Manges's remarks about the waters of Carlsbad and the methods there used, I am forced to believe that he is unacquainted with the physicians of Carlsbad and their methods in the use of the water. It seems that he has in mind the article of Dr. Hlavacek, written in the early forties, wherein it is stated that the usual custom was to drink between 50 and 60 glasses of the waters daily. In those days Balneotherapeutics was based solely on empiricism and not on the principles laid down by physiology, pathology, and internal medicine, as it is to-day. This wholesale water drinking has entirely ceased. Above all, all physicians practising at Carlsbad are registered graduates of Austria and have passed a rigid course in physiology and pathology, and are therefore thoroughly acquainted with the evils of a large amount of water drinking on diseased metabolism and especially the heart.

So far as I know, and following my own custom, every patient coming to Carlsbad to take the "*Kur*" and placing himself under "*the so called guidance of the physician*" is given a thorough and complete examination, and especially regarding the cardiac function. It is unnecessary to go into

the uses and methods of the Carlsbad "*Kur*;" but sufficient American physicians have taken the cure—some under my personal supervision—and have never complained of the symptoms due to the abuse of water drinking. There are some cases where people who come to Carlsbad do not place themselves under our "*so called guidance*" and who think they are better and more rapidly cured by drinking enormous quantities—paraphrasing "*drink all you wish for five cents*."

I must admit, that we do send patients to Nauheim, either because they have been badly advised to come to Carlsbad, having a cardiac lesion, or at their own desire wish to avail themselves of the carbonic baths and the enjoyable surroundings of Nauheim as an after-cure. It is the first time that I have read that a patient must be sent to Nauheim owing to the evil effects of a Carlsbad "*Kur*." It certainly seems strange, that the best European authorities, such as Leyden, Nothnagel, von Noorden, Klemperer, Naunyn, Boas, and others, should send a very large number of their patients to Carlsbad, if these abuses were such as the article imports.

M. GERSTL, of Carlsbad.

Proceedings of Societies.

ASSOCIATION OF CLINICAL ASSIST-
ANTS OF WILLS'S HOSPITAL,
PHILADELPHIA.

Meeting of January 18, 1905.

Dr. J. HILAND DEWEY in the chair.

Gumma of the Iris.—Dr. STANLEY S. SMITH read a report of a case of gumma of the iris and ciliary body occurring in the clinic of Dr. CHARLES A. OLIVER. The case presented all of the characteristic symptoms of the condition, and was fast becoming well. Dr. Smith stated that it was very instructive to note the secondary rapid diminution of vision produced by haze in the media which had been probably caused by a deposition of the gummy infiltrates into the chambers of the eye.

In the discussion, Dr. JOHN T. KRALL commented upon the comparative painlessness of specific cyclitis and the character of the infiltration into the aqueous and vitreous humors which was chiefly composed of round cell exudates. In support of the belief of others that gummata of the ciliary body usually occur on the upper border of the cornea, he had seen but one in which the swelling was situated on the lower side.

The various methods of administering mercury were informally discussed, the consensus of opinion being in favor of the use of mercurial ointment by inunctions.

Interstitial Keratitis.—Dr. JOSEPHINE W. HILDRUP read a paper upon ten cases of interstitial keratitis, nine of which had been studied in the clinic of Dr. OLIVER, and the remaining one in her own clinic at the Woman's Hospital. The ages of the cases varied from six years to fifty-eight years. The dyscrasia had been very carefully studied in all. Females had been prepon-

derant in the series. With but one or two exceptions, all of the cases had passed on to resolution.

The discussion, which was quite informal, embraced the forms of treatment which were the most favored by the surgeons in the institution. Dr. JAMES A. KEARNEY stated that he had seen much good from the use of inunctions of protiodide of mercury. Dr. DEWEY spoke favorably of the use of dionin, stating that it had hastened resolution in a number of cases which he had seen. He had not had much experience with subconjunctival injections and had seen some unfortunate results, such as conjunctival ulceration, giving rise to disfigurement from their use. Dr. KEARNEY exhibited a case in which the right eye was being treated by the ordinary routine methods, supplementing these by subconjunctival injections of common salt solution in the left eye; the latter organ (although the first involved) seeming to grow well much more rapidly than its fellow.

Dr. KRALL stated that he had learned to share the opinion of others that if injections were made under the conjunctiva, their effects would be to produce a number of adhesions between the bulbar conjunctiva and Temon's capsule; and stated that even though the injections were made into the capsule, their good results were but transitory as adhesions were sure to occur. In other words, he, with many other authorities, believed that such injections did more harm than good.

Double Pterygium.—Dr. KEARNEY presented a case of double pterygium from Dr. WILLIAM ZENTMAYER's clinic, in which one eye had been operated on by the von Arlt method and the other by the McReynold's. He exhibited a case of entropion of the upper lid, taken from the same clinic, in which a Hotz operation had been performed with little or no improvement, followed by a Jaesche-Arlt operation, which afforded a very satisfactory result. He also showed a case of entropion from the clinic of Dr. FRANK FISHER in which the cilia had been transplanted and the tarsus removed, giving most excellent results.

In the discussion, Dr. KRALL was of the opinion that the McReynold's operation had no advantage over the von Arlt. He believed that every case should be treated on its own merits, one method of operation not being applicable to all. Dr. DEWEY, Dr. MILTON A. ROBISON, and Dr. SMITH cited several cases in which different plans of treatment had been most successfully applied.

To Study Cerebrospinal Meningitis.—Dr. Edward Waitzfelder has been experimenting at Gouverneur Hospital, New York, in the treatment of cerebrospinal meningitis with diphtheritic antitoxine. The idea was first suggested by Dr. Wolf, of Hartford, Conn. In speaking of the method of treatment, Dr. John W. Brannan, president of the board of trustees of Bellevue and allied hospitals, said: "I want more time to study the question, but the results of the antitoxine treatment seem to be of great value."

Book Notices.

Practical Dietetics. With Reference to Diet in Disease. By ALIDA FRANCES PATTEE, Graduate, Boston Normal School of Household Arts; Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City. Second Edition, Revised and Enlarged. Pp. xvi+312. New York: Published by the Author.

The second edition of this handy little volume is considerably enlarged and seems to have been carefully revised. The work appears to be excellent and well arranged, and especially suited to the needs of the sick room and the hospital. The inclusion of dietaries suited to various conditions justify the claim of the book to be considered as a treatise on practical dietetics, and the frequent references to various standard medical works is an excellent feature. As a whole the volume will be of undoubted service to the general practitioner, as well as to the nurse.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XXII. Edited by JOHN B. STORY, M. B., F. R. C. S., General Secretary; Surgeon to Royal Victoria Eye and Ear Hospital, Dublin. Dublin: John Falconer; London: Baillière, Tindall, & Cox; Edinburgh: James Thin; Bristol: John Wright & Co., 1904. Pp. xxxix+439.

This volume contains a number of interesting papers, some of which are well illustrated, that were read before the different sections of the academy in 1903. It sustains the excellent reputation of the preceding volumes.

Miscellany.

X Ray Therapeutics.—Ewart, in the *Edinburgh Medical Journal*, for November, 1904, speaks of the similarity of the emanations from radium and the x rays. The physical laws governing the x rays should be understood in order to use them efficiently, he therefore finds it desirable to refer to some of them. The vacuum tube changes in resistance, becoming more rarefied in proportion to the discharge which passes through it.

The rays arise at the anticathode, and that point should be taken in estimating their relative intensity at any distance.

The exposure should be inversely as the square of the distance. The intensity of the ray in the reverse aspect of the tube will depend (1) upon the thickness of the photographic plate, and (2) upon the penetrating power of the ray.

An apparatus which is used for therapeutical purposes must maintain absolute constancy, or as near that as possible. Accumulators kept well charged are more constant than the current taken from the main by means of a transformer.

To ensure greater constancy the tube must not be allowed to get hot; this also will be a means of prolonging its life.

The screen and the operator's hand must not be used to judge of the penetrating power of the

rays on account of the lack of an absolute standard and the danger of such practice.

The proper interval between the terminals is found by experiment and must be maintained, only the duration and the interval of exposure must be varied. Avascularity and the opacity of the tissue are concerned in the production of a reaction.

The differences in the duration of the latent period of the reaction are due to variations in the intensity of the ray, and lack of uniformity in the accessory details of application.

The reaction presents the ordinary features of an inflammation, the various stages of which are greatly prolonged.

Examination of tissues which have been subjected to x rays shows in one instance that the epithelial cells undergo cystic degeneration and disappear, and in another that the cells are invaded by leucocytes, the vessels dilated, and that inflammation exists.

The author thinks the x rays a clumsy means for the treatment of lupus, and not as efficient as the Finsen light. There are not a few recurrences. The benefit to malignant disease by means of x rays is questionable. Rodent ulcer being superficial is usually benefited. Sarcomata are seldom improved by them. Pain is frequently relieved in hopeless cases, but the relief cannot be compared to that which is obtained from a hypodermic of morphine. If the patient is too feeble, or the growth too extensive for removal, or has recurred repeatedly the rays may be used.

In eczema relief is rapidly obtained, but is only temporary; in tinea sycois relief is obtained with equal rapidity and is permanent. In leucocythæmia much benefit has been obtained by gentle x ray treatment.

On the Question of Autointoxication in Ileus.

—Clairmont and Ranzi, in *Fortschritte der Medizin*, for October 20, 1904, report the results of extensive experiments with reference to the poisonous effects of the contents of the intestine in experimental work as well as in ileus in human beings. Their conclusions were that in both series of experiments toxic substances were formed in the intestinal contents. The experimental ileus was produced by means of a wick, which was believed to be better than silk or a drainage tube. The contents of the intestine which were accumulated by this means were then carefully filtered. The filtrates showed the following peculiarities:

1. Animals which were used for experiment showed the same typical phenomena after injection of the filtered material, and in most of the cases death resulted quickly. The symptoms were independent of the manner in which the ligature was applied and the species of animal, but were dependent upon the relation of the substance to the weight of the animal. The noteworthy symptoms were rapid breathing, dilated pupils, increased reflex irritability, clonic and tonic spasms.

2. These symptoms were also present after injection of aerobic bouillon culture filtrates. The development of poisons was observed, not only in

the body of the animal experimented upon, but also in the test tube.

3. The poisonous action of the filtrates was not materially influenced by heat.

4. The filtrates lost their effectiveness after they had been kept some time.

5. When normal brain tissue was added to the filtrate the poisonous effect seemed to be neutralized.

6. Some of the filtrates showed an intense hæmolytic activity under the influence of heat.

7. Cytolytic activity was also shown by the filtrates. The same peculiarities were evident when filtrates obtained from ileus in the human being were used. The symptoms which were observed after injection of the filtrates in animals were similar to those which were observed in human beings. They included such nervous phenomena as coma, delirium, and spasms.

The authors believe that the severe phenomena in ileus in human beings are mainly explained by the theory of intoxication rather than by the theory of reflex action. They have endeavored to reduce their investigations to a practical basis by attempts at producing immunity by means of opotherapy. The number of their experiments in this direction is still too small to permit them to draw comprehensive conclusions.

The Surgical Treatment of Infantile Paralysis.

—Wiener, in *Medicine*, for December, 1904, defines infantile paralysis as a sequel to a preceding inflammation of the anterior horns of the gray matter of the spinal cord, which terminates in more or less destruction of the ganglion cells. The muscles which are supplied by the diseased nerves, being deprived of their trophic centres, degenerate. The muscle loses its function and lipomatous tissue develops. The muscles may be destroyed or only weakened. If not destroyed they tend to regenerate, this tendency continuing to the seventh or ninth month. After this period no further improvement will take place and the case should then come to the notice of the surgeon. The surgical treatment is based on physiological principles. If there is lack of muscular tonus the muscle is like an overstretched rubber tube. It may not be paralyzed, though useless, and in such a case shortening of the tendon may restore function to the muscle. Relief is sometimes possible by means of a judiciously applied apparatus, but such a method is much slower and less effective than surgical treatment. If a muscle has undergone lipomatous degeneration its function can be restored only by supplying new contractile substance or by connecting its tendon with a healthy muscle. The tendon of the power giver may be severed and grafted to the tendon of a receiver, or there may be a division of the function of the power giver by splitting off a portion of its tendon. According to the direction which the split portion has to take there may be a descending, ascending, or mutual transference of function. The descending practically creates a muscle with two tendons, having different insertions. The mutual rests on the same principles, while the descending is a lateral connec-

tion between the paralyzed and the healthy tendon. The descending method does not interfere with the normal blood supply of the transplanted tendon.

Nervous energy should be borrowed from muscles of similar function, if possible. A tendon must always be transferred in a straight line. The tendomuscular flaps act best when there is tension in an overcorrected position.

As rivals to tendon grafting are, (1) the periosteal method of Lange by which the tendon is sewed to the periosteum with silk at the proper point; (2) grafting of muscle to muscle. The leg is the ideal extremity for tendon grafting. The incisions should be large, and the plan of the operation should be worked out in advance. The skin is united by a continuous silkworm suture, starched bandages hold the limb in an overcorrected position, and in a week a light plaster of paris or celluloid dressing may be substituted. The patient is able to be about on crutches three days after the operation has been performed, and ten days later he is allowed to use the extremity. The plaster of paris cast should be worn from four to six weeks. Surgical procedures have been sufficiently satisfactory to warrant their recommendation for infantile paralysis. Massage and electricity should be given for at least a year after the operation.

Diagnosis of Abscess of the Liver.—De Burn, in the *Revue de médecine*, for November 10, 1904, calls attention to the mistakes which are often made, especially in the East, by allowing intermittent or remittent fever to be regarded as proof positive of malarial congestion of the liver instead of abscess, although frequent careful examinations may have been made. The ordinary means of diagnosis is often insufficient to determine the presence of an abscess in the liver, and even puncture may deceive one in regard to the true situation.

No one will deny the value of such evidence as increase in the size of the liver, hepatic, and scapular pain, oedema of the abdominal wall, fever, and general malaise, but, in addition to these signs, the author lays stress upon the condition of the tongue, the symptoms produced by exploration of the chest, and certain peculiarities of the pulse and temperature. In subacute and chronic abscess of the liver the tongue is especially inclined to present an appearance which has not been sufficiently emphasized by writers upon these subjects. It gradually sheds the coating which covered it, the tip and edges become red, the whole organ becomes dry, and three lines appear, running the length of its face aspect, two lateral, and one median, uniting at the tip. If it is protruded from the mouth it is without its natural suppleness, is fiery red, and feels to the finger like a piece of wood. With the tongue in such a condition with fever which does not coincide with chronic diarrhea or with urinary troubles one should be suspicious of the presence of abscess of the liver. The condition of the tongue which has been described may be the only pronounced

symptom, but if it is connected with indistinct pain in the right shoulder, and in the liver, and with an attack of intermittent fever, the diagnosis of hepatic suppuration is almost certain to be the correct one.

Apyrexia may also attend the development of an abscess of the liver, but this will give place to fever in connection with indigestion, overwork, excitement, and various other causes. Apyrexia may occur also after a longer or shorter period of fever, coinciding with improvement in all other symptoms and deceiving the patient with the thought that he is getting well. The improvement may last a few weeks or months, and then upon the slightest provocation the bad symptoms will return with increased severity.

Abscess of the liver is almost always attended by important changes in the pleura. Pleurisy in this combination is always dry, except in cases in which the pus penetrates from the liver into the thorax, and friction sounds are usually heard at the posterior aspect of the base of the right lung. These sounds are sometimes heard over the entire posterior aspect of the right lung, and occasionally over the left lung. The pleurisy is not usually very painful, but it may throw the physician off his guard concerning the condition of the liver, and he may make a diagnosis of dry rheumatic or tuberculous pleurisy, of intercostal neuralgia, or of splenalgia. If one realizes the connection of this condition with abscess of the liver, one will not be misled by thinking that one has to deal with malaria.

The fever in hepatic suppuration is more frequently intermittent than remittent; the pulse is only moderately disturbed, its variations being disproportionate to those which are observed in connection with the temperature.

Intrathoracic Operations Performed With the Assistance of Sauerbruch's Chamber.—Mikulicz, in the *Revue de chirurgie*, for November 10, 1904, thinks that in view of his experiences and his study upon the cadaver, it is not always indispensable that the thorax should be extensively opened by a large temporary resection of the ribs in order to suture the heart. The opening of an intercostal space will often be all that is necessary. By cutting the intercostal muscles for half the length of this space, the sides of the wound can be held apart with the hands, or with a suitable retractor, sufficiently to enable one to operate within the thorax.

Simple intercostal thoracotomy between the third and seventh spaces may be practised with much economy of time. The closure of the thorax is made with tier suturing of the intercostals and the large muscles of the chest. Sauerbruch's chamber facilitates the removal of tumors from the chest wall and operations upon the diaphragm. By its aid the lungs become more accessible, for they can be readily reached over a large extent.

This chamber may possibly permit the surgical treatment of certain organic diseases of the heart, like the narrowing of the mitral valve, for example. Particular reference is made by the

author to the surgery of the thoracic portion of the œsophagus. If it is necessary to resect it there will be great difficulty in uniting the two ends on account of the rigidity of the tube.

If a resection of its lower portion is made the great cul de sac and the cardiac end of the stomach are drawn through the opening in the diaphragm and attachment made to the remaining portion of the œsophagus. In order to make resections of this portion of the tube, Mikulicz recommends an anterior incision in the sixth left intercostal space. He has operated only once on a human being in Sauerbruch's chamber, and under pressure. The case was one of cancer of the upper half of the thoracic œsophagus. The patient died from collapse during the operation. During the operation the lungs retained their normal volume and the respiratory movements remained regular.

Physiological and Physical Principles Involved in Intrathoracic Operations Performed in the Pneumatic Operating Chamber Invented by Sauerbruch.—Sauerbruch, in the *Revue de chirurgie*, for November 10, 1904, has made a study of the inconveniences and dangers which attend artificial respiration which may become necessary to combat operative pneumothorax, and proposes a method, applicable to human beings, which rests upon the principle of the constant maintenance of the difference of physiological pressure between that which is exerted within the bronchial tubes and that which is exerted within the pleural cavity. He makes use of a chamber in which the physiological lowering of the intrapleural pressure is obtained by aspiration of the air.

In experimenting upon animals the head of the animal remains outside the chamber and is separated from the latter by a rubber ball. Within this chamber one can make extensive resections of the thorax without causing serious trouble in the circulation or the respiration. The operator and his assistants can readily tolerate the conditions within the chamber.

Sauerbruch has constructed a large and a small chamber, the former differing from the latter in the fact that on the wall, opposite the side on which is the patient's head, is fitted a cylinder in which the abdomen and the lower limbs are introduced. This cylinder is hermetically closed at the level of the lower opening of the thorax and communicates with the external air. By this means the normal pressure is maintained in the pulmonary veins, while the pleural aspiration is diminished.

In a second method it was sought to obtain the difference in pressure, not by exerting less pressure upon the lungs, but by increasing the pressure within the lungs. This method resulted in producing troubles in the circulation and in the respiration which were not present in the first method.

In the course of his studies Sauerbruch observed that the hyperæmia which accompanies the collapse of the lungs plays an important part in the pathology of pneumothorax.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from February 18 to February 25, 1905:

Smallpox—United States.			
Place.	Date.	Cases.	Deaths.
Florida—Jacksonville	Feb. 11-18	1	
Illinois—Chicago	Feb. 11-18	15	4
Illinois—Galesburg	Feb. 13-20	1	
Louisiana—New Orleans	Feb. 11-18	6	
Two imported.			
Massachusetts—Boston	Feb. 11-18	1	
Massachusetts—Lawrence	Feb. 5-18	5	
Massachusetts—Lawrence	Feb. 11-18	1	
Michigan—Detroit	Feb. 11-18	5	
Michigan—At 66 localities	Jan. 28-Feb. 4	4	Present.
Missouri—St. Louis	Feb. 11-18	28	6
Nebraska—Omaha	Feb. 11-18	13	
New York—New York	Feb. 11-18	1	1
Ohio—Toledo	Feb. 4-18	12	
Pennsylvania—Steelton	Feb. 11-18	1	
South Carolina—Camden	Feb. 11-18	1	
South Carolina—Charleston	Feb. 11-18	2	
South Carolina—Greenville	Feb. 4-11	5	2
Tennessee—Nashville	Feb. 11-18	7	
Wisconsin—Milwaukee	Jan. 21-Feb. 11	24	

Yellow Fever.			
Brazil—Rio de Janeiro	Jan. 8-29	16	3
Mexico—Merida	Feb. 5-11	1	
Panama—Panama	Jan. 1-Feb. 11	19	6
6 cases, 2 deaths from U. S. S. Boston.			

Smallpox—Foreign.			
Brazil—Bahia	Dec. 31-Jan. 21	2	
Brazil—Para	Jan. 1-31	66	
Brazil—Pernambuco	Jan. 1-15	131	
Brazil—Rio de Janeiro	Jan. 8-29	123	54
France—Paris	Jan. 28-Feb. 4	12	
Great Britain—Bradford	Dec. 26-Jan. 9	12	
Great Britain—Leeds	Jan. 21-28	7	
Great Britain—London	Jan. 28-Feb. 4	1	
Great Britain—Manchester	Jan. 28-Feb. 4	2	
Gt. Britain—Newcastle-on-Tyne	Jan. 28-Feb. 4	5	
Great Britain—South Shields	Jan. 28-Feb. 4	2	1
India—Bombay	Jan. 17-24	1	94
India—Calcutta	Jan. 14-21	2	2
India—Karachi	Jan. 15-22	1	
India—Madras	Jan. 15-22	2	
Italy—Lecce Province	Jan. 26-Feb. 2	24	
Mexico—City of Mexico	Jan. 14-28	3	3
Norway—Christiania	Jan. 14-21	1	
Russia—Moscow	Dec. 31-Jan. 28	26	8
Russia—Odessa	Jan. 14-Feb. 4	4	2
Russia—St. Petersburg	Jan. 14-28	4	2
Russia—Warsaw	Dec. 10-17	2	
Spain—Barcelona	Jan. 22-29	15	8
Turkey—Constantinople	Jan. 22-29	9	
West Indies—Grenada	Jan. 11-28	7	

Cholera.			
India—Calcutta	Jan. 14-21	1	169
Russia—Astrachan	Dec. 27-Jan. 8	1	77
Russia—Government of Baku	Dec. 21-Jan. 1	38	33
Russia—Government of Saratow	Dec. 27-Jan. 3	15	10
Russia—Tiflis	Dec. 27-Jan. 3	7	31
Turkey in Asia—Van	Jan. 1-7	77	46

Plague.			
Africa—East London	Dec. 24-Jan. 7	8	5
Africa—Port Elizabeth	Dec. 24-Jan. 7	1	1
Arabia—Aden	Dec. 24-Jan. 7	110	83
Australia—Brisbane	Jan. 2	1	
Australia—Ulmara	Jan. 10	1	
Brazil—Bahia	Dec. 31-Jan. 7	2	
Brazil—Para	Dec. 31-Jan. 7	Present.	
Brazil—Rio de Janeiro	Jan. 8-29	41	15
Egypt—Suez	Jan. 14-21	4	3
Egypt—Tukh	Jan. 14-21	1	
India—General	Dec. 21-Jan. 7	27,886	24,385
India—General	Jan. 7-14	30,487	25,719
India—Bombay	Jan. 19-24	301	
India—Calcutta	Jan. 14-21	64	
India—Karachi	Feb. 15-22	46	64
India—Madras, vicinity of	Jan. 6	1	Outbreak reported
Japan—Hirogo	Dec. 14	1	
Russia—Ural Territory	Jan. 3-9	8	15
Siam—Bangkok	Dec. 15-22	1	1
Straits Settlements—Singapore	Dec. 30	3	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending February 22, 1905:

BLUE, R., Passed Assistant Surgeon. Detailed as member

of Revenue Cutter Service Retiring Board at San Francisco, Cal. February 16, 1905.

FOSTER, S. B., Acting Assistant Surgeon. Department letter of January 23, 1905, granting Acting Assistant Surgeon Foster leave of absence for twelve days, amended to read ten days from January 24th.

OAKLEY, J. H., Passed Assistant Surgeon. To proceed to Northport, Wash., for special temporary duty. February 21, 1905.

STIMPSON, W. G., Passed Assistant Surgeon. Detailed as member of Revenue Cutter Service Retiring Board at San Francisco, Cal. February 16, 1905.

WILLIAMS, L. L., Assistant Surgeon-General. Granted leave of absence for eight days from February 14th. February 16, 1905.

Board Convened.

Board convened to meet at San Francisco, Cal., February 25, 1905, for the physical examination of officers of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. G. STIMPSON, chairman. Passed Assistant Surgeon J. M. Holt, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 25, 1905:
PAYNE, J. H., Passed Assistant Surgeon. Ordered to the *Pennsylvania*.

SCHWEIN, L. H., Acting Assistant Surgeon. Detached from the *Abarenda* and ordered home to await orders.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending February 25, 1905:

BIRMINGHAM, H. P., Major and Surgeon. Left the Chief Surgeon's Office, Department of Texas, on tour of inspection to Jackson Barracks and Fort St. Philip, La.

GIRARD, A. C., Colonel and Assistant Surgeon General. Leave of absence extended thirty days.

MORSE, A. W., First Lieutenant and Assistant Surgeon. Relieved from duty at Vancouver Barracks, Wash., and ordered to accompany the Nineteenth Infantry to Manila, P. I., where on arrival he will report for duty in the Division of the Philippines.

SHEPARD, JOHN L., First Lieutenant and Assistant Surgeon. Left from detached duty at Washington, D. C., on fifteen days' leave of absence.

STONE, JOHN H., First Lieutenant and Assistant Surgeon. Granted four months' leave of absence to take effect about April 1st, with permission to go beyond the sea.

The following named medical officers are relieved from duty in the Division of the Philippines, to take effect on the dates set opposite their respective names, or as soon thereafter as practicable, and will then proceed by the first available transport to San Francisco, Cal., and upon arrival will report by telegraph to the Military Secretary of the Army for further orders:

BOYER, P. L., First Lieutenant and Assistant Surgeon. May 12, 1905.

BROOKE, ROGER, JR., First Lieutenant and Assistant Surgeon. May 12, 1905.

HALL, JAMES F., First Lieutenant and Assistant Surgeon. May 26, 1905.

HALLORAN, P. S., First Lieutenant and Assistant Surgeon. May 12, 1905.

HEARD, GEORGE P., First Lieutenant and Assistant Surgeon. May 26, 1905.

KOERPER, C. E., First Lieutenant and Assistant Surgeon. May 12, 1905.

NELSON, KENT, First Lieutenant and Assistant Surgeon. May 26, 1905.

O'CONNOR, R. P., First Lieutenant and Assistant Surgeon. May 12, 1905.

PATTERSON, R. U., First Lieutenant and Assistant Surgeon. May 12, 1905.

PHALEN, JAMES M., First Lieutenant and Assistant Surgeon. May 26, 1905.

QUINTON, WILLIAM W., Captain and Assistant Surgeon. May 26, 1905.

RAGAN, CHARLES A., First Lieutenant and Assistant Surgeon. May 26, 1905.

RUFFNER, E. L., First Lieutenant and Assistant Surgeon. May 26, 1905.

WHITMORE, E. R., First Lieutenant and Assistant Surgeon. May 12, 1905.

WILSON, WILLIAM H., Captain and Assistant Surgeon. May 26, 1905.

WOODALL, WILLIAM P., First Lieutenant and Assistant Surgeon. May 26, 1905.

Births, Marriages and Deaths.

Born.

MUNDORFF.—In New York, on Friday, February 24th, to Dr. and Mrs. George T. Mundorff, a son.

Married.

BARSUMIAN—BEDFORD.—In New York, on Friday, February 17th, Dr. Hagopian G. Barsumian and Miss Jennie Bedford.

DARLING—LLEWELLYN.—In New York, on Saturday, February 18th, Dr. Samuel T. Darling and Miss Naunryrie A. Llewellyn.

GREEN—BRICKELL.—In Weldon, North Carolina, on Thursday, February 16th, Dr. Isaac E. Green and Miss Margaret Williamson Brickell.

HINMAN—TALLMADGE.—In Catskill, N. Y., on Tuesday, February 14th, Dr. Eugene E. Hinman and Miss Edna Tallmadge.

JACKSON—HEXTER.—In Philadelphia, on Wednesday, February 22nd, Dr. Joseph Maurice Jackson and Miss Stella Hexter.

PHILLIPS—BAGWELL.—In Baltimore, Maryland, on Wednesday, February 15th, Dr. Francis Murray Phillips and Miss Harriet Twyford Bagwell.

Died.

BUCHAN.—In Union Grove, Wisconsin, on Thursday, February 16th, Dr. Alfred Buchan, in the fifty-eighth year of his age.

CRISFIELD.—In Jacksonville, Florida, on Tuesday, February 21st, Dr. James E. Crisfield, of Dansville, N. Y.

GALE.—In Chicago, on Saturday, February 18th, Dr. John H. Gale, in the sixty-ninth year of his age.

GRANNISS.—In Saybrook, Connecticut, on Friday, February 17th, Dr. John H. Granniss, in the sixty-first year of his age.

GRIFFITHS.—In Brooklyn, N. Y., on Monday, February 20th, Dr. William Edward Griffiths, in the sixty-third year of his age.

HOUGHTON.—In New York, on Sunday, February 19th, Dr. Elihu Russell Houghton, in the forty-first year of his age.

HUNT.—In Charlestown, Massachusetts, on Thursday, February 16th, Dr. Israel T. Hunt, in the sixty-sixth year of his age.

PHELAN.—In Duluth, Minnesota, on Saturday, February 11th, Dr. Francis Norton Phelan.

QUIRK.—In Sayre, Pennsylvania, on Thursday, February 9th, Dr. Matthew Aloysius Quirk, in the thirty-second year of his age.

SENER.—In Middlesboro, Kentucky, on Wednesday, February 15th, Dr. D. W. C. Sener.

SHAW.—In Middletown, N. Y., on Wednesday, February 22nd, Dr. Mortimer Wright Shaw, of New York, in the thirty-eighth year of his age.

VAN DALSEN.—In Paterson, New Jersey, on Thursday, February 16th, Dr. Spencer Van Dalsen, in the fifty-third year of his age.

VAN RENSSLAER.—In Boston, Massachusetts, on Monday, February 13th, Dr. H. R. Van Rensselaer.

VIXTRUM.—In Colorado Springs, Colorado, on Thursday, February 9th, Dr. J. A. Vixtrum.

New York Medical Journal AND Philadelphia Medical Journal.

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SATURDAY, MARCH 11, 1905

WHOLE No. 1371

Original Communications.

SUBCUTANEOUS INJURIES OF THE ABDOMINAL WALLS AND VISCERA.

By DANIEL N. EISENDRATH, A. B., M. D.,

CHICAGO.

In taking a retrospective view of abdominal surgery in the past twenty years one is struck by the fact that, comparatively speaking, the treatment of injuries of the abdominal viscera without external signs has progressed rather slowly.

The increased number of reports of both successful and unsuccessful cases shows that the interest of the profession has been aroused both in this country and abroad, especially during the past eight or nine years. Up to that time a patient who had been stabbed or shot, and who had some palpable evidence of injury in the shape of a wound of entrance, received far more attention than one who had often sustained graver and more frequently fatal injuries, but who perhaps had only a few abrasions on his abdomen.

The practitioner or surgeon, or both, were only too often content to make a diagnosis of "internal injuries" and calmly watch the patient succumb to a septic peritonitis from a perforated intestine or bladder. The same physician who urged immediate laparotomy for a ruptured extrauterine pregnancy on account of the rapidly increasing symptoms of anæmia from hæmorrhage into the free peritoneal cavity, would often sit apparently hopeless by the bedside of a man or woman who showed the same symptoms from the rupture of a spleen, or liver, or kidney, as the result of a crushing blow upon the abdomen, and not be aware of the fact that a laparotomy with extirpation of the spleen or the simple tamponade of a bleeding liver was even easier than the removal of a bleeding tube.

Ruptures of the abdominal viscera without external signs are more frequent than the combined number of gunshot and stab wounds of the same organs.

Of 362 cases of injury of the liver collected by

Eidler, in 1885, 50 per cent., or 184, were without external signs and the remainder was due to stab and bullet wounds. A similar ratio held true for injuries of the spleen.

Many lives could be saved every year if the diagnosis of a rupture of one of the abdominal viscera was made early enough, so that the question of surgical intervention might be discussed at a time when the percentage of chances of success was greatest. This is in the first six to twelve hours after the injury. As I will show, it is practically useless to make a diagnosis of a perforation of the bladder or intestine after the first twenty-four hours, or to hope to compensate for the tremendous hæmorrhage following a laceration of the spleen, liver, or kidney after the first twelve hours.

I trust that the reading of such papers as this will draw the attention of both surgeon and physician to this fertile field of diagnostic skill. Whenever a man or woman has fallen from a height, been kicked by a horse or human being over one of the abdominal regions, or thrown against a wagon pole or some other projecting object, or the trunk has been crushed, or some blunt missile has been thrown at him, do not fail to look for symptoms of a ruptured viscus, and give the patient at least the benefit of our latest observations in this direction. In many cases your watchfulness will be rewarded by the saving of a life which would have been lost without prompt surgical intervention.

When I am called to see a case with the history of one of the above modes of injury, my first thought is to consider which organ can have been injured. A practical division into hollow and solid viscera facilitates such a diagnosis and, by painstaking observation of the general and local conditions, a probable and often positive opinion can be formed, not only of whether any organ has been injured, but also of which particular one, so that the abdominal incision can be made as close as possible to the seat of injury.

Amongst the hollow viscera may be included, in the order of frequency of their injury, the small

and large intestine, urinary bladder, stomach, gall bladder, and ureters. The solid viscera, also given in the order of their frequency of injury, are the kidney, liver, spleen, and pancreas.

Ruptures of the kidney and intestine formed over 60 per cent. of 143 cases of all varieties collected by Makins and Neumann.

The reason for this is that the intestines have behind them the firm spinal column, and are separated from the abdominal wall in front only by the omentum, so that they are most frequently caught between the place where the abdomen is struck and the spinal column. Such a mechanism of injury occurs when the ileum or jejunum is crushed and torn, because the coils of this portion of the intestine are more mobile and are readily compressed against the firm spinal column. A second variety of injury of the small intestine and at times, although far more rarely, of the large intestine is a tearing off of the bowel say at the duodenojejunal flexure, or in the ascending or descending colon by a force which separates the bowel from its rather fixed point of attachment.

The reason why the kidney, like the intestine, is so frequently injured, has been variously explained. According to some, it is compressed by a crushing force between the rigid spinal column and the last two ribs; according to others, it is the action of the force upon a body full of liquid, which causes it to burst (Küster's hydrostatic theory). The spleen and liver are fairly well protected by the lower six or seven ribs. They lie in close contact with these bones, being separated from them by the diaphragm and lower borders of the lungs. A fall from a height, however, will allow the liver, by reason of its own weight, to be torn from its firm ligamentous attachment to the diaphragm. Similarly, a fall upon some blunt object, or a crush between two resistant bodies, as in being run over, or the compression of the lower part of the thorax, caused by running into a wagon pole or being struck by some object, as in one of my cases, where a monkey wrench was thrown at a boy or, as in another case, where a man was struck by a policeman, or a horse kick—all of these are liable to cause a rupture of the spleen or liver. The organ is caught between the wounding agent and the ribs lying behind it, as well as the spine, and so crushed.

The empty urinary bladder is seldom injured, because in the adult it lies well within the bony pelvic ring. In the child, however, a less degree of fullness than in the adult favors a rupture, as in a case to be spoken of, because the bladder in children lies only partly in the pelvis. In adults the bladder, when full, is most likely to tear at the

fundus. Such a rupture is often associated with fracture of the pelvis. It may be situated entirely in that portion of the bladder which is covered by peritonæum, thus allowing the urine to escape into the general peritoneal cavity, giving rise to the intraperitoneal variety of rupture. On the other hand, especially in fracture of the pelvic bones, it is torn at some point not covered by peritonæum, permitting the urine to escape into the pelvic cellular tissue, and even into the abdominal wall, as in my own case.

The gall bladder, ureter, and pancreas are seldom the seat of injury, because they are well protected by surrounding viscera.

What are the pathology and results of the rupture of the individual viscera? Only the capsules of the kidney, liver, and spleen may be torn and heal spontaneously without symptoms. If, however, a laceration of the parenchyma occurs, it may vary from a simple tear, extending deeply into the organ, to complete pulpification.

The immediate effect of these latter injuries is a more or less severe hæmorrhage, which in the case of the liver and spleen escapes into the free peritoneal cavity, and gives rise, as we shall see shortly, to dullness in the dependent parts, and to symptoms of acute anæmia. In 143 cases of death from rupture of the liver, hæmorrhage was the cause of death in 59. In the kidney injuries, the blood in the majority of cases escapes into the perirenal tissues, and along the ureter, causing hæmaturia. In a small number of cases the peritonæum in front of the kidney was torn, allowing the blood to flow into the general peritoneal cavity, and giving rise to the same group of symptoms as in rupture of the liver and spleen.

The hæmorrhage from the solid organs may cease spontaneously, and in the case of the extra-peritoneal kidney lacerations this blood will, in the majority of instances, be absorbed and the patient will recover. But when there has been a temporary stasis of bleeding in ruptures of the spleen and liver and intraperitoneal injuries of the kidney, the patient may have a recurrence of bleeding from dislodgement of the clot, or may succumb to a sepsis from infection of the large quantity of blood in the peritoneal cavity.

In the case of the hollow viscera, like the stomach, intestine, and bladder, the conditions are even less favorable than in the solid or parenchymatous viscera.

The chances of a walling off of the escaping intestinal contents or urine are very slight, and the mortality of non-operated cases is almost 95 per cent.; 11 out of 160 cases not operated upon recovered with formation of fæcal abscess.

In intraperitoneal rupture of the bladder, the

prognosis is fully as bad if the case is not operated upon.

When the urine escapes into the general peritoneal cavity, peritonitis develops within forty-eight hours. In extraperitoneal ruptures the loose pelvic cellular tissue becomes infected a little more slowly, but causes sepsis and death in the end.

In order to make a diagnosis of whether one of the abdominal structures has been injured, it is best to examine the case in a systematic manner, and I would suggest doing so by first asking the history.

First.—How did the accident occur? Was the patient crushed, run over, struck a blow over the abdomen, have something thrown at him; did he fall from a height upon his feet or buttocks?

Second.—Exactly what part of the abdomen received the main impact of the blow? If in the region above the umbilicus in front, suspect injury of the liver, spleen, kidney, gall bladder, stomach, and duodenojejunal flexure, or tears of the mesenteric vessels. If below the umbilicus in front, suspect the small and large intestine, urinary bladder, and ureters. If the main impact of the blow was received over the lumbar regions, examine for injuries of the kidneys.

Third.—What is the patient's general condition? Has it improved or grown worse since the time of the accident? The first effect in many cases of a blow upon the abdomen is great shock, with all of its typical symptoms. This primary shock is often not recovered from and continues up to the time the patient is seen by a medical man. If, with such a history of continuance of primary shock, with rapid, small pulse, great pallor of the skin and visible mucous membrane, restlessness, thirst, there are other signs of internal hæmorrhage, one should suspect that one of the solid viscera, like the spleen, the liver, or kidney, has been torn, and if there is no improvement in the patient's condition within six to eight hours from the time of injury, the chance for spontaneous amelioration of the symptoms is slight. In other cases the primary shock or primary syncope is recovered from by the time the patient is examined, and we must then depend upon the history of the injury, the local conditions which can be obtained by physical examination (see next subdivision), and a gradual increase in symptoms of anæmia, or of peritonitis for our diagnosis. This class of cases will be discussed more fully.

In a third class there has been apparently no primary shock at all, and we have simply the history of an injury, and the results to be obtained

by a careful local examination of the patient's abdomen, and observation of his pulse as to increase in rate, in order to make our diagnosis. It is this last class of cases to which we are called, with only the history of an injury, in which rupture of the abdominal viscera is so frequently overlooked until the symptoms of peritonitis or of internal hæmorrhage are so evident that surgical intervention is too often of no avail.

Fourth.—One should make a careful physical examination of the patient's abdomen, because this is one of the most valuable aids in making a diagnosis. This may be conducted in the systematic way of an ordinary physical examination, beginning with inspection of the abdomen.

INSPECTION.

(a.) One should look for abrasions, bruises, or the evidences of a traumatic hernia, all of which may aid us somewhat in determining over what portion of the abdomen the greatest amount of force acted. The history of the injury will aid us greatly, because in some cases the force acts in a circumscribed manner, as, for example, a man's or a horse's kick upon some one point of the abdomen, where it often leaves but slight traces. Similarly, the history of a more diffuse force, such as violence from a crushing between two cars, or between the axle of a wagon and a wheel, will aid us in determining whether a viscus at some distance from the abrasions or bruises which may be present in the case, has been injured. Following this examination of the skin, one should take the next step in the physical examination, that is,

(b.) Palpation of the abdomen. First, determine whether there has been a fracture of any of the ribs, because such fractures are often accompanied by ruptures of the spleen, liver, and kidney. Next determine whether there has been a fracture of any of the pelvic bones, especially in the region of the symphysis pubis, because they are often complicated by ruptures of the bladder and of the urethra. The next step in palpation is extremely valuable, namely, to find out where the greatest degree of tenderness exists, because this will often lead to the determination, especially in the early hours, as to whether a visceral injury has occurred, and is regarded as one of the most valuable signs by the majority of surgeons. A second extremely important symptom to be determined by palpation is one to which French and German surgeons attach great value, namely, the presence of a more or less localized rigidity of the abdominal wall, especially if it persists during a number of hours of observation of the case. Palpation will further aid, as in one of the

cases I will shortly describe, in determining whether a protrusion is due to a hernia or a blood clot.

After inspection and palpation of the abdomen, which may have yielded valuable evidence of injury, a third subdivision of this physical examination consists of careful percussion of the abdomen.

By this aid we can determine whether there is dullness present in the flanks and also whether there is any change in the area of dullness when the patient is turned upon his side. In some cases it may be very difficult to elicit any changes on account of the rigidity and pain.

In ruptures of the spleen and liver, as well as in those of the kidney, in which the blood has escaped into the general peritoneal cavity, dullness appears quite early in the dependent, and if the blood has not all clotted, the anterior border of the area will change according to the position of the patient just as in an ascites. In many cases there is also an increase in the size of the areas of dullness of the spleen and liver when these are torn. In extraperitoneal ruptures of the kidney, dullness extends much farther toward the front of the abdomen than under normal conditions.

In ruptures of the bladder the lower part of the abdomen will show distinctly increasing areas of dullness.

This sign I have found to be of great value in the diagnosis of the two cases of extraperitoneal rupture in which I operated.

After having made the examination in the order given above, consider some of the individual symptoms, such as vomiting, increasing tympanites, and rise in pulse rate; in other words, the symptoms of peritoneal irritation which are followed rapidly by those of a more or less extensive peritonitis.

Vomiting which continues for some hours after the injury points strongly to intestinal perforation. Increasing tympanites and a constant rise in the pulse rate are indicative of beginning peritonitis.

Hæmaturia with or without renal colic points strongly to rupture of the kidney or ureter, especially if it increases in severity. A constant desire to urinate without the ability to do so is characteristic of injury to the bladder. The test by which a certain amount of sterile fluid is injected into the bladder, and the same quantity is expected to return, if there is no perforation, is so apt to lead to wrong results that but little reliance can be placed upon it.

HOW SHALL WE TREAT THESE CASES?

If we have made a diagnosis of rupture of the intestine or urinary bladder, the sooner the patient

is laparotomized, the better the chances for recovery. The same holds true for ruptures of the spleen and liver. Left to themselves, over 80 per cent. of patients with spleen and liver injuries, 93 per cent. of those of the intestine, 89 per cent. of the extra and 98 per cent. of the intraperitoneal ruptures of the bladder, will die. The outlook for spontaneous recovery in laceration of the kidney is far better. About 65 per cent. of such patients will recover without operation.

Through earlier diagnosis and operation the percentage of recoveries is constantly increasing.

Up to 1890, 3 cases of rupture of the spleen had been operated in, with 100 cases. In an article written by me in 1902, the percentage of recovery in 50 collected cases was 56 per cent., or 28 cases. Of these 28, 27 had been operated in since 1895. I have been able to collect 110 cases of ruptured spleen which were operated in; 65 patients, or 59 per cent., recovered, and 45, or 41 per cent., died.

In 1896, Petry collected 36 cases of rupture of the intestine, in which laparotomy had been performed, with 52 per cent. of mortality. Since 1896 I have found reports of 50 cases, with 23 deaths (46 per cent.), and 27 recoveries (54 per cent.).

The same improvement holds true for ruptures of the liver. Up to the present time I have collected 46 cases, with 21 deaths (45 per cent.), and 25 recoveries (55 per cent.). The percentage of recoveries after intra and extraperitoneal bladder ruptures has increased in a similar proportion.

There can no longer be any question that surgical intervention is called for as soon as a diagnosis of rupture of abdominal viscera has been made. The only exception is in the treatment of ruptures of the kidney, where the results have been far better with the expectant treatment unless the symptoms indicated operative interference. Such symptoms, in the case of an intraperitoneal laceration of the kidney, cannot be distinguished from those of a rupture of the spleen or liver. In the case of an extraperitoneal rupture, the destruction of kidney substance may be so extensive as to involve one of the larger branches of the renal artery, under which circumstances the hæmorrhage would continue, giving rise to the symptoms of constantly increasing anæmia, and a nephrectomy would be indicated. At times, after the rupture of a kidney and the formation of a large retroperitoneal hæmatoma, the onset of temperature and other signs of sepsis will also lead to operative measures. The site of the incision should vary somewhat, depending to a great extent upon the diagnosis previously made of the

viscus which has been injured. If the symptoms are those of an internal hæmorrhage, and it is not possible to diagnosticate as to whether this comes from the spleen, liver, or kidney, or from a rupture of a mesenteric artery, it will be found best to make an incision in the median line above the umbilicus, evacuate the blood, which is usually found in the shape of large clots, as rapidly as possible, and after removal of as large a quantity as can be reached with convenience through the incision, a systematic search should be made, first of the right and left lobes of the liver, then the spleen, and, lastly, the hand should be inserted deep into the peritoneal cavity to determine whether there has been a laceration of the kidney, with hæmorrhage into the free peritoneal cavity. In the case of ruptures of the liver, the method of treatment consists either of suture, cauterization, or tamponade. In general, it will be found very difficult to insert sutures into the bleeding liver, and the best results usually follow tamponade.

The Paquelin cautery has also been tried at times to stop the bleeding, but as just stated firm pressure through tamponing with gauze will in almost every case check the hæmorrhage. If, after examination of the liver, this organ is found intact, the next viscus to be examined in the systematic search is the spleen. The majority of the successful cases of rupture of the spleen in which laparotomy was performed were treated by splenectomy. This is a perfectly safe and easy procedure, and consists in bringing the spleen forward into the abdominal incision and ligating its pedicle after transfixing it so as to prevent slipping of the ligature. Several successful cases of suture of the ruptured spleen and also of tamponade have been reported, but removal of the spleen seems the shortest and safest procedure. It is not followed by any ill results, since the other blood making organs seem to take up its function. In a number of the cases of splenectomy for ruptured spleen, glandular enlargement and a moderate increase in lymphocytes have occurred, but were only transient. If the spleen has been examined, and also found free of evidences of injury, search should be made in these cases of intraperitoneal hæmorrhage for injuries of the kidney in which the hæmorrhage occurs into the free peritoneal cavity. Such cases are best treated by making a second incision over the kidney, and either tamponing it or performing a nephrectomy. It was stated that the incision in cases of suspected intraperitoneal hæmorrhage from a ruptured spleen, liver, or kidney, should be made in the median line above the umbilicus.

This statement is subject to modification in this respect, that if there is strong suspicion of a rupture of the liver, the abdominal incision should be made at once along the right border of the right rectus muscle, and on the other hand, if there is sufficient evidence of a rupture of the spleen, the incision should be made along the left border of the left rectus, as these organs are far more accessible to these latter incisions. It must not be forgotten that ruptures of the viscera are frequently multiple, and this fact must not be lost sight of during the operation. In one of the splenectomy cases referred to below the bleeding did not cease after removal of the spleen, because there was a tear in the superior mesenteric artery.

In those cases in which we have evidences or suspicions, at least, of a rupture of the lower portion of the intestine, especially of the ileum and jejunum, or a laceration of the bladder, the best incision is one in the median line, extending upwards from the symphysis pubis. The peritoneal cavity should be opened at once, and systematic search made for a perforation of the intestine, beginning at the ileocæcal valve, and examining the bowel toward the duodenojejunal flexure. At the same time, the peritoneal surface of the bladder can be examined, and if no injury of this surface of the bladder or of any portion of the small intestine is found, the incision can be closed and search made for an extraperitoneal rupture of the bladder. If upon opening the extraperitoneal tissue above the pubis in such an operation, fluid is found in the cellular tissue around the bladder, it points strongly to an extraperitoneal rupture, and it will not be necessary to open the peritoneal cavity until this perforation has been disposed of. The best method of treatment for a perforation of the intestine or of the bladder is to suture them by means of a Lembert suture of fine silk, in two layers superimposed. In case the perforation involves the entire circumference of the bowel, or there is sufficient contusion to warrant a prognosis of gangrene of the bowel, a resection may be necessary. In the extraperitoneal ruptures of the bladder, if there has been considerable escape of urine into the pelvic cellular tissue, the best results can be obtained by suturing the perforation with a fine Lembert silk suture, and then inserting gauze drains around the bladder. When, as in the case about to be mentioned, there is a co-incident rupture of the urethra, the safest plan is to make an incision into the bladder, bring the edges to the surface, and insert a drain as in suprapubic cystotomy.

As was stated at the beginning of this article,

the treatment of ruptures of the abdominal viscera does not differ in any particular from that of other lesions of the same viscera, the chief question being one of early diagnosis. My own cases consist of two of rupture of the spleen, in both of which unfortunately diagnosis was made too late; one rupture of the kidney, and two of the bladder. I will give only a brief account of each case.

(To be concluded.)

AN UNUSUALLY SEVERE CASE OF ACUTE CHOREA SUCCESSFULLY TREATED WITH APOMORPHINE.*

By MONTROSE GRAHAM TULL, A. M., M. D.,

PHILADELPHIA.

In apology for presenting a remedy for a most troublesome affection, based upon my experience in a single case, I can only say the surrounding circumstances were so peculiarly definite, the clinical picture so distinct and perfect, the endorsement of the diagnosis by a specialist of high standing so valuable and the result so prompt, well defined and, above all, so satisfactory, that I feel justified in reporting the case at some length.

Elizabeth B., aged fifteen years, consulted me in the spring of 1904. She was an overdeveloped girl, presenting the physical appearance of a more mature woman, but was of neurotic stock; a maternal aunt having had chorea in an aggravated form when a girl. Her menstrual periods had appeared a year previous, but had not been regularly established. She had been sent to a boarding school in a distant city, and as a result of the general strain on her nervous system began to show signs of chorea. I at that time advised some changes in her school regimen, put her on the usual treatment of arsenic and iron, and advised an abundance of outdoor exercise. In spite of this she rapidly grew worse and had to be taken from school. On May 1, 1904, I was sent for to see her at her home and found the choreic and general symptoms much more pronounced. She soon was entirely unable to stand or walk. The condition rapidly degenerated into an acute mania, with thickened tongue, guttural, and unintelligible articulation, the lips being covered with a thick tenacious mucus. A confluent morbilliform rash extended from head to foot, covering the entire body, trunk, and extremities. She was soon a mass of bruises and had to be surrounded with bolsters to prevent her seriously injuring herself by contact with bedstead and walls. A trained nurse and her mother were with her constantly day and night. During this period I made use of all the accepted remedies, giving her at various times 10 grain doses of veronal, large

doses of strontium bromide, the three valerianates, opium by suppositories, and finally a pill containing morphine acetate, $\frac{1}{8}$ grain; camphor, 1 grain; English extract of hyoscyamus, 1 grain; and creosote, $\frac{1}{2}$ grain, every one, two, or three hours, *pro re nata*. This was in addition to arsenic in ascending doses, which had been exhibited from the beginning. After many days of this treatment, not only without a sign of improvement, but with a steady retrogression, I became alarmed for the patient's life, and called in my friend, Professor Charles S. Potts, who unhesitatingly pronounced it the most severe case of chorea that had ever come under his observation. He suggested rapidly increasing the arsenic to 16 drops, t. i. d., which was done at once with no apparent benefit. On the evening of the day following one of Professor Potts's visits we were all in despair, the mother insisting that something be done at least to give relief from the spasmodic movements which had continued, without intermission, for two weeks. I was ready to throw up my hands and confess myself completely baffled, when my somewhat familiar experience with apomorphine in alcoholic delirium occurred to me, and as a last resort, I concluded to try it in tentative doses. One fortieth of a grain of apomorphine was administered hypodermically with results as gratifying as they were surprising. Within probably three minutes the incessant motion had ceased, the muscles were relaxed, and the child slept peacefully and quietly. I then ordered $\frac{1}{20}$ grain by the mouth every three hours with the arsenic continued as before. At no time was there sign of nausea or vomiting. The result was all that could be desired; a steady, gradual improvement with no return of the severer symptoms. Ten days later the patient was able to go to Ocean City, N. J., where she spent the entire summer in good health.

The case seems to be of special value, in that the earlier treatment was reviewed and endorsed by a skilled expert, who at the same time confirmed the diagnosis and testified to the unusual severity of the attack.

It was extremely gratifying after all our efforts had proved abortive to find ourselves rewarded by an immediate success, from a remedy which, so far as our knowledge extended, had not previously been used in this disease.

This of course is but a single case, yet it has often seemed to me that the old maxim, that a chain can only be as strong as its weakest link, should be made to read that a chain ought to be, and should be made as strong, as its strongest link. Applying this to medicine would be equivalent to claiming that a clear, definite, unequivocal result in one case should be duplicated in all of the same type, and this would necessarily follow, were it not for our faulty application of remedial methods. I most sincerely trust, however, that in this instance, our results may be repeated and

* Read before the Philadelphia County Medical Society.

our conclusions confirmed by the experience of others along the same line.

Before leaving the subject, I may be pardoned for saying a word or two concerning the permanency and general reliability of apomorphine as a pharmaceutical product. My experience with it has been considerable, as in addition to its more common use in the delirium of acute alcoholism, with which you are doubtless familiar, I have for the past two years used it exclusively in the treatment of capillary bronchitis and the bronchial catarrhs of childhood with most satisfactory results.

Its physiological effects have manifested themselves in a marvelously short time. I have never seen it fail to turn water a bright green color when in aqueous solution. This result is so positive that I always forewarn the mother, that she may not be needlessly alarmed by the reaction.

With doses of one tenth of a grain, hypodermically, I have never failed to produce emesis within five minutes, and I have used it for this purpose in alcoholic cases many times during the past ten years.

In doses of one two hundredths, to one one hundred and fiftieth of a grain by the mouth to children, I have observed nothing more than a condition of general relaxation followed by very pronounced hypnosis, which is also very markedly present after the exhibition of large doses.

Its effects recall Professor Horatio C. Wood's characterization of *veratrum viride* as bleeding a man into his own vessels.

The pallor, cold sweat, and profound collapse seen after the ingestion of large doses are very alarming, yet I have learned to look upon them as upon a similar condition following the use of tobacco by one unaccustomed to it, decidedly more terrible in appearance than dangerous in reality. I believe that the general relaxed condition of the vascular system so relieves tension as to remove all chance of cardiac insufficiency. As a matter of fact I have always found the pulse full, regular, and soft, with deep and undisturbed respiration, notwithstanding the apparent great prostration.

In two cases which I have seen profuse bowel movements have followed the administration of one tenth of a grain hypodermically, but this appears to be exceptional.

I am quite sure that we have in apomorphine a much neglected and undervalued drug, most powerful in its therapeutical action, but in intelligent hands a perfectly safe agent. Taking everything into consideration I know of no remedy upon which I have learned to rely with more confi-

dence than upon this, and I now feel quite at a loss when it is not present in my hypodermic case.

THE EXAMINATION OF FÆCES.

By IRA S. WILE, M. D.,

NEW YORK.

Investigators have been led from the consideration of macroscopic appearance to ascertain the more intimate constitution of tissues and to analyze the various results of the mechanical and chemical functions of the individual. Each discovered fact has enriched our logical knowledge of the living processes. Particularly great advances have been made in the study of blood, urine, and structural alterations due to disease. Gastric analysis gives us valuable diagnostic aid. Perspiration, bile, saliva, cerebrospinal fluid leave much to be desired and are therefore receiving considerable attention. The fæces have received but moderate study by the general practitioner and as a result our knowledge of their clinical pathology is limited.

What can be learned from these residual products—what can be gleaned from this undigested, or better, unassimilated material? Theoretically we should ascertain the state and progress of intestinal digestion. The fæces bear the impress of various fluids other than those normal in the intestines, and so the theoretical condition of the intestine may be greatly masked.

Parasites may be detected; chemical changes occurring during health and disease may be studied; the products of disease and pathological alterations of stools may be investigated. While at the present time comparatively little is known of a subject so vast in its extent, the more frequent and careful examination of stools by medical men is necessary. Only by this means can advances in diagnosis be made and our knowledge of the clinical pathology of the fæces be increased.

In adults, idiosyncrasy and habit regulate the frequency of stools—from one or two within twenty-four hours to one in two or three days. In nurslings three, four or five stools in twenty-four hours are not abnormal. The frequency of stools is in direct relation to the amount of solids and fluids ingested. Constipation may thus result from fasting, diarrhœa from increased ingestion of liquids.

The amount of fæces depends on the quality as well as the quantity of food, i. e., on the amount of food unassimilated. Hence vegetable diet secures larger stools, 400 to 500 grammes, while mixed diet yields 120 to 200 grammes in twenty-four hours. In diarrhœas the increased quantity discharged is due to lack of absorption of fluids—as in cholera, where 5,000 grammes is not uncommon.

Normally firm, or mushy and formed, the stool

may vary from the hard, dry, fecal balls of obstipation to the watery stool of Asiatic cholera. Band-like scybala as a rule indicate an anteroposterior stenosis of the rectum.

In color one must differentiate the natural from the colors due to ingestion of certain foods or drugs. The normal bright brown to blackish brown, due to stercobilin, results from intermixture and interaction of bile and undigested food. Local variations of color may be recognized, as cherry pits, potato, portions of cereals, flocks of casein, etc. Stools of nurslings are colored by bile only. The intensity of color varies with the flow of bile. If the bile outflow is obstructed entirely, a dull gray stool presents itself. In the so called "bilious" stools the biliary color is unchanged, and the bright yellow, greenish yellow, or green results from rapid passage through the intestines, an increase of fluid in the bowel, or variation in reaction. According to Pettenkofer, the presence of unaltered bile pigment is always pathological. That drugs have been given in large enough doses may often be learned from the color of the stool:

Black is produced by iron, manganese, bismuth.

Blue, by long continued doses of iodides.

Green, by calomel.

Yellow, by santonin, senna, rhubarb.

Red, by hæmatoxylin.

Violet, by beta naphthol, salol.

In two robin egg blue stools of an infant suffering from enteritis I have found considerable indican.

The stool of a nursing child is normally of slightly sour odor, due to indol, skatol, and fatty acids. In slight infantile diarrheas the odor is similar to that of sebatic acid; in severe diarrhoea it is foul and putrid. In cholera and dysentery the odor is flat like that of semen. Gangrenous dysentery, carcinomatous or syphilitic ulcers of the rectum give a cadaveric stench. Blood and pus offer a mild stale odor. An ammoniacal odor usually arises from admixture of urine. This is very suggestive of a fistula somewhere along the urinary tract.

From reaction, Nothnagel concludes that little is to be learned. In children I believe it to be rather serviceable in determining the nature of the continuing fermentation. The stools of an adult are normally alkaline or neutral. The stools of children are alkaline save in severe diarrheas. In an examination of 563 stools of children under two years of age, 317 were found to be alkaline and 246 acid. The examinations were made while the infants were undergoing treatment for some form of summer diarrhoea. Medication was limited and the foods varied. From the observations of that time it appeared that the greener the color of the stool, the more likelihood of its alkalinity. The green acid stools were more constant in cases of fermentative

diarrhoea. This I believe to be the result of an increased flow of bile, yet insufficient to overcome the acidity due to fermentation.

Watery and mucous stools are self descriptive. Small amounts of mucus thoroughly mixed up in the fecal mass is the normal condition. If large mucous shreds are noticeable in the feces, enteritis is probable. Large, thick, tenacious masses bespeak colitis. If the mucus is white, glairy, spread on the surface of the stool, the inflammatory process is most probably in the rectum. Nothnagel's rules for localization of intestinal catarrh in chronic processes are of considerable value:

I. When the large intestine alone is involved, there is one full discharge in twenty-four hours and a recurrent diarrhoea.

II. When the small intestine alone is involved, movements are likely to be very sluggish.

III. When both are involved, a continuous diarrhoea results.

IV. Solid or semisolid stools, showing by microscope hyaline mucus, point to the upper part of the large intestine.

V. Presence of bile pigment (Gmelin's test) indicates catarrh of ileum and jejunum.

In the watery stools of acute intestinal catarrh, bile is usually not found. Virchow described "frog spawn" or "cooked sago" grains in watery stools. He believed them to be due to an excess of farinaceous food.

Fatty or alcoholic stools are offensive in odor, glistening, greasy, clayey whitish, containing needle-like crystals of fatty acids. Their appearance is due to an abundance of undigested fat. Occasionally by dissolving the fat in ether the remaining portion of the stool will assume a normal color showing that bile is really present, but concealed by the great excess of fat. Alcoholic stools are found in alcoholic poisoning, gout, enteritis of children, tuberculosis of the intestine, and, especially, chronic pancreatic disease. The fatty stools occur when bile is absent from the intestinal tract or when the intestinal mucous membrane and lymphatics are so altered as to be incapable of permitting absorption of the fatty materials. In pancreatic disease the presence of undigested muscle fibres is of importance.

Hæmorrhagic feces vary in appearance according to the site of the hæmorrhage. As a general rule, the nearer the anus the bleeding is the brighter the blood will appear at the anus. If scybala are merely covered with blood, the hæmorrhage is in the rectum or colon. If the blood is bright red and unchanged, the origin of the blood is the lower part of the rectum or anus—as from hæmorrhoids, fistula, or fissure. In thin stools, unmixed blood comes from the colon. Mixed, altered blood originates in the small intestine or stomach. Gastric

or duodenal hæmorrhage arising from ulcer or cancer gives the well-known "coffee grounds" appearance. Discovering minute amounts of blood in the fæces is of the utmost importance in the early diagnosis of cancer of the stomach or intestine. Occasionally a hæmorrhage of the ileum along with an active diarrhœa may make its exit bright red, as is not infrequent in cases of typhoid fever. Red blood corpuscles are seldom found unaltered. In most cases hæmatoidin pigment and masses of brown rhombic hæmatoidin crystals give evidence of the small hæmorrhage. If a firm stool is suggestively brown or black a test for blood is invaluable. Teichman's test is simple and satisfactory. Dry and powder a little of the fæces, place on a glass slide, add a crystal of salt and put on a cover slip. By capillarity run in two or three drops of glacial acetic acid. Heat the slide to just below boiling point. In a short time brown rhombic crystals of hæmin appear if blood is present. It should be borne in mind that ingestion of raw meat will cause small amounts of blood to appear in the fæces.

A purulent stool should be watched for whenever there is pus in the pelvis, as ulceration into the intestine may occur.

Gallstones of carbonate of calcium and cholestin are quite common and many cases of inexplicable dyspepsia are solved by careful examination of the stools. To search for stones, mix the stool thoroughly with water, strain carefully through a fine wire screen or several layers of cheese cloth. Wash residue again and strain once more. Examine the residue carefully. Enteroliths are to be distinguished from gallstones by softer consistency, lack of facets, and, if necessary, by chemical examination.

The microscope tells us a little about the state of digestion. By its use we may distinguish undigested animal and vegetable fragments and partially digested foods, as starches and fats. The particles are usually yellowish, stained by bile. To examine microscopically it is only necessary to place a small piece of fæces on a glass slide, moisten slightly with water, and cover with a thin glass cover slip. Mucus shreds are usually present, but not in large masses. Squamous epithelium is infrequent, while the columnar cells from the intestinal tract are always recognizable. Leucocytes are rarely seen, and when found, are laden with fatty globules. The presence of numerous white cells in a stool is highly suggestive of ulceration. Crystals of "coffin lid" or feathery triple phosphates are always present. Calcium oxalate and sulphate are generally present. The octahedral Charcot-Leyden crystals are occasionally found. Leichtenstein associates these with the existence of intestinal parasites. Along with eosinophilia of blood and the appearance

of numerous eosinophiles in the fæces, the finding of Charcot-Leyden crystals is even more suggestive of parasites. In jaundice of children and alcoholic poisoning, needlelike crystals of fatty acids are found in great number.

Bacteria constitute the bulk of the fæces' 30 per cent. of solid matter. Normally none has chemical interest save *B. coli communis*. Pathologically *B. typhosus*, *B. dysenteriae*, and *B. tuberculosis* are most important in this country. Moulds and yeasts are always present. *Amœbæ coli* are often demonstrable. While the typhoid bacillus may be found in the fæces, its diagnostic value to the physician is limited, as it rarely appears until the tenth or fourteenth day. Before Widal's test came into prominence, Lyonnet's process of demonstrating Eberth's bacillus was not a rarity to the laboratory examiner. The presence of tubercle bacilli in fæces does not necessarily imply infection of the intestine, as they may have had their origin in swallowed sputum. The bacillus tuberculosis may be demonstrated by ordinary methods (carbol fuchsin and methylene blue). The examination must extend over several days and include a number of slides from different portions of the same stool.

Of the larger parasites little need be said, as diagnosis is frequently made by the appearance of the animal itself or some portion of it in the stool. On the other hand, in obscure cases of anæmia, nervous depression, intestinal obstruction, chronic intestinal catarrhs, etc., careful examination of the fæces is frequently rewarded by finding small, round or oval shelled ova of the parasites causing the disturbance.

Most examinations for bacteria are outside of the laboratory facilities of physicians, and, therefore, may at present be given no comment.

In chemical examination most tests can be made with little apparatus. Albumin, normally absent in the stools of adults, appears in typhoid fever and some diarrheas. To test, mix fæces with water and a little acetic acid, filter several times, heat in test tube. An appearance of cloudiness is due to albumin. It is generally stated that the large cheesy masses in the fæces of infants consist of casein, while the smaller masses are made up of fats. It is more accurate to state that the masses, large or small contain both casein and fat. The proportions of fat and casein in the two vary very considerably. Peptone, seldom present in health, occurs in "pus cases," atrophic cirrhosis, and carcinoma of the liver. Urea is nominally present but its determination qualitatively is valueless, and quantitatively too complicated for clinical purposes.

Of the carbohydrates, starch and sugar are readily found. Boil fæces with water, filter, and test

filtrate with Legal's iodo-potassium iodide solution for starch or with Fehling's solution for sugar. Biliary acids may be demonstrated by Pettenkofer's methods. Urobilin is said to disappear in phosphorus poisoning, and its reappearance to be a favorable sign. Volatile fatty acids as formic, acetic, propionic, and butyric at present give but slight information when investigated. Unfortunately their determination is beyond the average clinical laboratory. The same is true of the gaseous constituents of the fæces, hydrogen, carbon dioxide, nitrogen, hydrogen sulphide, and the ptomaines, such as putrescine and cadaverine.

601 WEST ONE HUNDRED AND FORTY-EIGHTH STREET.

THE SO CALLED ATYPICAL FORMS OF GASTRIC ULCER.*

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In text books and monographs on gastric ulcer we find descriptions of atypical forms. When I was asked by the president of the Gastroenterological Association to speak on Atypical Forms at the "symposium" on Gastric Ulcer, the topic of this year's meeting, I was somewhat embarrassed in trying to determine what forms ought to be classed as atypical. What forms of gastric ulcer shall we consider as typical, what forms as atypical? The classification is in itself misleading.

If we consider as typical only those cases in which all the principal symptoms, severe pain, vomiting, hæmorrhage, hyperacidity, and hypersecretion are present, the clinical pictures which would have to be regarded as atypical become quite numerous. We really see all the cardinal symptoms combined in only a small percentage of cases, the great majority showing only some of these symptoms. In one group several cardinal symptoms may be combined, any one of which may be more pronounced than the others. In another group, we find only one cardinal symptom, pain, vomiting, or hæmorrhage as the case may be, while in a third group of cases none of the cardinal symptoms can be observed, until a sudden fatal hæmorrhage or perforation ends the patient's life.

Now, where shall we draw the line between the typical and the atypical forms? Shall we call atypical only those which show no cardinal symptoms at all—the so called "latent form" of ulcer? Shall we include as atypical those which show only one cardinal symptom, or shall we also add to

list those cases where we find two symptoms combined, and regard as typical only those in which all the symptoms are fully developed.

You will easily see how many combinations are possible here, and in the literature you will actually find a number of clinical pictures described under the heading of Atypical Forms.

Lebert, for instance, describes ten different varieties. Fenwick gives five forms, in which, as he says, "owing to the special predominance of some particular symptom, such as pain, vomiting, dyspepsia, hæmorrhage, or cachexia, the detection of the ulcer becomes a matter of more than ordinary difficulty."

He distinguishes the groups as follows: (1) The *gastralgic* form, the commonest variety, characterized chiefly by pain. (2) The *catarrhal* or *vomiting* form, where the principal symptom is prolonged and severe vomiting, without pain. (3) The *dyspeptic*, or "latent," form with only slight digestive disturbances. (4) The *hæmorrhagic* form, characterized by repeated attacks of hæmorrhage, to which the other symptoms are quite subordinate. (5) The *cachectic* form, in which the principal symptoms are emaciation and cachexia, appearing as a rule only after the disease has existed for a considerable time.

Fenwick, then, makes the predominance of one symptom a basis for describing atypical forms, while other authors describe different varieties, the classification depending on their personal experience and on the value attached to individual symptoms.

When carefully examined, such classifications are found to be very artificial and are more likely to confuse the diagnosis than to aid it.

Even in the so called "latent" form of gastric ulcer there are always some symptoms. The patients at times complain of dyspepsia, discomfort, and flatulency after meals, acidity, nausea, and some even have occasional attacks of vomiting. Only the cardinal symptoms, such as frequent vomiting, constantly recurring pain, etc., are missing, until finally perforation or fatal hæmorrhage proves that an ulcer was the cause of the dyspeptic symptoms.

We find similar conditions in other cases, with this difference, however, that the first hæmorrhage does not prove fatal. Then what at first appeared to be the "latent" form, or, according to another classification, the catarrhal form, is regarded as the hæmorrhagic form.

In other cases a period of slight symptoms is followed by one of severe pain, during which time the cases are classed as *gastralgic* forms. If, however, hæmorrhage occurs later, these cases are classed as *hæmorrhagic* forms; on the other hand, cases of the *catarrhal* or of the *gastralgic* form may, after a

* Read at the seventh annual meeting of the American Gastroenterological Association, Atlantic City.

period of years, develop into the condition described by Fenwick as the cachectic form.

Thus we see that not only the clinical pictures in different cases may vary greatly, but also that during the course of any one case a variety of clinical pictures may develop. In fact, the possible combinations of symptoms are so many that any number of atypical forms might be described.

I think, therefore, that we ought to do away entirely with the classification of forms of gastric ulcer as typical or atypical. In each case we have to deal with an ulcer that leads either to the development of symptoms few and vague, or to more pronounced and characteristic symptoms in manifold varieties. Each of those varieties is typical in its way, and a combination of symptoms that appears to one observer atypical may seem very typical to another who has learned how to interpret it correctly as caused by gastric ulcer. The less we classify the less shall we be apt to overlook the presence of an ulcer, in trying to fit each case to one form or another. We are confronted here with the same conditions as those connected with gallstone disease. For a long time the differentiation into regular and irregular gallstone attacks prevented the proper interpretation and correct diagnosis of cases which did not fit the typical or atypical forms discussed in text books. Since frequent operations for gallstones have taught us how vague and how few the symptoms are in many cases, and how manifold the combinations of symptoms may be, we have learned to disregard the old classification and to judge each case individually according to the symptoms it presents. We ought to follow the same course in dealing with gastric ulcer. If for practical purposes a classification is considered necessary, it ought to be as simple as possible. My teacher, Kussmaul, described in his lectures three forms: the catarrhal, the gastralgic, and the hæmorrhagic, at the same time pointing out that they might follow one another during the development of an individual case. It seems to me that these three forms, the names of which give their meanings, cover nearly all the clinical pictures one may find.

Far more important, however, than any classification is the fact, which has been proved by post mortem examinations as well as by experience gained at operations, that so called typical cases, i. e. cases with the well known triad of cardinal symptoms, pain, vomiting, hæmorrhage, form only a small minority. The majority of cases show clinical pictures described as atypical forms. That fact in itself shows how absurd it is to designate all those cases as atypical. If we make a positive diagnosis only in so called typical cases, we shall overlook many cases of ulcer and commit many errors. It is

my conviction that many more cases of ulcer are overlooked than diagnosticated.¹ This is certainly true of the majority of cases in the earlier period of their development. Cases which show the cardinal symptoms are nearly always far advanced. Hæmatemesis, for instance, occurs when the ulcer has penetrated into the deeper layers and has corroded a blood vessel.

If we desire to be more often successful in diagnosing gastric ulcer and in diagnostivating it early, we must not look for typical pictures, but must keep in mind the fact that the symptoms produced by gastric ulcer are often vague and few. We shall do well to follow Brinton, who in discussing the diagnosis of gastric ulcer advances the question: What is the *minimum* of probability that permits us to diagnosticate the presence of an ulcer?

We have to answer that question in each individual case, by weighing carefully each symptom, no matter how little pronounced, and on the other hand by considering each particular feature in the patient's history and examination. I cannot emphasize it too strongly that we must try to diagnosticate just those cases which are as a rule classed as atypical, and I am convinced that we are better fitted to accomplish that result when we are not prejudiced by a classification of forms as typical or atypical, to which we often vainly try to fit the individual history. All we have to remember is, that gastric ulcer may present a great variety of clinical pictures varying from the very obscure symptoms of plain dyspepsia up to the fully developed classical triad of cardinal symptoms. Since Brinton's day we have acquired a very important and valuable aid in diagnostivating such cases as show none or only one of the cardinal symptoms, that is, by the examination of the stomach contents. Although it must be admitted that hyperacidity is not a constant symptom in every case of gastric ulcer or at least not during the whole course of each case, it is nevertheless true that the presence of hyperacidity is the rule, its absence the exception. In doubtful cases, therefore, the finding of gastric hyperacidity suggests the presence of ulcer.

In fact, whenever gastric hyperacidity is persistent in spite of appropriate treatment and especially when the discomfort after meals is pronounced, when, instead of heartburn or pressure, the patient complains about gnawing or tearing sensations, the suspicion of an ulcer is justified. Keeping this fact in mind, we shall often be able to make a diagnosis, especially during the early stages of the disease, be-

¹ The statistics which have been presented before the association by Dr. Campbell Howard confirms this view. The records of some hospitals show a greater number of cases of gastric ulcer diagnosticated on the post mortem table than in the wards. When we remember that ulcer is a curable disease and does heal in most instances, such statistics are certainly significant.

fore the advent of severe pain or of hæmatemesis makes the diagnosis an easier matter.

Hyperacidity is not a disease, but always only a symptom, and in a great many cases a symptom of gastric ulcer. Many cases of gastric ulcer show no other symptoms than hyperacidity and the subjective complaints which we are accustomed to find connected with it.

More characteristic than hyperacidity is the finding of hypersecretion or gastrosuccorrhœa with gastric ulcer. Gastrosuccorrhœa is not a disease per se. The presence of gastric juice in the fasting stomach is always only a symptom and may develop whenever motor insufficiency and increased gastric secretion go together. It is met with during the course of various diseases of the stomach. Some authors say that we should not apply indiscriminately the term gastrosuccorrhœa to all cases where gastric juice is found in the fasting stomach. They maintain that we ought to distinguish between the cases where the presence of gastric juice in the fasting stomach is only a symptom, and another well defined group of cases for which they would reserve the term gastrosuccorrhœa as a disease per se. This sharply defined second group, the well known symptom complex of Reichmann's is, in contrast to the first, characterized by the presence of a combination of symptoms, i. e., pyrosis, vomiting, loss of flesh, and, most important of all, severe pains occurring after meals and during the night. This very combination of symptoms, which is asserted to be so typical as to warrant the diagnosis of gastrosuccorrhœa as a disease per se, is most characteristic of gastric ulcer. If you read the histories of cases of Reichmann's disease and, for the sake of argument, disregard the finding of gastric juice in the fasting stomach, I do not think that you will hesitate to diagnose gastric ulcer on the strength of the other symptoms. The finding of gastric juice in the fasting stomach does not change the picture, but gives additional strength to it, if its presence is correctly explained. The misinterpretation of this symptom is only one of the many mistakes that have been made since gastric contents have been analyzed to study gastric function. Functional disturbances which are really only symptoms have been stamped as diseases, and among those newly discovered diseases Reichmann's symptom complex takes a very prominent position.

So far as I know, no case has yet been reported where a post mortem examination has proved conclusively that Reichmann's symptom complex occurs without an ulcer. On the contrary, whenever an operation or an autopsy has afforded an opportunity to gain an anatomical basis, it has revealed ulcer or its sequelæ. We therefore shall do well to consider

as ulcer every case in which the combination of symptoms given by Reichmann is completely developed and in which severe gastric pain plays an important rôle. If we regard gastrosuccorrhœa as a symptom, it becomes a valuable aid in diagnosing certain cases of gastric ulcer. Whenever we find a patient suffering from gastric pains coming on regularly after meals and especially at night, with or without vomiting, the presence of acid fluid in the fasting stomach even in small quantities indicates ulcer of the stomach. In every one of my own cases of that kind, where the non-success of medical treatment made an operation advisable, the ulcer or its sequelæ could be demonstrated.

Therefore this symptom complex, which would otherwise be classed under the atypical forms, is in fact a very typical clinical picture of gastric ulcer. And so it is with other so called "atypical forms."

52 EAST FIFTY-EIGHTH STREET.

REMARKS ON THE RESULTS OF X RAY TREATMENT IN SEVERAL CASES OF CARCINOMA OF THE UTERUS.

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The first case, the results in which I desire to discuss, is that of Mrs. P., who was brought to me March 18, 1903, by Dr. S. K. Royle. She was a large, handsome woman of 50 years, but young in looks and spirits. She had suffered for several years from an enormous fibroid tumor of the uterus, which had finally undergone carcinomatous degeneration. This was accompanied by a profuse sanguineous discharge of very offensive odor, and great loss of strength. In February, 1903, she had followed the advice of a number of physicians and had taken a private room at the Presbyterian Hospital for the purpose of having the growth removed. Under ether, however, it was found that the entire pelvis was one cancerous mass, and that anything like an attempt at extirpation would be immediately fatal. A small portion of the cervix was removed and a microscopical examination showed the growth to be carcinoma.

A few days later she left the hospital, her friends being led to expect that she would live only about six weeks. Instead of this, however, Dr. Royle brought her to my office for x ray treatment. At first she had to come in a coach with her nurse, the doctor, her mother, and husband. She was very weak and miserable, and it would take an hour to give her the few minutes' actual treatment and get her back into the carriage again. Then again she was not able to keep her appointments; she might have one for Tuesday and not be able to come until Saturday. Meanwhile, she was having very severe hæmorrhages, and these the doctor continued to treat by intra-uterine and vaginal injections of a very weak

formalin solution. The abdomen was distended by the tumor, giving almost the appearance of the completion of gestation. There were very painful and somewhat tender areas corresponding to the position of the broad ligaments. The vaginal portion of the uterus was cartilaginous to the touch, as were also the anterior vaginal wall, the urethra, and the entire fornix. There was a profuse bloody discharge with offensive odor.

The treatment consisted in allowing the x ray to shine through the uncovered abdominal wall, and also through a Nott's speculum—which has a duck bill blade posteriorly and two divergent blades anteriorly—and in the application of high frequency currents over the two painful areas. The intensity and the quality of the radiation from an x ray tube are subject to myriad variations. In the manipulation of the apparatus, either to produce a perfect radiograph or to secure a beneficial effect in any case, the thickness of tissue to be penetrated and many other factors are to be considered. Experience will enable one to accomplish the result, but the following details may serve as a rough guide:

The current was from the hundred and ten volt direct current of the incandescent lighting supply. A liquid interrupter of the Simon's type was used. In this the current has to pass from a lead electrode through dilute sulphuric acid—one part, to six parts of water—through pin holes in a tough porcelain beaker, and through dilute sulphuric acid in a large outer jar to another lead electrode. In passing through this, the current encounters enormous resistance and is reduced to seven amperes or less. Then, again, as soon as the current begins to flow, bubbles of gas are formed by electrolysis, which block up the pin holes in the inner beaker and arrest the flow of the current. The bubbles of gas immediately rise to the surface and the current begins to flow; more bubbles are then formed and the current is checked. In this way the current is interrupted something like ten thousand times a minute. These ten thousand successive currents, all flowing in the same direction, pass through a primary coil of about a hundred feet of heavy copper wire, carefully insulated, and each successive current causes a wave of induced electricity in the secondary coil containing a hundred thousand feet of insulated wire which surrounds—but which has no connection with—the primary coil. It is by connecting the x ray tube with the two poles of the secondary coil that the x ray is produced. It is not necessary to detail the different properties of the "make" and "break" currents. The coil which was used in treating this case was a Wappler eight inch coil, and the tube was a forty centimetre Gundelach tube, and a rheostat was used to cut the current down to about four and a half amperes. With the tube disconnected this strength of current gave about a six inch spark. The vacuum in the tube was adjusted for each treatment to correspond with an internal resistance of about two and a half inches, and a penetration of two or three layers in the author's radiometer, each layer consisting of lead foil weighing an ounce to the hundred square inches.

The distance was nine inches from the anode of the tube to the nearest surface of the patient, and the time of exposure was about five minutes over the abdomen and five minutes in the vagina.

The high frequency currents as used in this particular case were taken directly from one pole of the x ray coil by means of an insulated cord passing from the coil to an insulated handle by which the operator held a glass vacuum electrode, which was placed in contact with the skin. When in operation this tube is filled with ten thousand waves a minute of ultraviolet and violet light passing into the patient's tissues and disappearing. A certain amount of ozone is produced, and some of this is carried in by the current, while as some remains upon the surface, its odor may be detected on the following day. This is the simplest form of high frequency apparatus, but it is not so effective nor so agreeable in application as some of the forms which have come into use since this particular patient was treated. The first result of the treatment was the very prompt disappearance of pain. Next to go were the discharge and the odor. Her doctor was under the impression that a little general disturbance noted was due to the elimination of morbid products disintegrated by the first two or three treatments, but this seems problematical. At all events, after the first few treatments she began to gain wonderfully in health and strength, and the last few weeks that she was coming to me she hopped onto a street car all alone; as fine a looking dowager as you would care to see. Generally she had a box of fruit or cake for a sick friend, whom she would visit after leaving my office. She used to say that she would rather have one of those treatments than go to a matinee. The last time I saw her was on August 6, 1903, four and a half months after beginning treatment. The fibroid had diminished one half in size, and she had been taking in her clothes about two inches every two weeks. There had been scarcely any change in the cervix and vagina. The discharge, odor, pain, and weakness were a thing of the past. At this time I transferred the case back to her physician, Dr Royle, who continued x ray treatment, and under whose care she did very well indeed until about a year from the time that x ray treatment was begun. She then developed serious gastric disturbance which seemed to Dr. Royle and to a consulting stomach specialist not to be of a cancerous nature. Then, the family becoming anxious about her, a change was made from Dr. Royle, who had given her very faithful attention all this time, and another physician was called in. The patient sank very rapidly and died March 20, 1904.

Reviewing the case I am confident that this woman's life was prolonged for a year by the x ray, and during almost all that time she was well and happy.

Another case was that of Mrs. M., a patient of Dr. Hill. She was about fifty years old and for a number of years had had menorrhagia, for which she was curetted about ten years before, and later, about six months before, a vaginal hysterectomy

was performed for a condition of adenocarcinoma. When she came to me, October 13, 1903, there was an indurated and congested mass at the upper extremity of the vagina, looking like a part of the cervix. She had never recovered her strength after the operation. The treatment consisted in allowing the x ray to shine through the abdominal wall and also applying it directly to the vaginal fornix by means of Cossar's x ray tube. This is a tube in which there is a prolongation directly opposite the anode, through which the x ray passes, and which may be introduced into the vagina or other cavity. The entire x ray tube is constructed of lead glass, opaque to the x ray, except at the extremity of the intravaginal prolongation. This enables one to apply the x ray at the exact spot which it is desired to influence even in these internal cases. Flexible, but very heavily insulated conducting cords are a necessity, as the tube is held in the hand during this application. The application over the abdomen was with a forty centimetre tube of medium vacuum and a current of about four amperes, and lasted about five minutes at a distance of nine inches from the anode. The application in the vagina was with a current of about three amperes, and lasted about three minutes. High frequency currents were also applied over the abdomen and up and down the spine principally as a tonic. For this purpose a vacuum electrode was connected directly with one pole of the eight inch x ray coil and applied by means of an insulated handle. No connection was made with the other pole of the coil. The current was a mild one of about two amperes, and the application lasted about ten minutes. Treatment was begun October 31, 1903, and was given an average of once a week until December 3, 1903. The effects were diminution of pain and very marked decrease in the amount of discharge, but the patient's strength steadily failed and at the last date mentioned it became evident that the exertion of coming to the office for treatment was more than counteracting the benefit received; the x ray was therefore discontinued. She subsequently failed rapidly and died about two months later. In this case the symptoms were relieved, but the disease had advanced too far for any line of treatment to materially prolong life.

Another case which I have seen from time to time, is that of an Armenian woman under treatment by the house surgeon in Dr. C. D. Adam's gynecological service at St. Bartholomew's Clinic. The discharge and the size of the tumor have been kept down, the patient's general condition has improved, and a condition almost like that of health has been maintained for almost a year. Treatment has been through the abdominal wall and through a vaginal speculum. Mild applications have been made twice a week.

Another case is that of Mrs. H., a patient of Dr. Hill. She is a delicate little woman about 45 years old, who had been sick and miserable for a year, and who was only recently subjected to an examination, which showed that the cervix uteri formed a large fungating mass, and that there was a neighboring ulceration of the vaginal

wall from contact with the growth. She had been sick in bed many months, and the local conditions seemed to preclude the possibility of a complete cure by an operation, even if she survived it. She was accordingly brought to my office for x ray treatment, first for its effect in checking hæmorrhage and discharge; second, for its effect of destroying outlying cancer cells and rendering an operation a little more likely to be of lasting benefit, and, finally, for the tonic effect upon the system which would enable her to stand the shock of an operation. Treatment was begun March 30, 1904, and consisted in allowing the x ray from a 50 centimetre heavy anode Müller tube to shine through the abdominal wall, and also from a Cossar's tube in the vagina.

The tube used over the abdomen was of a low degree of vacuum and the strength of current about four amperes, distance about eight inches, and time of exposure five minutes. Ten treatments were given during the next month and a half, and then my suggestion that she could stand an operation was acted upon and a vaginal hysterectomy performed by Dr. Cleveland on May 18, 1904. The patient was very slow in regaining her strength after the operation, and there was a great deal of discharge. Finally, on July 12, 1904, she was able to come to the office again for x ray treatment. Her strength was at once improved and the discharge practically stopped. She is still under treatment, and the skin of the abdomen through which alone the applications are now made is quite tanned. High frequency currents have been applied by means of a D'Arsonval transformer. Of late she has been losing weight, however, and of course the ultimate outlook is unfavorable.

Another case is that of Mrs. M., referred to me by Dr. Cleveland, who had performed an abdominal hysterectomy for carcinoma in December, 1903. A recurrence was discovered in April, 1904, and she was sent to my office for treatment June 24, 1904. The patient is 45 years of age and weighs 150 pounds. At the time she came to me there was a considerable discharge of blood and pus, and the speculum showed an ulcerated surface of considerable extent in the scar at the vaginal fornix. The patient has an umbilical hernia about the size of a lemon, which is easily reduced. There was considerable abdominal pain and difficulty in regulating the bowels. In treating her the x ray has been allowed to shine through the abdominal wall from a Müller heavy anode 50 centimetre tube with a raising and lowering device, and in which the vacuum has been reduced to a resistance equal to a two inch spark and a penetration of two layers of lead foil weighing an ounce to the hundred square inches as used in my radiometer. The abdomen has been compressed by the author's board compressor. This is a board $\frac{1}{8}$ of an inch thick and 9 by 18 inches in extent, strapped tightly across the abdomen and used in taking pictures through the abdomen and in the treatment of internal organs. It is effective in consequence of reducing the thickness of the tissues through which the rays must pass, in enabling us therefore to get the tube

nearer the photographic plate or to the diseased organ, as the case may be. Then, again, it has seemed to me that the skin is markedly protected from the action of the ray, while the deep action of the photochemical rays is not in the least affected. This transmission of the photochemical rays has been demonstrated over and over in radiography as of the kidney for stone, and in treatment the skin has remained unaffected while the curative effect has been produced. The author is aware that this is a step toward the admission of the protective influence of aluminum screens and the like, but of course nothing that is transparent to the x ray will prevent dermatitis from exposures which are too long, too strong, or too frequent. The anode of the tube was sometimes 7 inches and sometimes 8 inches from the surface of the abdomen and the current was from a 12 inch Wappler coil, with a Simon's electrolytic interrupter, of a strength of $4\frac{1}{2}$ amperes. The duration of the application has been four minutes. The second part of each treatment has been the application of the x ray from the same tube, which was enveloped in a Friedlander shield, through a vaginal speculum for four minutes. The vacuum, strength of current and time of application were the same as for the abdominal application. The distance was 9 inches from the anode to the vulvar orifice. For a number of weeks the patient came twice a week, and the discharge ceased entirely and the intestinal trouble came to an end. No other local treatment has been used, since the case came under my care. Her general health and strength became normal. On removing the speculum it would be found absolutely clean and dry. After about six weeks' treatment the inconvenience and expense of the journey from the patient's house in Bridgeport, Conn., caused her to cut the treatment down to one a week, and now there is developing a small amount of mouse colored discharge, which is just enough to show on the speculum. After ten weeks' treatment no redness of the skin of the abdomen is perceptible, but some tanning of the perinæum and vulva is present.

The cases described are not selected as an argument in favor of the x ray in the treatment of inoperable or recurrent carcinoma of the uterus, but rather as showing fairly what may be expected from it in the various stages and types of the disease. I cannot too strongly recommend the adoption of the treatment at any stage before the recurrent cancer has too far sapped the patient's vitality.

103 WEST SEVENTY-SIXTH STREET.

The American Laryngological, Rhinological, and Otolological Society.—The eleventh annual meeting of this society will be held under the presidency of Dr. Frederic C. Cobb, at Boston, on Monday, Tuesday, and Wednesday, June 5th, 6th, and 7th. Physicians are cordially invited to attend the meeting and take an active interest in the papers and discussions.

A UNIQUE CASE OF APPENDICITIS IN A CHILD AGED FOURTEEN MONTHS.*

By LARKIN W. GLAZEBROOK, M. D.,

WASHINGTON, D. C.,

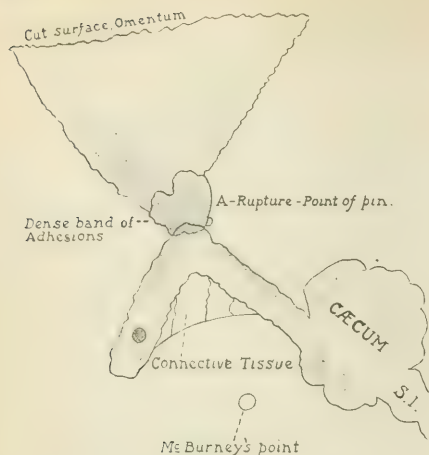
CORONER'S SURGEON, DISTRICT OF COLUMBIA; ATTENDING PHYSICIAN, WASHINGTON CITY ORPHAN ASYLUM, ETC.

On December 19, 1905, at 10 a. m., A. H. H., 14 months of age, while playing with several other children around a room, was noticed by the attendant as being ill. The child was markedly cyanotic and was having a severe rigor. She was at once taken from the floor, and it was noted that the child cried with pain on motion. The nurse at once administered ten drops of whiskey in water; in a few minutes the patient was comfortable, falling off to sleep in the nurse's lap. At that time the child was still pale and was breathing rapidly. The patient was put to bed and rested quietly until 12 m. At that hour the child awoke, crying with pain, which appeared to be situated in the lower right chest. Pallor was still marked, with short rapid breathing. At that time the nurse realized that the child was very ill, and suspecting pneumonia, telephoned for me. As I was engaged with another case Dr. E. L. Mason was called. He arrived about 1 p. m. At that time the child was in a semicomatose condition, with all the objective symptoms of pneumonia. I arrived a few minutes later and noted the same general appearance of the patient; before I was able to examine the patient, the little one died. Upon inspection and percussion I could make out nothing abnormal.

Previous History.—Father and mother apparently healthy people; several other young children. Six months before father had died of some acute disease. The mother was unable to care for this young child and secured its admission into the Washington City Orphan Asylum. Upon admission, the child was found to be in a healthy condition, and subsequently showed no ill effects of bottle feeding. The mother of the child, since her husband's death, had worn crape. As already stated, the child thrived upon the change of diet. At times, however, since its admission, it had had attacks of "wind colic," which had promptly responded to ordinary home remedies. My attention had never been called to this patient, until its last illness.

Necropsy.—December 20, 1904. Rigor mortis slight. General appearance, anemic. Nutrition fair. Abdomen not distended. As soon as abdomen was opened, my attention was called to the picture that presented itself. The large omentum, fan shaped, was seen to be adherent to the vermiform appendix, midway between the cæcum and its tip. This anastomosis was very firm, and appeared to be of several months' duration. As a result of some contraction of the omentum, the appendix had been drawn upwards; at the apex, the omental adhesion was found. The distal end of the appendix was free and not adherent. The only evidence of adhesions was at the omental attachment mentioned. To the left and posterior to this point about one drachm of green pus was found, which was escaping from a small perforation of the appendix. The

* Specimen and paper presented to the Clinico-Pathological Society.



appendix was then removed with a portion of the fan shaped omentum.

The other organs were found to be in a normal condition; the lungs in no way involved. The removed specimen was then carefully examined. A small round mass, about the size of a number 8 bird shot, and of the same consistence was felt three eighths of an inch above the tip of the appendix. Upon opening the appendix, I found this object to be the round head of an ordinary black mourning pin; at the omental attachment, where the rupture had been noted, I found the point of the pin (A). Immediately around the seat of the rupture, the parts were gangrenous. The accompanying drawing is of about the size of the specimen removed.

Besides the interesting features of this unique specimen, there are several other points which may be of interest.

The mother of the child was disposed to blame the institution for the condition found. Upon inquiry I found that no attendant at the institution was permitted to wear black, and that no black pins were ever used, especially the round head, mourning pins. The child had been an inmate for only two months. This fact, in connection with the dense band of adhesions, convinced me that the foreign body had no doubt been swallowed by the child while feeding from its mother's breast, prior to its admission. Either before or subsequent to this time the original puncture of the appendix occurred, followed by a simple local inflammation ("the conservatism of Nature"), resulting in the anastomosis noted.

The last illness lasted about three and one half hours, dating no doubt from the last rupture of the gangrenous appendix. The symptoms of this short illness were those usually met with in surgical shock. The subject of foreign bodies in the ap-

pendix has always been one of great interest to me. In 1,000 autopsies, done during the last twelve years, I have found only two other cases (fæcal concretions excepted). In neither of these two cases was death due to the foreign body, but to some other acute condition. In neither was there any apparent inflammatory condition of this part.

In conclusion, I wish to verify, as a result of my experience, the statement recently made by Vallée, who has found in 75 per cent. of autopsies upon children the cæcum on a plane above the anterior superior spines. The appendix, therefore, was somewhat higher than is seen in adults. It is, therefore, easy to understand why in many cases pain may be experienced at or near the diaphragmatic pleura.

2022 P STREET, N. W.

A CLASSIFICATION FOR CASES OF PULMONARY TUBERCULOSIS AND PHTHISIS.*

By KARL VON RUCK, B. S., M. D.,
ASHEVILLE, N. C.

The committee on nomenclature of the American Climatological Association recommended the following classification of cases, and of results of treatment, in pulmonary tuberculosis in their report of May 12, 1903:

SUGGESTED CLASSIFICATION FOR CASES OF PULMONARY TUBERCULOSIS.

Incipient. Slight physical and subjective signs, with history indicative of pulmonary tuberculosis. Sputa, if present, without bacilli.

First stage. Definite physical signs of localized infiltration; total involvement less than half a lobe, whether at one or more points; cough and expectoration with bacilli; constitutional symptoms slight. (In disseminated cases expectoration and bacilli may be absent with constitutional symptoms more severe.)

Second stage. Infiltration of single or multiple areas approaching or equal in amount to one lobe; or smaller areas in stage of softening; cough and expectoration with bacilli; constitutional symptoms, severe.

Third stage. Infiltration in excess of one lobe or, if less, in stage of well developed excavation; more severe constitutional symptoms.

CLASSIFICATION OF RESULTS OF TREATMENT.

Progressive. All essential symptoms and signs continue unabated.

Quiescent. Constitutional symptoms slight, or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli still present.

Arrested. Absence of constitutional symptoms; expectoration and bacilli still present; physical signs may or may not persist; foregoing to have existed for at least three months.

Apparently cured. All constitutional symptoms and expectoration with bacilli absent for a period of three months.

* Read before the American Climatological Association, Philadelphia, June 4, 1904.

Cured. All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

In this classification the committee fully recognized the necessary shortcomings of all classifications, but expects from its adoption a mutual agreement in the use of terms, by which something approaching harmony will be attained in records and reports by the members of the association. By a motion carried, upon its receipt by the association, a copy of the report was submitted to members with requests for opinions upon the same.

The attainment of the object which the association seeks in securing uniformity in classification appears to me of the greatest importance for every student of pulmonary tuberculosis, and an agreement in regard to it is to-day more necessary than ever in the light of the activity shown in every civilized country to combat this disease.

When only one or a few cases are the subject of a report, it is possible to add sufficient details, that enable an approximate estimation of their clinical features. In larger series of cases this is less feasible, and for purposes of prognosis in certain stages, for judging the value of, and for comparison of therapeutic measures, it is essential that large numbers of cases be brought together in certain groups corresponding clinically as nearly as possible. The natural desire to make such a classification concise, in order to avoid confusion, has governed most authors in the past, and is also apparent in the one under consideration; but no matter whether the basis for the classifications was purely a clinical one, or one that depended chiefly upon physical signs, all such concise methods have been found deficient, because it is impossible to bring the phases and stages of a disease, having such complex anatomical alterations and so varied a clinical course as phthisis is acknowledged to have, under two, three, or four comprehensive groups that have approximate uniformity in local alterations, in intensity of degree of constitutional impairment, or in their prospective future course.

Prior to the discovery of auscultation, phthisis was divided as a rule into three stages, an early or beginning stage, a middle or confirmed stage, and a last or terminal stage, all of which depended on the degree of constitutional impairment and intensity of existing symptoms. Such a classification was used by Andral (1) and by Bayle (2), the latter adding also a prephthisical stage, which he held to exist before the appearance of clinical symptoms, and in which the local alterations had

not assumed a sufficient extent or degree to produce them.

Although Laennec (3) introduced a division in which the anatomical lesions as shown by the physical signs were the chief feature, the clinical manifestations as the chief element of division have, nevertheless, been considered as most important by many authors since his time. Thus Grancher (4), in 1890, still adhered to Bayle's division, especially emphasizing the prephthisical stage, which would properly correspond to one of pure tuberculosis of the lung before the advent of phthisis proper.

Penzoldt (5) also recognizes clinical forms by dividing them into beginning, progressive, and stationary. Prior (6) divides his stages into incipient, confirmed, and consummate, while Musser (7) adopts a clinical basis for his divisions of acute, pneumonic, and chronic ulcerative forms.

West (8) says that not the anatomical lesions as determined by physical signs, but the constitutional and clinical conditions are of importance for prognosis, and upon the latter basis differentiates between an acute, subacute, and chronic course.

Cornet (9) distinguishes in three stages the customary clinical division, incipient, softening, advanced, according to the severity of symptoms.

Adhering to Laennec's, we find classifications which attempt to combine to a greater or less degree the clinical symptoms with the physical signs. Such classifications as those of Sir James Clark (10), of Stokes (11), and of Louis (12).

The more, however, the prognostic features were deemed essential, the more it became necessary to make more stages, or to make subdivisions, and among more recent authors we find Meissen (13) introducing a prephthisical, or what he calls his prophylactic stage, and adding a final decidedly hectic or hopelessly advanced stage to the customary three, with subdivisions for each according to the presence or absence of fever. A similar classification is that of Schroeder and Mennes (14).

Delafield (15) finds himself obliged to make four great clinical divisions, and to introduce seven subvarieties for the chronic miliary form of tuberculosis, according to the anatomical lesions and associated symptoms.

A. L. Loomis (16) made two large clinical divisions between acute and chronic forms, with an anatomical basis for three subdivisions of chronic phthisis; the pneumonic, the disseminated, and the fibrous, and he further divided each of these into early and advanced stages.

Percy Kidd (17) has five subdivisions for

chronic phthisis, according to the mode of onset of the disease, and three subdivisions for the acute forms. More simple again are the classifications of Strümpell (18) with three stages, incipient, cavernous, and disseminated.

Latham (19) distinguishes between two chronic and three acute forms, upon an anatomical basis, and clinically between the early and advanced stages of chronic phthisis in which he takes into consideration the existing physical signs.

Carrington (20), of the Fort Stanton Sanatorium, has clearly the clinical side in view when he makes his classifications good, bad, and very bad, while at the same time he seeks to establish a correspondence between these classes and three respective stages based upon physical signs.

On the other hand, many authors have ignored the clinical features almost entirely, some absolutely, basing their classification upon the anatomical lesions, as inferred by physical examination of the chest.

To these belong Lebert (21), Flint (22), (who simply distinguishes two stages, one before and one after excavation). Eichhorst (23), Brehmer (24), Hillier (25), and others.

Finally we have a number of those who believe that the extent of the area of lung involved should be the exclusive basis for classification, the clinical features being added as existing in the individual case.

The chief exponent of this basis for classification is Turban (26), and his method has found numerous adherents, especially in Germany. Kroeniger (27), however, had already made such a classification in a report of a large series of cases in 1895. Weicker (28), A. Möller (29), and a number of other directors of both public and private sanatoria follow Turban in their reports.

Turban limits his first stage to involvement of one whole or two half lobes, with moderate percussion dullness, auscultation showing medium sized râles. His second stage includes involvement of greater area not exceeding that of two lobes, or severer cases with only one lobe involved. His third stage comprises all cases exceeding the second stage.

A. Fränkel (30) prefers a similar division in use by the German Imperial Health Bureau, also of three stages.

First stage.—Light cases of the disease limited to a small and circumscribed area, especially the apex, and not extending below the clavicle in front, and the spine of the scapula behind, with or without râles, but not showing consonant râles.

Second stage.—Cases in which the local process exceeds in extent that of the first stage, but is less than in the third stage.

Third stage.—Consolidation of an entire lobe or of several lobes, or evidence of cavity.

Dr. Bowditch (31) also takes into consideration the extent of area involved at least in his first two stages, while the clinical features are also recognized. In his fourth report of the State sanitarium, Rutland, Mass., he gives the following division:

Incipient stage.—Physical signs confined to one or both apices, constitutional symptoms slight.

Marked incipient stage.—Larger area involved than in incipient, and constitutional symptoms more decided.

Moderately advanced stage.—Well marked changes in percussion and auscultation, with more or less constitutional disturbances.

Advanced stage.—Well marked areas of consolidation, with cavity formation and constitutional disturbances.

Very advanced stage.—Marked increase of all the foregoing signs.

In his fifth annual report of the same institution, he, however, dropped the *very advanced stage*.

Trudeau (32) divides phthisis into three stages only, without exactly defining the areal extent.

Incipient stage.—With but slight local and constitutional involvement.

Advanced stage.—Local disease more extensive, or in an advanced stage, or the local disease may be comparatively slight, with grave constitutional impairment or some complication.

The far advanced stage.—Both physical and rational signs warranting the term.

H. P. Loomis (33), also Stubbert (34), in the reports of the Loomis Sanitarium, classify similarly, distinguishing between incipient, moderately advanced, and advanced stages, and Ashton (35) and Elliott (36) follow this classification in their reports.

If one examines these various classifications, to which many more or less decided modifications by other authors could be added, one can see good points in all of them, be they based upon the clinical manifestations solely, upon a basis which is purely anatomical, or one that is a combination of both.

When one, however, has a larger series of cases to dispose of and intends to classify in a manner in which the anatomical lesions (as shown by physical signs) are attached to certain clinical phases of the disease, then there are cases left over which cannot be disposed of at all, while some of those which have been disposed of under

one or the other combination groups, are found to differ greatly in *prognosis*, which after all is the real object of all classifications, so far as we use them for statistical and comparative purposes. A careful study of the classification of stages recommended by the committee of this association does not appear to me to have sufficiently remedied this serious defect, and I am well convinced that no classification can do this even approximately, so long as it attempts to combine the physical phenomena, especially in regard to extent of area, with the clinical aspect of cases, simply because they stand in no necessary relation, either in the prospect for duration of life, or in the prospect of a clinical cure.

Under such circumstances, one is tempted to resort to the old method of division into clinical stages only, the more so as the attainment of uniformity on a physical sign basis implies, as Turban himself admits, equal training and experience in examination of the chest.

In the classification of my own work, comprising reports of over 3,000 cases, I have therefore paid secondary attention to the physical signs, and have divided my cases into three classes, entirely upon a clinical aspect from my own standpoint of prognosis.

By this method a case is classified regardless of the fact that one or two lobes are the seat of demonstrable alterations, while cases with acute or actively progressive changes, caseous pneumonias, or such with more serious complications and of but limited or less acute local lung disease, go where, from a prognostic standpoint, they really belong. A case recently examined by me, in which the greater part of an upper lobe was the seat of caseous pneumonia with coexisting parenchymatous nephritis and tuberculous ulceration of the larynx, was naturally placed in the most unfavorable class, whereas according to Turban the classification should have been in the first, and according to our committee's recommendation, in the second stage.

While I have found room for improvement in my own classification, especially for making my reports with a view of their ready comparison with those of others, I have made no change in the past, because every one seemed to classify differently, and I proposed to continue consistently at least in my own work, until the profession should adopt a standard that all will follow.

That this standard should reflect the *prognosis* of the cases grouped together as far as possible, I presume all are agreed, and the changes made from Turban's division by our committee can have no other object.

Being deeply interested in the subject ever since I became acquainted with the recommendation of our committee for a uniform classification, I have spent much thought upon the subject, and have endeavored to formulate a substitute that should be an improvement, while making the element of prognosis its chief feature.

In the formulation of such a classification, I have been aided by that of Carl Spengler, of Davos (37), which he has used for many years and which appears in the volume dedicated to Professor Koch on the occasion of his sixtieth birthday.

Dr. Spengler divides his cases in two large groups, the first being non-febrile and therefore inactive; the second group comprises the febrile or active forms of the disease. He then makes three stages under each group.

The first stage includes only those that are what has been termed "closed" cases, that is to say, those in which the process is purely tuberculous, softening and excavation having not yet occurred.

The second stage is that of early or beginning phthisis.

The third stage is that of cavernous phthisis: each stage has an inactive and active group.

For prognostic purposes I believe, however, a division into four stages to be desirable, inasmuch as some cases that would come in the second stage, according to Spengler, ought to be taken out and placed with the third stage, and likewise certain cases that he places in his third stage, would with advantage be classed by themselves, since in these the prognosis for lasting improvement or cure is unfavorable.

It may also be deserving of your consideration to emphasize the distinction between *pure tuberculosis* and *phthisis* more decidedly by not enumerating such cases with those of phthisis, and by classing them as chronic tuberculosis while reserving three stages for phthisis proper.

I have made this a feature of the classification which I submit and believe a careful examination will justify such a course, since an additional aetiological factor, largely dominating the future course of the disease, comes into consideration with the advent of phthisis.

Some may object to the division of each stage into an active and inactive form, thereby really distinguishing between eight classes instead of three or four, as has been the common custom. I believe, however, that for purposes of prognosis this division is unavoidable, and also that when one familiarizes himself with the divisions it will not be found a hardship to observe it.

Dr. Spengler's condition of absolute freedom

DR. VON RUCK'S CLASSIFICATION OF STAGES FOR CASES OF PULMONARY TUBERCULOSIS AND PHTHISIS.

CHRONIC PULMONARY TUBERCULOSIS.

a. Inactive, closed tuberculosis, latent form, free from fever, reacting to tuberculin, with varied extent of physical signs.

b. Active, closed tuberculosis, with mild tuberculous fever (100.5 degrees F. maximum); otherwise same as a.

PULMONARY PHTHISIS.

Class I. Non-febrile Cases.

Class II. Febrile Cases.

First Stage.

a. Inactive, initial phthisis, without demonstrable cavity formation, with bacillary sputum; total quantity not exceeding $\frac{1}{2}$ ounce in 24 hours; passive secondary infection; with or without mild complications on the part of pleura. Temperature normal to 99 degrees F.

b. Active initial phthisis, with moderate tuberculous fever, or a combination of the tuberculous with that of subacute secondary infection. Expectoration not exceeding $\frac{1}{2}$ ounce in 24 hours, with or without mild complications on part of pleura. Temperature not exceeding 101.5 degrees F.

Second Stage.

a. Inactive phthisis, with single, small demonstrable cavity formation. Expectoration not exceeding 1 ounce in 24 hours. Passive secondary infection; with or without mild complications on part of the larynx or pleura or both. Temperature normal to 99.2 degrees F.

b. Active phthisis, with tuberculous fever, or combined secondary fever; demonstrable cavity formation. Expectoration not exceeding 1 ounce in 24 hours. Mild complications on part of pleura or larynx or both. Temperature not exceeding 102.5 degrees F.

Third Stage.

a. Inactive, advanced, cavernous phthisis, with large or multiple cavity formation. Expectoration exceeding 1 ounce in 24 hours. Passive secondary infection; serious complications, tuberculous or otherwise, on the part of larynx, pleura, intestine, or other organs. Temperature subnormal to 99.5 degrees F.

b. Active, advanced, cavernous phthisis, with tuberculous or secondary fever of any degree. Large single or multiple cavity formation. Expectoration exceeding 1 ounce in 24 hours. Complications same as under a, or caseous pneumonia, diffused mixed infection, acute miliary disseminations.

CLASSIFICATION OF RESULTS OF TREATMENT OF PULMONARY TUBERCULOSIS AND PHTHISIS.

<i>Cured.</i>	Patients free from all subjective symptoms, without elevation of temperature, without cough or expectoration. Physical signs absent, or indicative of connective tissue changes or cicatrization. General health restored. Tuberculin test applied three months or later after discontinuance of treatment must have proved negative, or above conditions must have been maintained at least for two years after discharge.
<i>Apparently cured.</i>	Same condition as above, maintained at least for three months after discontinuance of treatment.
<i>Disease arrested.</i>	Decided retrogressive changes in the physical signs, coexisting with corresponding amelioration of symptoms, only slight cough remaining, expectoration not exceeding 2 drachms in 24 hours, still containing tubercle bacilli. General health to be approaching normal state. Temperature must be practically normal, not exceeding 99 degrees F. Such condition must have been maintained for three months or longer.
<i>Greatly improved.</i>	Symptoms and physical signs present on admission must show material reduction, especially cough, expectoration, and fever. Weight and strength, if previously deficient, must show decided increase.
<i>Improved.</i>	Symptoms, such as cough, expectoration, and fever, have grown less. No loss in weight, or gaining on discharge.
<i>Stationary.</i>	No material change in patient's condition. No loss in weight.
<i>Progressive.</i>	Symptoms and physical signs are increased.

from fever for inactive stages of phthisis, I could not think practical, for there are few cases which, while they have a considerable amount of secretions from ulcerated surfaces or cavities, do not show a slight rise at some time during the day, although there is no apparent active or progressive tendency.

A further objection may be urged for the necessity of distinguishing between the sizes of

cavities in classifying between the second and third stages. It is true that this may become a difficult matter in some instances, but I believe that the sputum quantity will aid considerably in this respect, since it represents with a great degree of uniformity the area of ulcerating surfaces from which it is derived.

Large cavities are, however, easily found, and their prognostic feature lies chiefly in the fact that

they rarely can be caused to close without resort to surgical measures, at least not in adults; such cases, therefore, cannot attain a clinical cure.

You will observe the following to be the chief distinctive features for the classification:

For chronic tuberculosis.—The absence of softening, ulceration or excavation.

For initial phthisis.—The destructive area is small, giving as yet no physical signs of cavity, and having a correspondingly limited amount of expectoration.

For phthisis.—The destructive process has extended to such a degree that a small sized cavity is recognizable; the increase of the ulcerating surface corresponding with an increase of sputum. In this stage the larynx may also show a mild degree of involvement.

For advanced cavernous phthisis.—The presence of a large cavity or of multiple cavity formation, again reflected by a correspondingly increased amount of sputum; and with this stage are classed all cases which, regardless of the extent of local destructive changes, have coexisting grave complications, be they tuberculous or otherwise.

We thus dispose of the occurrence of amyloid degeneration, of grave diabetes, of nephritis, and of certain rarer complications on the part of the heart, that may be a feature in any stage of the disease, and likewise of cases of acute caseous pneumonia, diffused mixed infection, acute miliary dissemination, etc.

The distinction of actively progressing from inactive, non-febrile cases is also of obvious advantage.

While this classification is chiefly upon a clinical basis, it reflects the gravity of the cases grouped together, and has the great additional advantage that it requires no extraordinary skill and experience in placing a given case in its proper group.

Another word I would like to add in regard to the classification of the results of treatment.

If we look at the customary classification of results, especially in American reports, we find a fair degree of uniformity, although all classifications in use could be improved by the adoption of more reliable criteria.

Dr. Bowditch is reluctant to make a class of apparently cured cases, and until his last report of the Massachusetts State Sanitarium, he has substituted the word *arrested*, as an equivalent. In the last report, made jointly with Dr. Clapp, the *arrested* and apparently cured cases are classed together, in the same sense and under the same conditions as to the results obtained. In

addition he makes only one more class, representing every shade of improvement.

Trudeau's class of "apparently cured," corresponds to Dr. Bowditch's and Dr. Clapp's cases, but like all others, Dr. Trudeau makes a *special class* for *arrested* cases, in which cough and expectoration with tubercle bacilli are still present, but constitutional disturbances have been absent for several months, and the physical signs show retrograde or arrested progress. Besides he has an *improved class*.

In the Loomis Sanitarium, as also in the Muskoka Cottage Sanitarium, Trudeau's classification prevails and in my reports from the Winyah Sanitarium I have followed it, while I have made two classes for improved cases, according to the degree of benefit attained.

I believe, however, that if we adopt a uniform standard for the classification of results, we can define more accurately the requirements for each group. In cases actually alleged to be cured, there should be no symptoms of any kind, and the result of physical examination should be negative, or give no other evidence than that of connective tissue or cicatricial changes. But instead of a time limit of two years, a negative tuberculin test after three months from the date of discharge should be accepted. In fact, my own opinion is, that this should be an invariable condition. In addition, the state of the patient's general health should be consistent with recovery.

For an *apparent* recovery the conditions must necessarily be the same, or else the recovery cannot be said to be apparent. It becomes unconditional only after a tuberculin test, or expiration of the time stipulated for a cure.

I find very little difference between the *arrested* and the *quiescent* classes in the classification submitted by the committee. In the quiescent class constitutional symptoms *may* be, and in the *arrested* class they *must* be absent. In the former cough with bacillary expectoration is mentioned, and in the latter expectoration containing tubercle bacilli may still be a symptom; and since cough implies expectoration, and expectoration is usually attended with cough, both classes may still cough and expectorate tuberculous sputum in unlimited amount. The same uncertainty prevails in regard to the physical signs; in the quiescent class they may be improved or unchanged, while in the *arrested* class they may or may not persist. The real difference is, therefore, that in the *arrested* class there is a provision of time during which the condition has been maintained.

If you will examine the conditions I have made for *arrested* cases, I believe you will agree with

me as to the desirability of limiting the temperature to practically normal, and stipulating likewise that the cough and expectoration shall be slight, as stated, while the physical signs must show retrogressive changes.

To prevent confusion, I have left out the quiescent class entirely, and substituted a stationary class in its stead, that is to say, one in which there has been no apparent improvement as a result of treatment, while the patient has held his own.

Between this stationary class and the arrested one, I found it necessary to make some provision for improved cases which, when treatment was discontinued, have not received enough benefit to meet all the conditions that justify their inclusion among arrested cases.

The difference between a cured and an apparently cured case, is that the former has proved a cure by a tuberculin test, or by the expiration of two years of good health, without return of symptoms.

Between the cured and arrested cases, the chief difference is that there may be in the latter a still open surface, discharging a limited amount of secretion, which is inconsistent with the acceptance of a cure.

Between these and the improved cases, the classification represents the degree of benefit derived from treatment and, while in arrested cases this degree is more sharply defined, the improved state is evidenced by changes for the better which are a matter of comparison between admission and discharge.

With these remarks I submit to you the classification suggested for your further consideration.

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The Medical Association of the Greater City of New York.—A stated meeting of this association will be held in Hosack Hall, New York Academy of Medicine, on Monday, March 13, 1905, at 8.30 p. m. Order of exercises: The Constitutional Treatment of Bright's Disease, by Dr. William H. Porter; discussion to be opened by Dr. Reynold Webb Wilcox; The Treatment of Bright's Disease by Lavage of the Renal Pelves, by Dr. Winfield Ayres; The Treatment of Pyelitis, by Dr. Howard A. Kelly, of Baltimore, professor of gynecology in Johns Hopkins University; discussion by Dr. F. M. Johnson, of Boston, Dr. George M. Edebohl, Dr. Willy Meyer, Dr. Ramon Guiteras, Dr. Frederic Bierhoff, Dr. James Pedersen, and Dr. W. J. Pulley.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXVI.—What diet do you prescribe in typhoid fever? (Answers due not later than March 15, 1905.)

XXXVII.—How do you manage the alcohol habit? (Answers due not later than April 15, 1905.)

XXXVIII.—How would you prevent disease of the vermiform appendix? (Answers due not later than May 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the *NEW YORK MEDICAL JOURNAL* AND *PHILADELPHIA MEDICAL JOURNAL* (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXV has been awarded to Acting Assistant Surgeon G. R. Plummer, of the navy, whose article appears below.

PRIZE QUESTION NO. XXXV.

THE TREATMENT OF BUNIONS.

By G. R. PLUMMER, M. D.,

ACTING ASSISTANT SURGEON, UNITED STATES NAVY.

I order what are known as right and left socks or stockings, which have a straight inner edge to the foot and are normally curved around the toes so as to prevent dragging on the great toe. It would be better to use a sock or stocking which has a separate apartment for the great toe, but it cannot be found on the market, whereas the "right and lefts" are on sale in New York.

The inner edge of the sole of the shoe is made perfectly straight, and although the sole is as wide as the foot, the curve of the toe resembles so closely the curve of the normal toes that it is not clumsy in fact or appearance. It has been my experience that it is better to have the toe box.

The bunion should be bathed night and morning with a four per cent. solution of carbolic acid for a few minutes, and this should be followed by a bath of plain water. The carbolic solution is not only antiseptic, but a decided analgetic.

If, after several weeks' trial of proper foot gear, the bursa is still distended with fluid and it is

necessary to aspirate it, the operation is simple, practically painless, and if antiseptic precautions are practised, a safe one. All the foregoing applies to simple bunion caused by an ill fitting shoe.

Now, there is a class of cases which have been practically ignored in literature, and the management of them requires no little knowledge of the anatomy of the foot, the gouty and rheumatic diatheses, and physical peculiarities. Many cases of bunion are due to flat foot, which causes the great toe to turn out and brings the prominent metatarsophalangeal joint against the side of the shoe. In this case, unless the arch of the foot is restored by a plate, the treatment for simple bunion would fail. In the case of enlarged joints from gouty or rheumatic inflammation, these constitutional diseases would have to be overcome by internal treatment and hygienic living, otherwise the local treatment would not succeed. Four of the five tendons attached to the great toe tend to drag the toe outward, and the question of their abnormal contraction must be taken into account. Whenever possible, no operation should be performed on the metatarsophalangeal joint without an x ray picture being taken as a guide, and in that the sesamoids must not be mistaken for exostoses. As the deformity is often the result of a simple dislocation, the tripod of the foot should be respected and restoration secured by removing wedges from the metatarsal or phalanx, or both, and tenotomy.

KEY WEST, FLA.

[We regret that we have not space for the publication of other essays on this subject.—THE EDITOR.]

Correspondence.

LETTER FROM MONTREAL.

Harmony between the English and French Physicians of Montreal.—*The Governor's Fellowship in Pathology at McGill University.*—*The Royal Victoria Hospital.*—*The McGill Medical Faculty.*—*Marmorek's Serum.*—*Leprosy in Canada.*

MONTREAL, February 18, 1905.

There are signs that the profession of Montreal will soon be a united one and that no longer will there be two camps composed of English and French adherents, respectively. The medical profession of Montreal sat down together at a banquet in the Windsor Hotel on the evening of the 21st of February, the occasion being a joint gathering with the Montreal Medico-Chirurgical Society and La Société médicale as hosts. Too long has the profession in Montreal been divided to the detriment of others than themselves, and

while it was not due to religious feeling, but rather to jealousies of years gone by with which the present generation can have but little to do, it is fitting to thus celebrate the burying of the hatchet.

Dr. Oscar Klotz has resigned the Governor's fellowship in pathology at McGill University, which was first instituted in 1899. The fellowship is tenable for two years by graduates of medicine who have performed some previous research work, and is worth \$500 per annum. Dr. Klotz has done some good work, the most important being on the part played by soaps in the process of pathological calcification, which will shortly be published. Dr. George A. Charlton, who formerly held this fellowship and was subsequently a Rockefeller fellow, has been appointed by the government of the Northwest Territories to establish a bacteriological and pathological station at Regina.

The eleventh annual meeting of the governors of the Royal Victoria Hospital was held in the latter part of January, when the following appointments were made to the staff: Associates in medicine, Dr. Fry, Dr. Cushing, and Dr. McCrae; clinical assistants in medicine, Dr. Burnett and Dr. McAuley; clinical assistants in neurology, Dr. Robertson, Dr. Robins, and Dr. Russell; clinical assistant in ophthalmology, Dr. Tooke; clinical assistant in gynecology, Dr. Goodall; clinical assistant in laryngology, Dr. Hamilton White; registrar and assistant registrar, Dr. Cushing and Dr. McAuley. The report shows that the number of patients admitted during 1904 was 3,054, an increase of 123 over the previous year. The total days of hospital treatment aggregated 74,777, an increase of 666. On the 1st of January, 1904, there were 210 patients in the institution, and during the year 3,096 were discharged, of whom 1,537 were well, 856 were improved, 189 were not improved, 329 were not treated, and 175 died. The number remaining in the hospital at the end of December, 1904, was 184. Of the 175 deaths, 52 took place within forty-eight hours of the patients' admission. This gives a death rate for the year of 3.97 per cent. In the out-patient department 3,992 patients were treated. The income for 1904 amounted to \$148,836. The total daily cost for each patient was \$1.61. Dr. W. J. Cram was appointed externe in the X Ray Department, and Dr. Klotz house pathologist.

The Medical Faculty of McGill University will seek full union with the university. Toward this end the Medical Faculty recently appointed a special committee from their number to wait on the corporation of the university, which they did

at their last regular meeting. This committee was composed of Dean Roddick and Professor Gardner, Professor Ruttan, Professor Adami, Professor Shepherd, and Professor Armstrong. The corporation of the university warmly welcomed the fact that the Medical Faculty desired full union in the institution, and will arrange for a special meeting in the immediate future to confer with regard to details. Dr. Adami has been appointed a Governor's fellow on the corporation.

An important report regarding the Marmorek serum has been prepared by Dr. de Martigny, of Montreal, and presented to the Hygienic Committee of that city. Last June the Hygiene Committee despatched Dr. de Martigny to Paris to make observations and conduct experiments on Marmorek's serum, and this report sets forth his results and gives as well his opinions with regard to the same. He is convinced that Marmorek's serum has a wonderful efficacy and feels positive that, if it were applied at once to the treatment of all consumptives in Montreal, tuberculosis would in ten years be as rare as smallpox now is in that city. Dr. de Martigny concludes his report by strongly recommending Marmorek's serum in the treatment of tuberculosis.

That leprosy is on the decrease in Canada at all events is shown by the report of the superintendent, Dr. Smith, of the Leper Hospital, at Tracadie, N. B., which that official laid before the Federal Parliament a short time ago. The register of the institution shows that there are now fifteen inmates of the lazaretto, ten of whom are males and five females. There were four deaths during the past twelve months. Of the present inmates, nine are French, three Icelandic, and three English. Dr. Smith states that during the year Chaulmoogra oil has been freely used by the inmates with beneficial effects. A short time before he handed in his report Dr. Smith took a tour of inspection through the adjoining parishes and found one undoubted case of leprosy. He also found three persons showing premonitory symptoms. Notwithstanding this, he considers that the disease is rapidly decreasing.

Physicians' Club of Buffalo.—The Physicians' Club held their monthly meeting Thursday evening at the residence of Dr. J. J. Finerty, of 429 Franklin Street. The members and invited guests numbering about 60, were entertained by the host, and the annual election of officers was held. The following physicians were unanimously elected: President, Dr. Joseph S. Porter; vice-president, Dr. D. J. Constantine; secretary treasurer, Dr. William Ring.

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DISPENSARIES IN THE STATE OF NEW YORK.

We are indebted to the secretary of the State Board of Charities for a statement of the leading points in the forthcoming annual report of the board's Committee on Dispensaries. It appears that during the year ending September 30, 1904, there were open for the whole or a portion of the time 123 dispensaries. A few of them, only twenty, were direct recipients of public funds, but in all they received only the comparatively small sum of \$11,032.40. Sixty-one were operated in connection with institutions receiving public appropriations. It is creditable to private munificence to find that as many as forty-two were maintained entirely without grants of public money.

The State licensing and supervision of these institutions have now been in operation for a little more than five years, and it is stated that in no other part of the country is dispensary work so extensive or under such systematic State regulation as in New York. The State Board of Charities has made rules to govern the conduct of the licensed dispensaries, and its inspector has during the year made a special investigation as to the extent of compliance with these rules. According to a tabulation of his reported findings, the inspection has covered a multitude of points,

most of them of little interest from any other point of view than that of administration. It is to be noted with regret that in only twenty-eight of the dispensaries is clinical or any other instruction given. It is gratifying to learn, however, that in all but one of the twenty-eight clinical instruction is given only with the patient's consent. As regards only one of the board's requirements does there seem to have been decided laxity—that relating to investigation as to applicants' ability to pay for medical treatment and to the recording of the results of such inquiry. Sentimental considerations doubtless lie at the root of the comparative disregard of this requirement. A simple denial of the benefits of the dispensary to such applicants as are obviously not needy, "after questioning, but without further formality," appears to be a less repugnant course, for it is followed in eighty-seven of the dispensaries. The State supervision does not seem to be too searching, and we do not doubt that it is of great utility.

THE ITCH.

Scabies is a disease that few of us see in this country, save in the clinics, but Dr. James Nevins Hyde, of Chicago, one of our leading dermatologists, points out in the March number of the *American Journal of the Medical Sciences* that of late there have been at work two circumstances calculated to lead before long to an unusual prevalence of the itch—namely, an enormous immigration and a great massing of people from all parts of the country at the St. Louis fair. He does not predict that the extension of the pest will be general or formidable, but he thinks that the number of its victims, as observed in both public and private practice, will gradually increase beyond what has heretofore been recorded, and that after that there will be a diminishing prevalence ending in a return to the figures of average years.

Such an unusual visitation, he continues, will occur again when the causes mentioned are repeated, but as yet he looks upon it as doubtful if the opening of the Panama Canal will give rise to a fresh increase in the prevalence of the disease. The facts, he says, and the probabilities

dependent on them occasion one of the serious problems of public hygiene and call for a national education regarding the means of preventing imported filth diseases. The itch is a grievous and loathsome disease, but, fortunately, it is one of those that are the most readily prevented and cured, and it is hardly to be doubted that Dr. Hyde's note of warning will serve as an incentive to measures efficient in preventing to a great extent such a widespread visitation as might otherwise be apprehended. He intimates that the government inspection of immigrants is lax in the matter of scabies, but any such shortcoming can easily be remedied.

MANUEL GARCIA.

On Friday of next week there will be celebrated in London the one hundredth birthday of Manuel Garcia, whose appliances for the visual study of the action of the vocal cords in singing, improvised or adapted many years ago, led to the development of the laryngoscope of the present day. In spite of his advanced age, Garcia is said to be in fairly good physical condition and in the enjoyment of mental faculties practically unimpaired. Though his long life has been devoted to music, his discovery is everywhere recognized as having called modern laryngology into being, and the celebration, as is fitting, will be the joint work of the medical profession and of the musicians. It is to be held in the rooms of the Royal Medico-Chirurgical Society.

Seldom does it happen to a man to be thus honored by the members of two professions, and rarely, too, does a man of prominence reach the age of a hundred years. The occasion therefore will be exceptionally memorable, Garcia was fifty years old when his paper entitled *Physiological Observations on the Human Voice* was presented before the Royal Society, and that organization and the laryngological societies of various countries, including our own, will take part in the ceremonies of March 17th.

Although it is generally understood that Garcia was disappointed with the results of his laryngoscopic studies from the point of view of a teacher of singing, he has for many years had the satisfaction of knowing that they led to the

establishment on a sound basis of a special branch of medical practice that has shown brilliant progress. The formal acknowledgment of this result of his labors is a tribute that is undeniably his due. His memory will always be cherished in the annals of medicine.

A SPECIAL PERIL TO SURGEONS.

There was recently tried in the District Court of Ramsey County, Minnesota, a case which calls attention to a peril which threatens every surgeon, and which seems to me so important that I believe it should be brought prominently to the attention of the whole medical profession. The circumstances of the case are as follows: A patient, a woman, was referred by her family physician to a surgeon for trouble with her ears. Examination by the surgeon of the ear concerning which she made her chief complaint disclosed a condition which seemed to him to call for a surgical operation, to which the patient consented. At the time of the operation, the patient having been anæsthetized, a more careful examination was made of both ears than had been possible without anæsthesia. This examination showed that both ears were diseased, but that the condition of the left ear was worse than that of the right, and in the surgeon's opinion immediate removal of the ossicles was demanded in the left ear in order to prevent an extension of the disease that might threaten the patient's life. The family physician and some other physicians were present, and all agreed to the diagnosis and as to the necessity of an operation; the operation was then performed. When the patient recovered from the anæsthesia, the circumstances were explained to her and she was apparently satisfied with what had been done and agreed to have the other ear operated upon at a later date.

A few days afterward, the patient having in the mean time talked the matter over with friends and (presumably) lawyers, declined further treatment from the surgeon, and later filed a suit against him, charging him with malpractice, accusing him of having by mistake operated on the wrong ear and demanding heavy damages. When the case came up for trial, and it was demonstrated by competent witnesses that the surgeon

had made no mistake, but had deliberately operated on the left ear, on account of the serious and dangerous condition present. the plaintiff's attorneys asked and were given leave to amend their complaint, withdrawing all charges of malpractice, and a new trial was granted, whereat the surgeon was charged with technical assault, the assault consisting in operating on a portion of the body which he had not been employed to operate on. The case was tried and the plaintiff was awarded the enormous damages of \$14,225.50. The judge was apparently satisfied that the plaintiff had a cause of action for assault, since he refused to direct a verdict, although later he granted a motion for a new trial of the case on the ground that the damages were excessive.

Circumstances analogous to those in the foregoing case are of daily occurrence among surgeons, and if this case is finally decided in favor of the plaintiff, I predict an epidemic of similar suits all over the country. Let us suppose that a surgeon makes a diagnosis of appendicitis and on opening the belly finds a suppurating tube; if he removes this tube is he guilty of assault? Suppose that he makes a diagnosis of disease of the right ovary or tube and finds at the operation disease of the left ovary or tube, must he sew up the belly and wait for authority from the patient before doing what should be done at once? Such would seem to be the law.

Of course no surgeon has the right to operate upon any patient without the permission of that patient or of some one in authority to give that permission, but when a patient has placed himself or herself in the hands of a surgeon for an operation, has the surgeon no discretion as to the detail of that operation? Must he outline every step of his procedure in advance, and does he render himself liable for assault in case he should find it necessary to do, and does, something which he had not beforehand explained to the patient? I do not mean to assert that a surgeon would be justified in operating upon a portion of the body remote from that concerning which the patient had consulted him; but it behooves the surgeon to find out whether he is or is not to do what the exigencies of the case seem to him to demand when he undertakes to perform

a surgical operation for the cure of a certain disease or for the relief of certain symptoms concerning which his patient has consulted him, and when an operation has been agreed upon.

Few surgeons go through life without the annoying and expensive experience of having to defend a malpractice suit, and there are in every community lawyers who make their living by hunting up and prosecuting such suits. These suits have become so numerous of late years that insurance companies have appeared offering defense policies which pay the expense of such suits and which in some cases pay the damages up to a certain specified sum. If the case above mentioned is finally decided in favor of the plaintiff, a new field and a lucrative one will be opened for the shysters who fatten upon damage suits and malpractice suits, and the surgeon will do well to surround himself with all possible precautions before undertaking any surgical operation; it would probably be wise for him to provide himself with a blank form which, signed by the patient and properly witnessed, would give him authority to do whatever he believed it necessary and proper to do in each individual case.

BURNSIDE FOSTER.

CALCIUM CHLORIDE AS A HÆMOSTATIC.

Calcium chloride seems to be coming into more varied therapeutical use than was formerly made of it. Boas (*Therapie der Gegenwart*, 1905, No. 7; *Berliner klinische Wochenschrift*, January 23rd) recommends it as a rectal hæmostatic. In cases of bleeding hæmorrhoids half an ounce of a ten per cent. solution is to be injected into the rectum after the morning evacuation, and retained for some time. If the hæmorrhage is severe, an evening injection also will be necessary. He has used it successfully in other rectal hæmorrhages, such as that due to carcinoma. If the salt is chemically pure, it will cause no discomfort; otherwise it may give rise to burning pain and tenesmus.

A BACILLUS OF BALANITIS.

More and more are we coming to recognize, or at least suspect, a parasitic cause for various diseases. Ordinary balanitis is ascribed by H. Vincent (*Annales de dermatologie et de syphiligraphie*, June, 1904; *Berliner klinische Wochenschrift*, February 13th) to a bacillus. It is pathogenic

for animals, does not take the Gram stain, grows on ordinary media, and exhales a foetid odor.

OUR RAILWAY SLAUGHTER.

Evidence is accumulating to show the unworthy preeminence of the United States in manslaughter by railway accidents. A Prussian cabinet minister has recently stated that thirty-six times as many persons are annually killed or wounded in such accidents in this country as in Prussia.

HUMAN AND BOVINE TUBERCULOUS DISEASE.

In a recent contribution to the casuistics of the relations of human and bovine tuberculous disease (*Archiv. für pathologische Anatomie und Physiologie und für klinische Medicin*, clxxvii, 3; *Berliner klinische Wochenschrift*, January 23rd) Ipsen records the case of a child, ten months old, in which there was found post mortem ordinary tuberculous disease of the lungs, the intestines, and other organs, together with an affection of the intestinal peritonæum corresponding to one of the forms of the disease in cattle, in both its gross and its microscopical appearances. Such cases, it is remarked, are very rare in literature.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 13th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; German Medical Society of the City of New York; New York Medicohistorical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Corning, N. Y., Medical Association.

TUESDAY, March 14th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, March 15th.—Woman's Medical Association (New York Academy of Medicine); New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, March 16th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, March 17th.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 4, 1905:

	March 4.		February 25.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	262	6	292	5
Diphtheria and croup	276	30	258	45
Scarlet fever	248	22	261	14
Smallpox	3	..	5	1
Chickenpox	98	..	121	..
Tuberculosis	390	188	318	164
Typhoid fever	42	10	28	10
Cerebrospinal meningitis .....	..	60	..	49
	1,309	316	1,283	288

Commissioner Darlington, of the health board, reports that the death rate for last week was lower than the corresponding week in any previous year. During the previous administration the death rate for that specific week was 20.67 per thousand. This remained the record until last week, when it went down to 20.47 per thousand. Commissioner Darlington hopes to get the year's death rate below that made during any former administration. The lowest figures were made in 1903, when the rate went down to 18.18 per thousand. "During that year," said Commissioner Darlington, "we had a warm winter and a cool summer. If we have as favorable weather conditions this year I expect to see the death rate fall below 18."

The Annual Dinner of the Society of Medical Jurisprudence is to be held on Saturday evening of this week at the Hotel Astor, Forty-fourth Street and Broadway.

A Clinic on Cancer.—At the close of the course of special lectures by Dr. L. Duncan Bulkley at the New York Skin and Cancer Hospital, Nineteenth Street and Second Avenue, New York, on Wednesday, March 29th, at 4.15 p. m., there will be a clinic on cancer by Dr. William Seaman Bainbridge, of the hospital staff. A number of interesting cases will be on exhibition.

Aid Society of St. Catherine's Hospital, Brooklyn.—The officers of this society are: President, Mrs. Joseph Eppig; vice-presidents, Mrs. Ann Brown, Mrs. M. Bannon, and Mrs. C. Hillenbrand; recording secretary, Mrs. John J. Hagerty; corresponding secretary, Sister Mary Mercedes, O. S. D.; treasurer, Sister Superior Mary Emilia, O. S. D.; board of directors, Miss Mary Carroll, Miss Ellen Keefe, Mrs. James Cooke, Mrs. J. Leyendecker, Mrs. A. Kramer, Mrs. T. Hess, Mrs. F. Ibert, and Mrs. B. Uzmman.

Roosevelt Hospital.—At a meeting of the trustees of the Roosevelt Hospital, held on February 28th, Dr. James W. McLane, former president of the College of Physicians and Surgeons in New York, was elected president of the hospital. W. Irving Clark was elected vice-president; W. Emelen Roosevelt, secretary; and Richard Trimble, treasurer.

Grateful because of their quick recovery, two private patients in the hospital have given the institution \$5,000 each, for the opening of one of the public medical wards which has been closed for some time, owing to lack of funds. The gifts were not solicited.

Nurses Graduated from the New York Hospital.—Elizabeth Munroe Bowers, Katharine L. Bowers, Elizabeth Burroughs, Dora Browning, Alice C. Ellison, Ella Fligg, Gertrude I. A. Forbes, Isabelle Gordon, Florence Louise Golding, Mary Adeline Harding, Georgiana Elizabeth Hay, Mrs. Ethel Josephine Da Costa Hosking, Martha Josephine McCabe, Margaret Felicia Marie Moir, Margaret Paisley, Isabel Phymister, Elizabeth Y. Richmond, Caroline Straub, Winifrede Salter, Lillian Evelyn Smardon, Henriette Beta Tatlatscheck, Alice Augusta Todd, Helen Van Meter, Mrs. Mary Wharton Van Huzon, Louise Tilden White, and Anna Galena Warren.

Rosary Hill Home and St. Rose's Free Home.—A series of lectures on The Women of the Renaissance is to be given by Dr. J. J. Walsh, Ph. D., LL. D., for the benefit of Rosary Hill Home, Hawthorne, Westchester County, N. Y., and St. Rose's Free Home, Cherry Street, New York. These two branches of the same charity are for the relief of incurable cancer patients and are under the care of Sister M. Alphonse (Mrs. Rose Hawthorne Lathrop, daughter of Nathaniel Hawthorne), and the Servants of Relief. This charity is the only one which undertakes these cases and is of vital importance to these sufferers. Aside from the charity to be helped, the lectures promise to be otherwise interesting.

The New York Academy of Medicine.—The section in medicine will meet on Tuesday, March 21, 1905, at 8.15 p. m. Order: Annual election of officers; presentation of cases; clinical reports: A Case of Acute Polyarticular Gout, by Dr. N. B. Potter; A Sterile Purulent Joint, following Acute Articular Rheumatism, by Dr. H. S. Carter; papers: The Present Clinical and Bacteriological Status of Vincent's Angina, by Dr. W. N. Berkeley; discussion by Dr. Mayer, Dr. Thacher, Dr. Simpson, Dr. Lipman, Dr. Sobel, Dr. Bell, and others; Recent Studies in the Diagnosis of Rabies, by Dr. B. W. Poor; discussion by Dr. Biggs, Dr. Dulles, Dr. Ewing, Dr. Park, Dr. Brooks, Dr. Huddleston, Dr. Wilson, Dr. Bailey, and others. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

A meeting of the section in laryngology will be held March 17th, at 8.15 p. m., in honor of the one hundredth birthday of Signor Manuel Garcia. Order: Manuel Garcia, Teacher, Discoverer, and Man, by Dr. James E. Newcomb; address, by Walter Damrosch, Esq.; The Future of the Laryngoscope and the Study of Laryngology, by Dr. John N. Mackenzie. Lewis A. Coffin, M. D., chairman; Lee Maidment Hurd, M. D., secretary, 15 East Forty-eighth Street.

A Conference on Hospitals.—The New York Association for Improving the Condition of the

Poor is to have a conference on hospital needs and hospital finances, to be held in the assembly hall of the United Charities Building, 109 East Twenty-second Street, at 2.30 p. m., on Thursday, March 23rd. The hospitals, as well as various charitable organizations having daily contact with distress arising from sickness and physical injury, have been invited to send at least three delegates from their boards of directors and ladies' auxiliaries. The association was prompted to this action by repeated announcements made through the press and through hospital reports showing that the hospitals of New York do not receive that ample support which their needs require and their merits deserve. Heavy annual deficits are the rule rather than the exception, social deficits as well as financial, for in many hospitals work is curtailed for lack of means. Although an injury to medical science, and thus to the whole community, such curtailment bears hardest upon the poor.

To Establish a Hospital for Cancer Cases.—A movement is on foot among prominent New York medical men for the establishment of a hospital in which cancer may be treated scientifically, and where inoperable and destitute cases may be cared for. The commissioners of the State Board of Charity at a recent hearing approved the granting of a certificate of incorporation for such an institution, when sufficient money is in hand to run the hospital a year. The name decided on is Fairhaven Sanitarium, and Henry R. Wilson, president of the Lincoln Trust Company, has undertaken to raise \$10,000, which amount will be sufficient to begin operations. The medical board will include:

Dr. William B. Coley, attending surgeon, General Memorial Hospital; Dr. B. F. Curtis, attending surgeon, Bellevue Hospital; Dr. George F. Shrady, consulting surgeon, General Memorial Hospital; Dr. Joseph A. Blake, professor of surgery, P. and S., attending surgeon, Roosevelt Hospital; Dr. Edwin B. Cragin, professor of gynecology, P. and S., attending gynecological surgeon, Roosevelt Hospital; Dr. Austin Flint, Jr., attending gynecologist, Bellevue Hospital; Dr. George H. Ballery, private sanitarium; Dr. Walter B. James, attending physician, Presbyterian and Roosevelt Hospitals; Dr. Alexander Lambert, attending physician, Bellevue Hospital; Dr. Walter F. Chapelle, attending surgeon, Manhattan Eye and Ear Hospital; Dr. Gertrude B. Kelly, attending surgeon, New York Infirmary; Dr. Marie Chase, attending surgeon, New York Infirmary; Dr. Grace Peckham Murray, adjunct professor of gynecology, Postgraduate Hospital; Dr. Anna M. Galbraith, attending neurologist, Orthopaedic Hospital; Dr. Josephine Walter, attending physician, New York Infirmary and Montefiore Hospital.

PHILADELPHIA.

Deaths.—Dr. William B. E. Miller died at Hightstown, N. J., on March 2nd, aged 56 years. Dr. Miller was a prominent veterinarian and for several years had served as the federal inspector of cattle at Jersey City.

Dr. D. W. Dundore died at Womelsdorf, Pa., on February 23rd, aged 48 years. Dr. Dundore graduated from the medical department of the University of Pennsylvania in 1879.

Scientific Society Meetings for the Week Ending March 18, 1905.—Monday, March 13th, Section on General Medicine, College of Physicians;

Wills Hospital Ophthalmic Society. Tuesday, March 14th, Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, March 15th, Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants, Wills Hospital. Friday, March 17th, University of Pennsylvania Medical Society; American Philosophical Society.

Charitable Bequests.—On March 1st the directors of the various Jewish charitable organizations held a meeting at the Mercantile Club, which was the result of an invitation issued by the Federation of Jewish Charities. The president of the federation, Jacob Gimbel, announced that within the last few days a subscription of more than \$15,000 had been obtained from 70 of the 1,800 members of the organization. The larger subscriptions were asked for on account of the increased needs of the constituent societies of the federation. By the will of Mary H. Beagh \$500 is bequeathed to any institution that her sister decides to enter.

College of Physicians.—At the meeting of the College of Physicians, held Wednesday evening, March 1st, Dr. Robert N. Willson read a paper entitled *The Relief of Uremic Hemiplegia and Other Uremic States by Lowering Intracranial Pressure*. Dr. T. L. Coley read a paper entitled *The Famous Controversy Concerning the Internal Use of Cantharides—an Historic Sketch*. Dr. Alfred C. Wood read a paper entitled *Gallstone Obstruction of the Bowel; Report of a Case; Removal of the Stone by Operation; Recovery*. Dr. John B. Roberts read a paper entitled *The Gardener's Spade Deformity and the Silver Fork Deformity in Fractures of the Carpal End of the Radius*. The honorary librarian announced the addition of sixty-seven volumes to the library during February.

The Health of the City.—During the week ending February 25, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	77	10
Scarlet fever.....	52	0
Chickenpox.....	85	0
Diphtheria.....	69	15
Cerebrospinal meningitis.....	9	1
Measles.....	15	0
Whooping cough.....	24	0
Tuberculosis of the lungs.....	62	51
Pneumonia.....	90	92
Erysipelas.....	15	0
Puerperal fever.....	1	5
Tetanus.....	1	0

The total death rate for the week was 579, in an estimated population of 1,438,318, corresponding to an annual death rate of 20.93 per 1,000 population. The total infant mortality was 94; 76 under one year and 18 between one and two years. There were 29 still births; 19 males and 10 females. The following deaths from other transmissible diseases were reported: Malarial fever, 1; tuberculosis other than tuberculosis of the lungs, 13; dysentery, 1; diarrhoea and enteritis under two years, 11. No unusual meteorological phenomena were recorded by the weather bureau.

Annual Meeting of the Associated Health Authorities and Sanitarians of Pennsylvania.—The

twelfth annual meeting of the Associated Health Authorities and Sanitarians of Pennsylvania was held at Harrisburgh on February 14th and 15th. The meeting endorsed the following bills now before the State legislature: (1) For the establishment of a Bureau for the Registration of Vital Statistics. (2) For the protection of the inland water supplies of the State. (3) For the establishment of a State department of health. The annual address was delivered by Dr. John S. Fulton, secretary of the State board of health of Maryland, who spoke on Vital Statistics. A "symposium" on tuberculosis was offered by the members of the medical staff of the Phipps Institute of Philadelphia. Dr. Charles J. Hatfield spoke on *Methods of Infection*; Dr. William B. Stanton spoke on *the Importance of Popular Education in regard to Tuberculosis*; Dr. Joseph Walsh spoke on *the Necessity of Early Diagnosis*. Among sanitary and prophylactic measures recommended was the free State distribution of antitoxine. Dr. A. H. Stewart, of Philadelphia, read a paper on *Disinfection for Communicable Diseases*. Dr. Harry B. Bashore, of West Fairview, read a paper on *the Neglect of Rural Hygiene*. The following officers were elected:

President ex officio, Governor Pennypacker; first vice-president, Dr. T. M. McKee, of Kittanning; second vice-president, Dr. R. S. Maison, of Chester; third vice-president, Dr. H. D. Heiler, of Hilltown; treasurer, Dr. Jesse Green, of West Chester; secretary, Dr. W. R. Batt, of Philadelphia.

Medical Society Programmes.—The University of Pennsylvania Medical Society met at 1925 Chestnut Street on Friday, February 17th. Dr. M. B. Hartzell read a paper entitled *The So Called Tuberculides, with a Report of Two Cases of the Papulonecrotic Variety*. Dr. William Pepper read a paper on *The Medical Faculty of the University of Pennsylvania from 1765 to 1905*.

The following was the programme of the section in otology and laryngology of the College of Physicians at its meeting held February 15th:

Dr. P. S. Donnellan, *A Case of Leucoplakia Buccalis. Specific Pharyngitis Complicated with Periamygdalear Abscess*; Dr. W. G. B. Harland, *The Cosmetic Use of Paraffin in Changing the Shape of the Nose*.

The following was the programme of the section in ophthalmology of the College of Physicians at its meeting held February 21st:

Dr. Charles A. Oliver, *Description of a Single Stitch Operation for Advancement of the Exterior Ocular Muscles*; Dr. G. E. de Schweinitz, *Traumatic Aniridia*; Dr. G. E. de Schweinitz and Dr. B. F. Baer, Jr. (by invitation), *Four Cases of Sarcoma of the Choroid and One Case of Glioma of the Retina, with Microscopic Examinations*; Dr. C. F. Clark, of Columbus, O. (by invitation), *Astigmatism Following the Operation for the Extraction of Cataract*; Dr. W. Zentmayer, *A Case of Paralysis of the Upward Movement of Both Eyes*; Dr. H. F. Hansell, *Some Further Experiences in the Treatment of Ocular Inflammations by Diaphoresis*; Dr. E. A. Shumway, *Exhibition of a New Ophthalmic Outfit for Bedside Examination*.

The Pathological Society, at its meeting February 23rd, offered the following programme:

Dr. C. Foulkroud (by invitation), *Diverticulum of Fallopian Tube; Tuberculous Ulcer of Tongue; Sarcoma from a Patient Sixty-six Years of Age*; Dr. R. C. Rosenberger, *Homogenized Cultures of Tubercle Bacilli*; Dr. D. H. Bergy, *Influence of Pasteurization on the Chemical and*

Physical Qualities of Milk; Dr. M. E. Pennington, Comparison of Pasteurized and Raw Milk; Dr. J. Evans, Does Milk Possess Germicidal Properties.

The following was the programme of the Philadelphia County Medical Society at its meeting, February 22nd:

Dr. Myer Solis-Cohen, The Pasteur Preventive Treatment of Rabies at the Patient's Home: a Report of Two Cases; Dr. Joseph Price, Surgical Intervention in Cases of General Peritonitis from Typhoid Perforation and from Acute Gonococcus Infection; Dr. H. Emerson Wetherill, Hygrometry: Some Practical Results from the Measurement of the Perspiration in Health and Disease.

The following was the programme of the Philadelphia Neurological Society at its meeting, February 28th:

Dr. Ralph Pemberton, for Dr. W. G. Spiller, A Case of Lumbosacral Syringomyelia; Dr. William G. Spiller, A Case of Progressive Muscular Dystrophy with Atrophy of Bone, and A Case of Tabetic Facial Palsy; Dr. D. J. McCarthy, A Case of Tuberculosis with Graves's Syndrome; Dr. T. H. Weisenburg, A Case of Hemorrhage in the Pons, and A Case of Hemorrhage in the Floor of the Aqueduct of Sylvius; Dr. George E. Price, A Case of Malarial Infection Presenting Symptoms of Multiple Neuritis; Dr. Alfred Gordon, Clinical and Pathological Report of a Case of Lead Poisoning with Remarks on the Pathogenesis of the Disease.

GENERAL

Bayonne Hospital.—Dr. Lucius F. Donohoe has resigned the secretaryship of the medical board of the Bayonne, N. J., Hospital, after ten years' service.

Dr. James H. Whaley, of Rome, N. Y., health officer, has been appointed superintendent of the O. and W. Railroad, as the resident physician for that road in that city.

Richmond Academy of Medicine and Surgery.—The subject announced for discussion at the next meeting of this association, on March 14th, is Conservative Gynecology, and the discussion will be led by Dr. Edward McGuire and Dr. Charles R. Robins.

Dinner in Detroit to an English Surgeon.—Dr. J. B. Kennedy gave a banquet at the Russell House, Detroit, Tuesday evening, in honor of C. A. Rankin Nitch, fellow of the Royal College of Surgeons and chief surgeon of St. Thomas's Hospital, London, England. Dr. Guy L. Kiefer presided as toastmaster.

The Children's Free Hospital, of Milwaukee, has recently received the sum of \$1,000 to support four free beds in that institution for one year, with the promise that the subscriptions will be continued indefinitely. The donors are Mrs. Ferdinand Schlesinger, Mr. Charles Catlin, and the Infants' Ward Association.

Floyd County, Ky., Medical Society.—Officers have been elected by this society as follows: President, Dr. H. S. Wolfe; vice-president, Dr. George H. Cannon; secretary treasurer, Dr. Austin Funk; censors, Dr. E. P. Easley, Dr. J. F. Weathers, and Dr. W. J. Leach; delegate to the State meeting, Dr. C. W. McIntyre.

La Salle Hospital, Chicago.—Reorganization of the La Salle Hospital staff has been effected, and Dr. O. E. Wald is now surgeon in chief of

the institution. The president is Dr. B. S. Henderson, of the Cook County Hospital, and Dr. G. A. Raithel is secretary and treasurer. Dr. Wald has been connected with Augustana Hospital and also with Bethesda Hospital.

Gift to Westminster Hospital, London.—The sum of £1,000 has been presented by Mr. Edward Heron-Allen to the Westminster Hospital, London, Eng., to endow a bed in one of Dr. Murrell's wards "in recognition of his valuable contributions to pharmacology and his researches on the action of remedial agents in the treatment of disease."

Association of American Medical Colleges.—By vote of a two thirds majority of all the colleges voting, it has been decided that the next meeting of this association will be held in Chicago, Monday, April 10, 1905. Detailed information as to place of meeting, and programme, will be published later. Fred C. Zapffe, M. D., secretary.

Lebanon Hospital Training School for Nurses.—This institution graduated the following young women on February 22nd: Miss Sarah A. Edenberg, Miss Nessie Jaffe, Miss Meta Jaeger, Miss Margarete McCullum, Miss Dorces Crozier, Miss Harriette A. Rosenbluth, Miss Margarette Donovan, Miss Madeline Holderer, Miss Lillian Barit, Miss Yetta Sadusky, Miss Theresa Grupe, and Miss Anna Chichester.

The Gross Prize.—Dr. J. H. Wright, director of the pathological laboratory of the Massachusetts General Hospital, has been awarded the \$1,200 Gross prize. This prize is given by the trustees of the Philadelphia Academy of Surgery, once in five years. The subject of Dr. Wright's essay was Biology of the Microorganism of Actinomycosis, founded upon his own pathological investigations at the Massachusetts General Hospital. Dr. Wright is a Johns Hopkins graduate, about 35 years of age, is on the staff of the Massachusetts General Hospital, and is an instructor in the Harvard Medical School.

Nurses Graduated from the Massachusetts General Hospital.—Edith Edna Deland, Nellie Jane Harvey, Helen Genevieve Cody, Aletta Alvildia Clark, Olga Emilie Ahler, Izah Mitchell, Amy Otis Gamage, Violet Laura Kirke, Justina Adeline Briggs, Annie Catharine Carstensen, Catharine Beattie, Olive Blanche Golding, Mary Stella Doherty, Mary Eulalia Smyth, Miriam Bertha Holder, Maude Evelyn Retallick, Nellie Maude Ford, Nellie Addie Stevens, Mary Rose Walsh, Rose Butler, Katherine Roche Moloney, Hannah R. Hogan, Mabel J. Seaver, Gertrude B. Hislop, Lena B. Tompkins, Mary A. MacNeil, Grace P. Hurlbut, Emma A. Armstrong, and Jessie L. Brown.

Pneumonia in Chicago.—There were 162 fewer deaths from pneumonia—nearly 24 per cent. less—than during February, 1904; but the consumption mortality remains substantially unchanged—285 and 278, respectively. Since the beginning of the current pneumonia season, October 1, 1904, up to March 4, 1905, there have been 1,299 deaths

from consumption, and 193 from pneumonia, out of a total of 11,350 from all causes. These figures give proportions of 11.4 per cent. of the total mortality for consumption, 18 per cent. for pneumonia, and an excess of 49 per cent. of pneumonia over consumption. There were only 3 deaths reported from typhoid fever during the week and only 15 for the month of February.

A Medical Library for Atlantic City.—A medical library has been established by the Atlantic City Academy of Medicine, and this society has entered into an arrangement with the Atlantic City Free Public Library by which a room has been set apart for its books and periodicals. These will, however, only be given out to members of the academy and their friends, as it is deemed unwise to allow the public free access to medical books. Physicians visiting Atlantic City will be extended every courtesy the library can offer. Contributions on medical subjects will be gladly received and may be directed to Dr. William Edgar Darnall, president of the academy, or Dr. Philip Marvel, chairman of the committee.

Statement of Mortality in Chicago for the Week Ending March 4, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated mid-year populations of 1,990,750 for 1905, and of 1,932,315 for 1904:

	Mar. 4, 1905.	Feb. 25, 1905.	Mar. 5, 1904.
Total deaths, all causes.....	627	637	625
Annual death rate per 1,000.....	15.94	16.73	16.91
By sexes.....			
Males.....	369	377	364
Females.....	258	260	261
By ages.....			
Under 1 year.....	129	168	102
Between 1 and 5 years.....	25	23	44
Over 60 years.....	145	122	142
Important causes of death—			
Acute intestinal diseases.....	24	30	27
Apoplexy.....	16	14	8
Bright's disease.....	32	28	33
Bronchitis.....	35	41	30
Consumption.....	73	71	54
Cancer.....	25	23	14
Convulsions.....	16	19	17
Diphtheria.....	9	8	5
Heart diseases.....	43	36	51
Influenza.....	11	10	5
Measles.....	1	3	0
Nervous diseases.....	28	31	32
Pneumonia.....	117	135	165
Scarlet fever.....	3	0	3
Smallpox.....	3	2	0
Suicide.....	10	4	7
Typhoid fever.....	3	6	13
Violence (other than suicide).....	26	18	31
Whooping cough.....	7	7	1
All other causes.....	144	151	120

Obituary Notes.—Dr. Alvah R. Cummings, one of the oldest physicians in New Hampshire, died February 26th, in Claremont, N. H., aged 80 years. He graduated from the medical department of Dartmouth College in 1852, and most of his professional life was spent in Claremont. He was president of the Cottage Hospital, and was the oldest member of the New Hampshire Medical Society.

Dr. Adolph Zierlin, an honorary member of the faculty of the University of Tübingen, Germany, from which he graduated over fifty years ago, died in Cincinnati, February 28th, aged 90 years. He served during the Civil War as a surgeon.

Dr. George R. Metcalf, of St. Paul, Minn., died in Orrieto, Italy, suddenly on March 1st. He was 57 years old, a native of Brattleboro, Vt., a

graduate of Amherst College and the College of Physicians and Surgeons of New York, and practised for some time in New York.

Dr. Walter S. Christopher, a well known paediatrist, died in Chicago on March 3rd, aged 46 years. He inaugurated medical inspection in the public schools while a member of the school board. Dr. Christopher was a member of many medical societies, and a liberal contributor to the medical press.

Dr. John J. Prendergast, a prominent Brooklyn physician, died March 1st, aged 58 years. He graduated from Seton College in 1864, and from the New York College of Physicians and Surgeons in 1868. He also took a course at Columbia law school. In 1888, together with Dr. Thomas R. Porley, Dr. Prendergast founded the Manhattan Eye and Ear Hospital. He was for several years connected with St. Francis's Hospital, Jersey City.

Health in Michigan During February, 1905.—Reports to the State Board of Health, by representative physicians in active general practice, in different parts of the State, show the diseases which caused the most sickness in Michigan during the month of February (four weeks ending February 25th), 1905, as follows:

Diseases arranged in order of greatest prevalence in this month.	Number of reports received for this month.....		Per cent. of reports stating presence of disease.	
	Feb., 1905.	Jan., 1905.	Average for Feb., 10 years, 1895-04.	Average for all months, 1895-04.
Influenza.....	72	55	73	43
Rheumatism.....	67	63	65	62
Neuritis.....	61	53	60	56
Bronchitis.....	60	54	64	51
Amygdalitis.....	56	52	56	45
Gonorrhoea.....	28	30	*	*
Syphilis.....	27	26	*	*
Cancer.....	25	18	*	*
Pneumonia.....	22	10	33	18
Diarrhoea.....	20	23	20	35
Pleuritis.....	20	17	20	16
Consumption, pulmonary.....	20	20	24	23
Inflammation of kidney.....	16	16	22	19
Smallpox.....	11	12	4	4
Erysipelas.....	10	5	5	11
Scarlet fever.....	9	11	14	11
Typhoid fever—Enteric.....	7	10	7	12
Typhomalarial.....	2	2	1	2
Inflammation of bowels.....	7	7	9	10
Intermittent fever.....	6	6	10	15
Measles.....	5	10	10	10
Diphtheria.....	4	4	6	5
Cholera morbus.....	3	3	12	10
Remittent fever.....	2	1	8	12
Puerperal fever.....	2	1	2	2
Whooping cough.....	2	1	5	6
Inflammation of brain.....	0.8	2	1	2
Dysentery.....	0.4	1	3	10
Meningitis.....	0.4	0.7	1	1
Cholera infantum.....	0	1	0.9	7
Membranous croup.....	0	0.7	1	0.7

At the State Capitol for the month of February, 1905, compared with the average for the corresponding month in the ten years, 1895-1904, bi-daily observations for the State Board of Health show the prevailing direction of the wind to have been west, instead of northwest, the velocity .8 of a mile per hour greater, the average temperature 3.69 degrees lower, the average daily range of temperature 1.3 degree less, the average daily range of atmosphere pressure .004 of an inch greater, the precipitation .55 of an inch less, the absolute humidity the same, the relative humidity more, the day and night ozone much less, and the depth of water in the observation well 8 inches less. For the month of February, 1905, compared with the average for February in the ten years, 1895-1904, smallpox and

cholera morbus were more than usually prevalent; and pneumonia, inflammation of kidney, erysipelas, scarlet fever, inflammation of bowels, intermittent fever, measles, diphtheria, remittent fever, whooping cough, and dysentery were less than usually prevalent.

THE MOST DANGEROUS COMMUNICABLE DISEASES.

Including reports by regular observers and others, meningitis was reported present in Michigan during the month of February, 1905, at 7 places; whooping cough, at 16 places; diphtheria, at 64 places; measles, at 68 places; typhoid fever, at 93 places; scarlet fever, at 105 places; smallpox, at 106 places; pneumonia, at 142 places; and consumption, at 251 places. Reports from all sources show meningitis reported present at 8 places less; whooping cough, at 6 places more; diphtheria, at 19 places less; measles, at 5 places more; typhoid fever, at 15 places less; scarlet fever, at 4 places less; smallpox, at 2 places more; pneumonia, at 41 places more; and consumption, at 16 places less, in the month of February, 1905, than in the preceding month. Henry B. Baker, secretary.

Statement of Mortality in Chicago for the Twelve Months Ending December 31, 1904, compared with the corresponding period of 1903. All death rates computed on United States Census Bureau's estimated midyear populations of 1,943,315 for 1904 and of 1,873,880 for 1903:

	1904.	1903.	Dec. 1904.
Total deaths, all causes.....	26,300	28,914	2,614
Annual death rate per 1,000.....	13.61	15.43	†11.79
By sexes—			
Males.....	15,076	16,408	1,332
Females.....	11,224	12,506	1,282
By ages—			
Under 1 year.....	5,019	5,316	297
Between 1 and 5 years.....	2,034	2,961	927
Over 60 years.....	5,481	5,525	44
Important causes of death—			
Acute intestinal diseases.....	2,234	2,218	*16
Apoplexy.....	751	635	*116
Bright's disease.....	1,842	1,714	*128
Bronchitis.....	825	1005	180
Consumption.....	3,103	2,869	*234
Cancer.....	1,125	1,066	*59
Convulsions.....	554	618	64
Diphtheria.....	396	614	214
Heart diseases.....	2,049	2,092	43
Influenza.....	114	166	52
Measles.....	47	276	229
Nervous diseases.....	1,070	1,489	419
Pneumonia.....	4,141	4,629	488
Scarlet fever.....	143	206	153
Suicide.....	417	492	65
Smallpox.....	30	47	17
Typhoid fever.....	373	588	215
Violence (other than suicide).....	1,556	2,065	506
Whooping cough.....	115	270	155
All other causes.....	5,415	5,775	360

If the prospect for the immediate future is discouraging a retrospect of the year as a whole is full of encouragement. A total of 2,614 fewer deaths among a population some 60,000 more than last year; a reduction of 1,224 deaths of children under five years of age, including 927 of children at the milk feeding period of life; the best sanitary quality of the public water supply ever furnished, and, as a consequence of the latter, a vanishing death rate from typhoid fever: a successful battle with frequent importations of smallpox—are among the features of the year upon which the commissioner of health bases the claim that Chicago has maintained its record for high-

est degree of healthfulness among all the principal cities of the world—those having populations of more than 300,000 each. Chicago's water supply is at last among the best on earth—thanks largely to the substantial completion of the South Side Intercepting Sewer System by the city. Since the latter part of September the water from all tunnels has been found, by the rigid tests of the department laboratory, to be as good as the samples taken twelve miles from shore, which is the department standard of purity or "safety." The result is seen in the lowest typhoid fever death rate in the history of Chicago—1.92 per 10,000 of population, as compared with an average of 3.24 during the previous decennium. A serious menace to child life early threatened from the one daily delivery of milk. Fortunately this was offset by the unusually low summer temperature—the coolest in thirty-four years. The action, however, led to increased activity among the various volunteer agencies for improving the quality of the milk supply and caused the commissioner personally to investigate the conditions of milk production in the country and the methods of shipment to the city. A great improvement has resulted in the former and the railroads are now interested in furnishing better facilities for handling in transit and for speedy transportation, thus "shortening the time from the cow to the baby." To the improved quality of the milk supply, from these causes, is largely due the reduction of mortality among children of the milk feeding period (one to five years of age) from the number in 1903. The cool summer, however, was a considerable factor in this saving of child life. Smallpox, which more than once threatened an epidemic spread from repeated importations into the city, has been combated with such vigilance and efficiency that its mortality is only 30 as compared with 47 in 1903. This vigilance and efficiency, made possible by the city council's emergency appropriation, have prevented any panic or undue excitement from the continued presence of the disease—a presence which must last as long as smallpox remains so widespread throughout the country as it now is. So, too, with diphtheria; the department supply of the antitoxine was cut off early in the year and the gravest results were apprehended. A personal visit and appeal of the commissioner to the New York health commissioner secured a renewal of former relations and an abundant supply of the specific has been had uninterruptedly since last February. The total deaths from this dreaded disease were only 396, or 218 fewer than last year and the fewest since 1878, when the population was less than one fourth that at present. Only five of the important causes of death show any increase over the numbers of last year. Except deaths from the acute intestinal diseases, which were sixteen more than in 1903, the causes showing increases were diseases over which sanitary effort and preventive medicine have as yet gained little or no control. These are apoplexy, 116; Bright's disease, 128; consumption, 234; and cancer, 59 more than in the previous year.

* Increase. †Per cent.

Pith of Current Literature

PRESSE MEDICALE.

February 4, 1905.

1. Instruction in Obstetrics at the Tarnier Clinic,
By Professor BUDIN.
2. Neurofibrillæ, According to the Method of S. Ramon y
Cajal.
By L. AZOULAY.

1. **Instruction in Obstetrics.**—Budin describes the advantages for teaching possessed by the Tarnier clinic and the course of instruction given there.

2. **Neurofibrillæ.**—Azoulay adds another contribution to the many he has already made regarding Cajal's method of staining and studying neurofibrillæ. In this article he deals with methods of staining not only the neurofibrillæ, but also of the separate nerve elements.

February 8, 1905.

1. New Apparatus for the Administration of Chloroform,
By F. JAYLE and G. BERRUYER.
2. Monosymptomatic Diphtheritic Paraplegia,
By C. AUBERTIN and L. BABONNEIX.

1. **Apparatus for the Administration of Chloroform.**—Jayle and Berruyer describe the various appliances invented for this purpose by Roth-Draeger, Vernon Harcourt, Ricard, and finally Reynier, together with the points of advantage possessed by the latter over the former.

2. **Monosymptomatic Diphtheritic Paraplegia.**—Aubertin and Babonneix claim that loss of the knee jerk may be the only symptom to indicate the presence of a postdiphtheritic paralysis, and they believe this to be caused by a very slight degree of poliomyelitis.

February 11, 1905.

1. Epidemiology of Cerebrospinal Meningitis,
By A. MANDOUL.
2. The Constituents of the Urine,
By MARCEL LABBE and HENRI LABBE.

1. **Cerebrospinal Meningitis.**—Mandoul observed in 1904 a small epidemic of five cases of cerebrospinal meningitis and has come to the conclusion that true prophylaxis against this disease consists in periodic lavage of the nasopharyngeal cavity in order to render it as aseptic as possible.

2. **The Constituents of the Urine.**—In this article the Labbés present a continuation of two articles which have previously appeared on the same subject. The nitrogenous substances, urea, uric acid, and the xanthic bases are dealt with. The conclusion drawn from the researches of the writers is that all the mineral and organic substances introduced into a physiologically normal digestive tract can be traced in the urine, that the constituents of the urine come not from dissimulation of the tissues, but from combustion of the alimentary material introduced into the organism, so that the urinary excretion serves as an index of the method of alimentation.

REVUE DE CHIRURGIE.

January 10, 1905.

1. Ankylosing Tuberculous Rheumatism. Plastic Arthritis. Osseous Ankylosis of Tuberculous Origin,
By PONCET and LERICHE.
2. The Surgical Treatment of Scapula Alata,
By DUVAL.
3. Note on Anomalies of the Fingers, with Especial Reference to Valgus of the Little Finger,
By FÉRÉ and PERRIN.
4. Remarks on the Treatment of Cancer with the Röntgen Rays,
By DJÉMIL PACHA.
5. A Critical Study of Trendelenburg's Operation,
By VIANNAY.
6. Pathological Physiology of Pleural Hæmatoma
By CHASTENET DE GÉRY and FROIN.
7. External Cervical Œsophagotomy for the Treatment of Foreign Bodies in the Œsophagus,
By BALACESCO and COHN.
8. The Rational Treatment of Congenital Luxation of the Femur. A Theoretical Study,
By LE DAMANY.

1. **Ankylosing Tuberculous Rheumatism.**—Poncet and Leriche advise that the question of tuberculosis be ignored when arthritis has resulted in ankylosis. It is desirable, however, to eliminate acute articular rheumatism, traumatic arthritis, infectious arthritis with ankylosis, the different forms of chronic rheumatism, and the arthropathies of nervous origin, and recognize that the invasion of a bacillus is alone responsible for the condition. One must then determine whether the ankylosis is osseous or fibrous, and this can be done more accurately by means of radiography than by Malgaigne's method. A well ordered plan of treatment must then be adopted with especial reference to the presence of the bacillus of Koch. During the acute period salicylate of sodium or antipyrine should be administered in sufficiently large doses. The affected limb should be immobilized at an early period, and the effusion into the joint should receive revulsive treatment by means of the actual cautery, vesication, etc. The question of an orthopædic appliance should be considered as soon as ankylosis is definitely established. In deciding this question one will be influenced by the age of the patient, by his general condition, by the firmness of the ankylosis, etc. In deciding upon any form of treatment the possibility of recurrence of the trouble must be taken into account, and the indications must be clearly marked whether one decides upon immobilization under anaesthesia or resection.

4. **Remarks on the Treatment of Cancer With the Röntgen Rays.**—Djémil Pacha was enabled to reach the following conclusions: 1. Radiotherapy appears to have a favorable action on malignant tumors in general. 2. It results in cure when applied to superficial cancer, especially if the disease is in early stage. 3. It is important whether the apparent cures are permanent, and this question can be decided only after sufficient time has elapsed. 4. Radiotherapy is a palliative measure in cases in which the disease is extensive and in an advanced stage, and has a salutary influence upon the cancerous cachexia. 5. In inoperable

malignant tumors which cannot be subjected to surgical procedures radiotherapy is a valuable means of reducing to a minimum the sufferings of the patient.

5. A Critical Study of Trendelenburg's Operation.—Viannay observes that in the presence of a varicose condition of the internal saphenous vein an operation upon a single portion of the vein will prove futile unless there is a high resection in Scarpa's triangle. A better plan is to remove a number of segments of the vein, or to resect it entirely. The results which have been obtained by these operations justify their recommendation.

BERLINER KLINISCHE WOCHENSCHRIFT.

January 23, 1905.

1. Finsen Light Treatment of Lupus, By E. LESSER.
2. Echinococcus Disease of the Eyes, By R. GREFF.
3. Local Action of Suprarenal Substance, Pyrocatechin, and Spermin on the Circulation, By J. BAUM.
4. Acute Disseminated Hæmorrhagic Encephalomyelitis Under the Picture of Ascending Spinal Paralysis, By L. HINSMANS.
5. Cure of Two Cases of Bilateral Exophthalmos and One of Chorea by Removal of Adenoids, By B. HOLZ.
6. Camphor and Digitalis, By T. A. MAASS.

2. Echinococcus Disease of the Eye.—Greff proves that echinococcus disease of the eye occurs intraocularly, a fact which has hitherto been overlooked or doubted. He reports two undoubted cases. In both the cysts were simple and contained no daughter cysts, and in both the entire lenticular space behind the lens was filled by the cyst.

3. Action of Suprarenal Substance on the Circulation.—Baum concludes from his experiments that the anæmic effect of suprarenal substance are more powerful and more rapid, and last longer, the more normal the tissue containing the vessel is. The practical result is that the substance must be used only in normal or in slightly pathological tissues. It will not penetrate normal skin. There is a great chemical similarity between suprarenal substance and pyrocatechin, the latter acting in the same manner as the former upon small skin defects. The author believes that suprarenal substance acts on the principle of reduction. Experiments on frogs show that spermin acts as an accelerator of the pulse and as a dilator of the arteries and capillaries, antagonistic, therefore, to suprarenal substance in its local action.

4. Encephalomyelitis Hæmorrhagica.—Hinsmans reports the case of a previously healthy man who began to suffer from high fever, nervous disturbances, and later from weakness in the extremities. After paraplegia of the legs had appeared, the trunk became affected, then, in order, the upper extremities, the diaphragm, the muscles of the throat and pharynx, and finally the respiratory centre. The case presented every clinical evidence of acute ascending paralysis, but the autopsy showed it to be one of acute, disseminated, hæmorrhagic encephalomyelitis.

5. Adenoid Vegetations.—Holz reports two cases which he has classified as Basedow's disease mainly on account of exophthalmos. The author claims this symptom to have been due to adenoid vegetations, since it disappeared after their removal, recurred with a recurrence of the growths and disappeared again after their second removal. In the second case, a preliminary amygdalotomy had no effect upon the exophthalmos, but the removal of the adenoid vegetations permanently relieved the symptom. In a third case, a chorea in a child of seven years of age disappeared after adenoidectomy.

6. Camphor and Digitalis.—Maass says that camphor has a distinct vasodilator influence most noticeable in the regions of the jugular and femoral veins. Its direct action on the heart has also been proved of late. The author, in speaking of the well known influence of digitalis, says that a moderate contraction of vessels in the area controlled by the splanchnic nerve, takes place.

January 30, 1905.

1. Sprains of the Ankle (*To be concluded*), By PELS-LEUSDEN.
2. Intestinal Putrefaction in Catarrhal Jaundice, By F. BLUMENTHAL.
3. Two Rhachitic Dwarfs Delivered by Cæsarean Section, By HELMBOLD.
4. Chemical Questions as to Carcinoma, By C. NEUBERG.
5. Frequency of Primary Intestinal Tuberculosis in Berlin, By O. WAGENER.
6. Intestinal Diseases in Nurslings, By SALGE.

4. Chemical Questions in Carcinoma.—Neuberg has examined primary cancer tissue of the stomach and metastatic deposits in the liver for pentose contents, and finds a greater quantity of pentose in the metastasis than in the primary growth. It follows from this that the primary malignant cells of the gastric growth either undergo a degeneration in the liver or that new ferments are developed after the deposit of the cells in the liver. The author tested the effect of the altered liver tissue upon the lung tissue of the same individual and found that the juices from the hepatic cancer produced an abnormal fermentation of the pulmonary proteids.

5. Primary Intestinal Tuberculosis.—Wagener found, in 419 autopsies in Berlin, 20 cases of primary intestinal tuberculosis, cases in which the general somatic infection with the tubercle bacillus must be assumed to have originated in the intestines.

6. Intestinal Diseases in Nurslings.—Salge protests against diagnosis of gastrointestinal diseases in infants from the character of the stool alone, and urges consideration of the entire clinical picture of any given case. Diarrhoea, for instance, is often the result of overfeeding, such infants frequently suffering from eczema which recurs again and again despite treatment. In cases of cholera infantum in which the stools smell strongly of fatty acids, ingested fats are badly borne; but the main purpose of treatment

is to combat the collapse. The author does not believe in making diagnoses from the examination of the faces of children who are not seen clinically.

ZENTRALBLATT FUER GYNAEKOLOGIE.

January 21, 1905.

1. Paralysis of the Non-Pregnant Uterus,
By P. STRASSMANN.
2. Embryotomy,
By L. SEELIGMANN.
3. Prolapse and Gangrene of the Dilated Ureteral Ends,
By M. SIMON.

2. **Embryotomy.**—Seeligmann says that in cases of neglected transverse position, decapitation or eventration must be considered. In the absence of skilled assistants, the latter is the easier operation, all the necessary instruments being a scissors and a hook. First the thoracic and abdominal cavities are emptied, then the spinal column is broken with the hook and the body is delivered bent on itself. If this is not possible, the prolapsed arm is disarticulated and a version is done. The author reports two cases.

3. **Prolapse and Gangrene of the Ureteral End.**—Simon reports a case of this rare complication. A woman, fifty-two years of age, who had suffered for years from vaginal prolapse, discovered suddenly, while urinating, a tumor between the genitals, which proved to be the dilated, prolapsed left ureter entirely gangrenous. Simon operated on the patient, whose urine gradually cleared up, but continued to contain pus, probably due to pyelitis. But nine cases of the kind are to be found recorded.

January 28, 1905.

1. Winchel's Manual of Obstetrics,
By DOEDERLEIN.
2. A Case of Tetany Gravidarum,
By K. SCHMIDLECHNER.
3. A New Speculum for Perinaeorrhaphy,
By R. B. KEYSERLINGK.

2. **Tetany Gravidarum.**—Schmidlechner reports a case in a forty-four years old primipara who had severe attacks in the seventh month of pregnancy. Labor was induced, but had no appreciable effect and the patient died on the fifth day post partum during a severe attack. The autopsy showed nothing characteristic. The author goes carefully into the details of the disease, its classification, and treatment.

RIFORMA MEDICA.

January 21, 1905.

1. The Pathogenesis of Sensory Dissociation of Central Origin (*To be continued*),
By UGO BENENATI.
2. Diastatic Activity in the Bacillus of Tuberculosis, as a New Evidence of Its Relation to the Streptothrix,
By CLAUDIO FERMI.
3. Primary Trephining for Fractures of the Cranial Vault,
By ALDO CERNEZZI.
4. The Mode of Action and the Method of Controlling Some of the Antimicrobial Serums (*Concluded*),
By A. PALADINO-BLANDINI.

2. **Diastatic Action of the Tubercle Bacillus.**—Fermi found the newly discovered American

potato to be an excellent medium for the cultivation of the tubercle bacillus upon which the diastatic action of the germ in question could be studied. In previous papers the author showed that all the varieties of the streptothrix were endowed with noteworthy saccharifying properties. He was interested, therefore, in searching for the same property in the tubercle bacillus, as its presence would demonstrate another biological feature in common with the streptothrix. He made cultures of the tubercle bacillus upon a glycerin paste containing fifty per cent. of American potato, in which the absence of all reducing substances was first tested thoroughly. The paste was thoroughly mixed with the bacilli and placed in sterilized tubes, which were sealed and kept in the thermostat, together with control tubes containing simply the sterile paste. The tubes were placed horizontally, in order to give the paste as large a surface as possible. The results of this investigation proved that the tubercle bacillus has the power of diastatic action, and produces reducing bodies in starch. This effect was noted in all the tubes without any exceptions, and was absent in all the control tubes. The newly discovered diastatic action of the tubercle bacillus, according to the author, places this germ in still closer relation to the streptothrix than heretofore. The complete study of this question must be reserved, however, for further researches.

3. **Primary Trephining in Fractures of the Skull.**—Cernezzi pleads for the prompt employment of trephining in fractures of the cranial vault which require this operation. He reports a case of fracture of the left parietal region with considerable depression in which primary trephining produced an excellent result. He speaks of trephining as of an operation of ancient origin, recommended as early as in the Hippocratic era in the famous aphorism: *Nullum capitis vulnus leviter contemni debet*. During the Middle Ages, the decadence of science brought with it a gradual obsolescence of trephining, and only the tonsure of the monks remained as vestige of this operation. The Hippocratic traditions were revived, however, by Falloppius, and especially by Berengario da Carpi. Trephining was used with exaggerated zeal by Pietro Marchetti and Marco Aurelio Severino, who employed this operation even for syphilitic headaches, and naturally a severe reaction ensued against such practices, especially in the work of Boyer, Desault, and Bichat. The high mortalities of this operation obtained by Fritz, Pirogoff, and Otis in the first half of the nineteenth century also served to discredit trephining. It was only with the advent of modern asepsis that the operation entered upon its modern status. Zanelli, in 1877, advocated immediate trephining in all fractures of the cranium which gave symptoms of compression, and the same view was held by Sédillot, Lucas-Championnière, Trélat, and von Bergmann. The latter advocated immediate trephining in all compound fractures of the cranial vault with or without cranial complications. In 1886 Seydel demonstrated the innocuousness of this operation when per-

formed aseptically, and lamented the lack of confidence in trephining held by practitioners of his day. Luebeck and Wagner, and later on Robson and MacGill (? McGill) in England; Ceci in Italy, and Quénu in France, reported brilliant results with this rehabilitated therapeutic procedure. Since 1890 the work of Klemm, Koehler, and Broca and Manbrac has definitely established the operation in its present status. The chief point to remember in connection with the indications of trephining, a point which cannot be too strongly emphasized, is that the presence of but slight visible injuries to the soft parts is not a reason for confining one's self to expectant treatment. The author has seen several cases in which septic infection of the cranial cavity followed in such patients after a short period of expectant and antiseptic treatment. Trephining in his opinion should be done in depressed fractures whether or not there are signs of compression. A wide opening of the wound, a thorough cleaning, the removal of all fragments, and thorough drainage should be the chief features of all trephining operations.

4. Mode of Action of Antimicrobial Serums.—

Paladino-Blandini agrees with Metchnikoff that the artificial immunity conferred on animals in virtue of injections of antimicrobial serums is an active immunity, induced through leucocytosis. He believes, also, that in testing the efficiency of a serum one should inject simply the minimum lethal dose of the culture; at most twice this dose, and one should always use germs of high virulence in the experimental infections in animals.

January 28, 1905.

1. Latent Echinococcus of the Liver. Hidden Echinococcus (*To be continued*), By C. BARNABEL.
2. On Cancerous Cirrhosis of the Liver, By ELMARO ROLLINO.
3. Late Hereditary Tabes Due to Congenital Syphilis, By MARIO BARTOLOTTI.
4. On the Pathogenesis of Sensory Dissociation of Central Origin (*To be continued*), By UGO BENENATI.

2. The Origin of Cancerous Cirrhosis of the Liver.—Rollino concludes from a study of three cases that the prolonged irritation produced by chronic gastroduodenal catarrhs induces a retarded flow of bile and a slow interstitial hepatitis, which in these cases was followed by cancer, the contributing causes having been heredity and alcoholism.

3. Late Tabes Due to Hereditary Syphilis.—Bartolotti reports two cases of tabes which occurred in adults as the result of hereditary syphilis. In one patient the locomotor ataxia did not develop until after the fortieth year. Inunctions of mercury had excellent effects in this case. In the second patient the disease began when he was 25 years old and was arrested in the incipient stage. The author calls attention to the necessity of considering hereditary syphilis as one of the causes of locomotor ataxia even at an advanced age. Usually alcohol, etc., is blamed in such patients, and hereditary syphilis is thought of only in younger persons affected with tabes.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 4, 1905.

1. The Importance of General Therapeutics in the Treatment of Ocular Diseases, By A. MAITLAND RAMSAY.
2. The Sanitary and Moral Prophylaxis of Venereal Diseases, By PRINCE A. MORROW.
3. What is the Right Attitude of the Medical Profession Toward the Social Evil? By HOWARD A. KELLY.
4. Syphilis as a Disease Innocently Acquired, By L. DUNCAN BULKLEY.
5. Syphilis Affecting Infant Mortality, By HENRY ENOS TULEY.
6. Acute Yellow Atrophy of the Liver, By H. GIDEON WELLS and PETER BASOE.
7. Delirium as a Symptom of Hysteria. Report of Four Illustrative Cases, By THEODORE DILLER.
8. The Relation of States of Apprehension to Cardiac Disease, By WILLIAM RUSH DUNTON, JR.
9. Spastic Diplegia Following Pertussis, By J. H. W. RHEIN.
10. Acute Intestinal Surgery, with Remarks on Technics, By JOHN YOUNG BROWN.
11. Valedictory Address at Johns Hopkins University, By WILLIAM OSLER.
12. Immunity. Chapter VI.

2. Prophylaxis of Venereal Diseases.—Morrow holds that effective prophylaxis against venereal diseases can be hoped for only through education. This will lead to two important results: The establishment of adequate hospital facilities for the free treatment of acute venereal diseases and the development of the feeling of individual moral responsibility. Venereal diseases differ from all other contagious diseases in that they are usually transmitted voluntarily. It is for this reason that it is important that the moral responsibility of the transmitter of the disease should be emphasized.

3. The Medical Profession and the Social Evil.—Kelly holds that the only remedy for the social evil problem is an active personal campaign, inspired by a profound sense of personal responsibility. The author has this to say regarding government control: "As for myself, and I trust I speak for all in this professedly Christian land, I would declare: 'We cannot consent to sanction of evil that good may come from it.' If appealed to to be practical, we answer that we cannot afford to be 'practical' at the sacrifice of principle; we will fight evil wherever we see it, and under all circumstances we will oppose the debasement of the public standards of right and morality. This we will do in entire confidence that in spite of all appearance the right so upheld will in the end prove victorious. Pure laws are the heritage we would leave to our generations yet unborn, and let not those who are caught in a final cataclysm of evil, point back to this day of boasted civilization as the memorable era when the public standards of right were first debased."

4. Syphilis.—Bulkley holds that since syphilis is not necessarily a venereal disease it should be treated as any other form of contagious disease so far as the health authorities are concerned. A sharp distinction should be made between the

problem of syphilis and that of prostitution. The author concludes: "The first step, I believe, is to recognize and place syphilis among other contagious diseases, under the control of health boards, and as public sentiment is aroused to the advantage of this proceeding, it will be easier to advance step by step in the restraint of the disease. If it were placed on the same footing as smallpox, scarlatina, and diphtheria, and if it were made a misdemeanor to communicate syphilis wittingly, a great step would have been taken toward diminishing the frequency of the disease and consequently its innocent infection."

6. Acute Yellow Atrophy.—Wells and Bascoe report in detail, clinically and pathologically, four cases of acute yellow atrophy of the liver studied in the pathological laboratories of the University of Chicago and Rush Medical College. The object in placing the cases on record is to furnish material for those interested in the study of this not uncommon disease.

7. See this *Journal*, Vol. LXXX, page 234.

8. See this *Journal*, Vol. LXXX, page 234.

9. See this *Journal*, Vol. LXXX, page 186.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 2, 1905.

1. Certain Aspects of Bile Duct Disease,

By JAMES G. MUMFORD.

2. Ptosis of the Abdominal Organs with Special Reference to the Kidney:

(a) Importance of Considering Ptosis of Other Organs in the Treatment of the Kidney,

By M. P. SMITHWICK.

(b) Treatment of Ptosis of Abdominal Organs by Abdominal Supporters,

By WILLIAM H. SMITH.

(c) The Actual Results at the Massachusetts General Hospital, Following Operative Treatment,

By F. G. BALCH and J. R. TORBERT.

(d) Results of Surgical Treatment of Movable Kidney at the Boston City Hospital,

By PAUL THORNDIKE and L. R. G. CRANDON.

1. Bile Duct Disease.—Mumford devotes his paper to an attempt to prove the soundness of the following rules which he urges should be observed in operating for bile duct disease: (1) Remove stones; for if left behind they are very sure to cause subsequent disturbance, and we know conversely that after the thorough removal of stones their recurrence is almost unknown. (2) Remove so far as possible all disorganized, degenerated, and permanently crippled tissue; for such tissue, when left behind, may become the nidus for subsequent inflammation, stone formation, and a return to the invalid condition. (3) Drain, for without drainage we have no certainty of the removal of infectious material.

2. Ptosis of the Abdominal Organs.—(a) Smithwick emphasizes the importance of not concentrating the attention too closely on a floating kidney and holding it alone responsible for all the symptoms observed. Incidentally he calls attention to the fact that visceral ptosis may be the consequence and not the cause of nervous exhaustion. (b) Smith has used two general forms

of support: (1) The plain abdominal belt and (2) the well padded and fitted corset-like belt. The latter will, generally speaking, give the best results. He concludes: "Without the intelligent cooperation of both patient and physician, but little benefit will follow the use of abdominal supporters; where this cooperation can be secured and a properly fitted belt is made and properly worn, I believe relief is to be obtained in certain cases, especially of nephropothesis with Dietl's crises. In some cases I believe this relief will be permanent." (c) Balch asserts that, on the whole, the results obtained from nephrorrhaphy at the Massachusetts General Hospital have not been very encouraging. In private practice the final results should be much better, but cases should be selected with very great care. (d) Thorndike summarizes his paper thus: From 40 per cent. to 80 per cent. of all women have a palpable or even movable kidney. The causes of the condition seem to be lack of general muscular tone, anatomical peculiarities, or increase in the weight of the kidney, one or all. The symptoms are—a sensation, subjective or objective, of a mass moving from the flank into the abdomen, crises of kidney pain, a variety of nervous derangements from nervous dyspepsia to neurasthenia. The diagnosis is made on the presence of the mobile tumor, the symptoms just given, and by ruling out kidney stone, new growth, and gallstones. The treatment should be, first, mental; second, development of abdominal and back muscles; and last, if necessary, and no contraindication exists, fixation of the kidney by operation. The prognosis, after an operation, which is technically proper, is for perfect cure.

MEDICAL NEWS.

March 4, 1905.

1. The Equilibrium Between Infection and Immunity as Illustrated in the Tonsillar Crypt,

By JONATHAN WRIGHT.

2. Multiple Neuritis in Wood Alcohol Poisoning,

By SMITH ELY JELIFFE.

3. Appendicitis, as a Visceral Manifestation of Erythema Exudativum Multiforme,

By JAMES S. CHENOWETH.

4. Short and Easy Methods of Arriving at Good Results in Diseases of the Ear and Upper Air Tract, Illustrated by Recent Cases,

By W. SOHIER BRYANT.

5. The Diagnosis of Malaria by the Finding of Pigmented White Corpuscles in Unstained Blood Films,

By J. R. CLEMENS.

6. Psammoma of the Maxillary Sinus,

By JOHN C. MUNRO.

2. Multiple Neuritis.—Jelliffe reports three cases of multiple neuritis due to the drinking of wood alcohol. Optic neuritis due to this cause is fairly frequent, and has received a fair amount of attention. Multiple neuritis must be rare, since this author has not been able to find references to a single case. This is probably due to the fact that patients are apt to die so quickly that a peripheral neuritis has not time to develop.

2. Appendicitis.—Chenoweth reports two cases of appendicitis due to the local manifesta-

tions of erythema exudativum multiforme. He believes that too much stress has been placed on the bacterial causation of appendicitis and too little on its possible constitutional origin. The not infrequent visceral symptoms of erythema exudativum multiforme must not be mistaken for an appendicitis.

5. **The Diagnosis of Malaria.**—Clemens has tested, with over five hundred observations, the dictum of Mason that: "The finding of pigmented white corpuscles is absolutely pathognomonic (of malaria) and a diagnosis may be made on that finding alone." He asserts that the statement is correct. The method is so rapid and accurate that it should receive general recognition.

MEDICAL RECORD.

March 1, 1905.

1. The Digestion of Caseins, and Its Relation to Certain Problems in Infant Feeding,

By THOMAS S. SOUTHWORTH.

2. A Study of Fifteen Cases of Erysipelas Treated by Injections of Antistreptococcus Serum, By J. C. AYER.

3. Chronic Rheumatism, Gout, and Other Uric-Acid Diatheses Treated by the X Ray, High Frequency Currents, and Vibratory Massage, By SINCLAIR TOUSEY.

4. The Prosthetic Treatment of Fracture of the Mandible,

By FRANCIS ASHLEY FAUGHT.

5. Acute Intussusception in an Infant; Resection of Gangrenous Intussusceptum; Murphy Button Anastomosis; Recovery, By EDWARD W. PETERSON.

6. The Use of Extract of Dichondra as a Bactericide in Diphtheria,

By M. ARAMIAN.

1. **Infant Feeding.**—Southworth discusses the digestion of caseins in the infant stomach from the standpoint of the most recent studies of stomachic digestion in animals. Woman's milk is not alkaline, as was formerly taught, and caseinogen is a fiction of the older chemists and physiologists. Stomachic digestion, in the young, according to present teaching, may be summarized as follows: The first secretion of the stomach of the young is the ferment rennet. The rennet ferment acts upon the calcium casein of the milk, forming a soft clot which is called calcium paracasein (junket). If no acid is present this paracasein clot may pass on into the intestine where it is readily digested by the pancreatic and intestinal secretions. The pepsin secreted by the stomach will not attack calcium paracasein in the absence of acid. But when hydrochloric acid begins to be secreted by the stomach this reacts with the calcium paracasein formed by the action of the rennet ferment, making first free paracasein and then a definite chemical compound known as hydrochloride of paracasein which is fitted for gastric digestion and is now readily attacked by pepsin, and true stomach digestion begins. The author attempts to outline how the feeding of bottle infants should be conducted so as not to conflict unduly with modern chemistry.

2. **Erysipelas.**—Ayer concludes: (1) That the administration of antistreptococcus serum shortens considerably the course of uncomplicated attack of erysipelas. (2) That it tends to inhibit

extension of the disease. (3) That it has a strikingly beneficial effect upon the general condition of the patient, reducing the temperature, pain, and discomfort incidental to the disease. (4) That it rapidly reduces the pathological leucocytosis. (5) That it prevents or suppresses febrile albuminuria. (6) That its use is attended with no danger, even in large doses. (7) That the only disagreeable symptom referable to the serum observed by the writer is a transient eruption which occasionally occurs at the site of the injection. (8) That the efficacy of the serum treatment is in direct ratio to the length of time which has elapsed between the onset of the disease and the first injection of serum.

4. **Fracture of the Mandible.**—Faught recommends treating fractures of the mandible by cementing to the teeth of the fractured jaw a metal splint constructed to accurately fit the teeth when perfect reduction has been obtained. The author describes in minute detail the various steps in the manufacture of the splint. Any dentist ought to be able to do the work satisfactorily by following the author's directions.

5. **Acute Intussusception.**—Peterson reports in detail the case he describes in the title of his paper. The infant was four months old. The button was passed on the fourth day.

6. **The Extract of Dichondra.**—Aramian asserts that the extract of dichondra, one part, in glycerin three parts, is a true bactericide for the germ of diphtheria. The mixture should be applied locally, and can be used without fear, as it is non-toxic. Cultures from the throats of diphtheritic patients will prove negative for the diphtheria bacillus after three or four days' treatment with the drug advocated. The drug is purely bactericidal, and is not in the least sense antitoxic.

AMERICAN MEDICINE.

March 4, 1905.

1. Mucous Colic, By ROBERT COLEMAN KEMP.

2. Some New Views of Infant Feeding and Their Practical Application, By HENRY DWIGHT CHAPIN.

3. The Mortality of Pneumonia in High Altitudes, By MAJOR CHARLES F. KIEFFER.

4. Landry's Paralysis, with a Report of a Case, By CHARLES F. WILEY.

5. Case of Puerperal Tetanus with Recovery, By JOHN F. RODEERER.

6. Poisoning by Potassium Bichromate, By FRANCIS EUSTACE FRONCZAK.

7. City Dust and Patent Medicine Advertisements, By ROBERT HESSLER.

1. **Mucous Colic.**—Kemp defines mucous colic as a "condition characterized by the excessive production of mucus in the colon, by attacks of painful spasms of varying degrees of severity and frequency, accompanied or followed by the expulsion of mucus in gelatinous masses, or in the form of tubular casts, or in tape-like pieces or strings, and furthermore characterized by anomalies of the gastrointestinal functions and by various nervous symptoms." The ætiology of

the condition is generally conceded to be poorly understood. The author records a number of observations which lead him to believe that its chief ætiological factor is ptosis of the colon with associated gastropnoia. The treatment is therefore of two kinds: Medicinal and surgical. The latter need not be resorted to except in very exceptional cases. The author describes at length the treatment of the condition from the internist's point of view. He has a high opinion of the efficiency of Rose's belt.

2. **Infant Feeding.**—Chapin emphasizes some of the newer teachings regarding infant feeding. It is now well established that the alkalinity or acidity of milk cannot be tested by litmus paper. Cow's milk is not acid, as compared with woman's milk. The effect of adding an alkali to an infant's milk is this: The rennet ferment of the stomach will not curdle the milk in the presence of alkalis, and no stomach digestion can take place in the absence of acid; so as long as there is alkali in the food, digestion will not take place in the stomach, but the food will pass into the intestine in a fluid condition. Curdling of the milk in the stomach is indeed prevented, but at the expense of the stomach's functional activity. By adding gruels to an infant's milk we prevent the formation of hard curds in the stomach, but still leave work for the stomach to do. This latter method of feeding is the one advocated by the author.

3. **The Mortality of Pneumonia.**—Kieffer has studied the records of 127 cases of pneumonia that have occurred at Fort D. A. Russell, Wyoming, during the past thirty-eight years. The post is situated at an elevation of 6,195 feet above sea level. The author would not deduce too much from so few cases. Yet, so far as they go, they seem to show that altitude has no influence on the mortality of pneumonia.

4. **Landry's Paralysis.**—Wiley reports one case which did not die. The temperature did not go above normal after the forty-third day of the disease. The patient, at the time the paper was written, had not yet regained the use of his lower extremities. The author reviews briefly the usual clinical course of Landry's paralysis and inclines to the belief that the affection is of an infectious nature.

5. **Tetanus.**—Roderer gives the following summary of his case of puerperal tetanus: The first symptoms of tetanus appeared on June 7th, ten days after the birth of the child. Eighteen days later (June 25th) she had entirely recovered from tetanus. From June 7th until June 11th she had only tonic spasms. The clonic spasms began on June 12th and lasted until the evening of June 24th, during which time she had at least 1,500 convulsions. During the first four or five days all the spasms, which were very severe, were accompanied by intense pain. After that the convulsions were not painful, nor were they so severe. Tetanus antitoxine was administered on 32 different occasions. In all, 660 c.c. were given, or to speak more correctly, 132,000,000 immuniz-

ing units. The injections were given under the skin of the abdomen or sides of the thorax. Chloral and morphine were also used in the treatment of the case.

INTERNATIONAL JOURNAL OF SURGERY.

February, 1905.

1. Some Common Deformities and Their Prevention, By BOWDEN.
2. The Chambers Suture in Abdominal Surgery, By CHAMBERS.
3. The Temperature as a Guide to the Existence of Suppuration, By ALLEN.
4. Practical Gynecology, By SELLMAN.
5. Practical Treatment of Diseases of the Eye, By COOKE.

3. **The Temperature as a Guide to the Existence of Suppuration.**—Allen draws the following conclusions: 1. Chronic suppurative processes are very frequently unattended by fever. 2. Acute suppurative processes are frequently unattended by fever, therefore in a given case the absence of fever must have little weight, by itself, in excluding the possibility of suppuration. 3. Since a rise of temperature above 100° F. occurs in about two thirds of all aseptic cases, the presence of fever alone must have little weight in making a diagnosis of suppuration.

AMERICAN JOURNAL OF OBSTETRICS.

February, 1905.

1. The Pathological Anatomy and Pathogenesis of the Toxæmia of Pregnancy, By EWING.
2. Eclampsia with Report of Cases, By ALLEN.
3. The Treatment of the Obstetric Hemorrhages, By BRODHEAD.
4. Pyelitis Complicating Pregnancy, By SPALDING.
5. A Typical Case of Tuberculous Peritonitis, By MANTON.
6. Three Specimens of Exencephalia, By LEWIS.
7. Some Conclusions After Operating for Two Years on the Pelvic Diseases of Insane Women, By BROWN.
8. Pelvic Inflammation. A Discussion of One of the Moot Questions Relating Thereto, By DUNNING.
9. Fibroid Tumors and Pregnancy, By MARX.
10. A New Operation for Cystocele, By WOOD.

1. **Toxæmia of Pregnancy.**—Ewing offers an interesting paper on this very important subject. He states that at present this condition may be regarded as a functional disturbance of the liver, usually accompanied with anatomical lesions of that organ, and with functional disturbance and anatomical lesions of the kidneys and other organs. The kidney disease may become pronounced only when the poisons resulting from the failure of oxidation in the liver cause degeneration, congestion, and exudative inflammation of these organs. It may, therefore, be far advanced before albuminuria appears. There may be fatal cases with minimal lesions of the liver. The hepatic lesions follow the disturbance of function, but there are several steps between the loss of oxidizing capacity, and the hydrolysis, fatty degeneration, and necrosis of the liver cells. Many factors are concerned in the disturbance of nitrogenous metabolism such as the retention of

substances usually eliminated with menstruation, the increased metabolism required in the growing fetus, the influence of thyreoid and parathyreoid, etc. Two important observations upon autopsy subjects were the distended intestine containing saline solution which had not been absorbed, and the remarkable concentration of the blood. The inference from these conditions is that the blood requires dilution, but it should be by infusion with saline solution rather than by rectal enema. Pathological study also shows the absence of any necessarily fatal character in the disease. We are dealing primarily, at least, with a disturbance of function, not with a hopeless anatomical lesion nor an uncontrollable bacterial infection. Ringer's fluid is recommended for infusion, rather than the usual normal salt solution.

2. **Eclampsia.**—Allen offers the following conclusions: 1. Eclampsia is due to a toxine which probably has its origin in the liver. 2. Its origin is maternal rather than foetal. 3. Premonitory symptoms are always present. 4. The most constant and important premonitory symptom is frontal headache. 5. The diagnosis of toxæmia of pregnancy should be made early, and this can generally be done if the patient is under observation. 6. The mortality should not exceed 20 per cent. 7. The premonitory symptoms should be treated until they are proved ineffective. The uterus should then be emptied, and this may be the only way to stop the progress of the disease. 8. Delivery should be accomplished as rapidly as is consistent with cleanliness and the integrity of the soft parts. From 300 to 700 cubic centimetres of blood should be drawn, and then 500 to 1,000 cubic centimetres of salt solution should be infused according to the quantity of blood withdrawn and the character of the pulse. It may be necessary to repeat this operation: Morphia gr. $\frac{1}{4}$ may be given to relax the muscular system, and Croton oil, 1 to 2 drops, in olive oil 1 to 2 drachms, followed by magnesium sulphate, half an ounce, in saturated solution until free purging has resulted. 9. The diet should be limited to milk and water. 10. Other symptoms should be treated as they arise.

9. **Fibroid Tumors and Pregnancy.**—Marx concludes his paper as follows: 1. Every fibroid, with few exceptions, which develops during the child bearing period, should be attacked by surgical means. 2. Those fibroids which are beyond the dilating zone of the uterus should be carefully watched. Every complication during pregnancy which depends upon the fibroid should warrant a surgical attack, or should at least cause us to consider the question of emptying the uterus. 3. The apparently safe tumors should be watched during labor. Resultant complications such as hæmorrhage and delayed labor should be met energetically as they arise. Tumors which block the bony passage, and cannot be displaced should be enucleated per vaginam when possible; or Cæsarean section should be performed and be followed by hysterectomy. 4. Sloughing and necrosis of a puerperal fibroid must not be mistaken

for retained secundines. The doubt must be eliminated by exploration with the asepticized hand. The curette should not be employed on account of the possibility of injuring the capsule and subsequent sepsis. 5. Sloughing and necrotic fibroids should be removed either by enucleation or hysterectomy.

ANNALS OF SURGERY

February, 1905.

1. Acid Intoxication. Its Significance in Surgical Conditions, By KELLY.
2. Gall Bladder and Biliary Duct Surgery, By STEELE.
3. Volvulus of the Jejunum, By SCUDDER.
4. Operations on the Lower Ends of the Ureters by the Inguinal Extraperitoneal Route Under Local Anæsthesia (Cocaine), By SAMPSON.
5. Primary Urethral Calculus, By WOLF.
6. Case of Bone Transference, By HUNTINGTON.
7. Contrecoup Fracture of the Sternum, By TAEROWSKY.
8. Fracture of the Carpal Scaphoid with Habitual Dislocation of the Central Fragment, By RUSS.
9. Interscapulothoracic Amputation, By COBB.
10. Symmetrical Inflammation of the Epiphyseal Beak of the Tibia, By WINSLOW.

1. **Acid Intoxication.**—Kelly states that he formulates no definite theory for the causation of this condition. He merely presents a series of cases which are identical with those which have been reported by other observers. Our knowledge as to the cause of the symptoms as well as of the occurrence of acetone and diacetic acid in the urine is yet in its infancy. It is not due to acetone circulating in the blood, nor is the quantity in the urine an index to the severity of the condition. It is not yet proven whether the symptoms are due to a toxic substance acting on psychomotor centres or to pressure on these centres. There is some toxæmia, but we do not know whether it is due to the presence of volatile fatty acids, to the rapid destruction of proteid matter, or to the rapid elimination of alkalies. This condition has usually been considered as fatal in its tendency, but the author's cases show that it exists in a mild form in a variety of instances. There is need of further experimental and clinical investigation of the subject.

4. **Operations Under Local Anæsthesia.**—Sampson summarizes his article as follows: 1. Advantages of a general anæsthetic are that the patient is unconscious, relaxed, the operation requires less time and is easier than with a local anæsthetic. 2. But in certain cases a general anæsthetic is contraindicated, a percentage of cases die from that cause alone, it lowers the resistance of the patient, it is often unpleasant to take, and unpleasant to recover from. 3. If an operation is not painful why give a general anæsthetic, or for a long operation why not use a temporary general anæsthetic like nitrous oxide or a local anæsthetic like cocaine for that portion of the operation which may cause pain? 4. Pathological conditions of the lower ends of the ureters usually impair the functions of those organs and of the kidneys as well, and therefore may contraindicate

the use of a general anæsthetic. 5. In four very long operations performed by the author the most noteworthy symptom was fatigue. 6. Anything which causes traction of the parietal peritoneum is painful. 7. The extra peritoneal route is a desirable way of reaching the lower ends of the ureters, is less painful, and offers less chance of infection, and less shock. 8. Two incisions are practicable, the gridiron incision lateral to the rectus muscle similar to the McBurney incision, but a little lower, or a longitudinal incision through the rectus.

LANCET.

February 18, 1905.

1. The Hunterian Ovation, By J. TWEEDY.
2. Functional Mental Disorders, By G. H. SAVAGE.
3. The Early Symptoms of Insular Sclerosis, By E. HOBHOUSE.
4. Sabouraud's Method of Ringworm Treatment, By J. L. BUNCH.
5. Some Cases of Urethral Stricture Complicated with a Prostatic False Route or Passage; with Remarks, By R. HARRISON.
6. Colles's Fracture and Other Fractures and Disjunctions at the Lower End of the Radius and Ulna, By A. FULLERTON.
7. A Case of Acute Hæmorrhagic Pancreatitis: Operation; Recovery, By T. C. L. JONES.
8. The Histopathology of Seborrhœa, Seborrhœic Dermatitis, and Psoriasis, By R. W. BRUNACOMBE.
9. A Case of Endocarditis with Pericarditis Following Scarlet Fever; Treatment by Antistreptococcic Serum; Recovery, By A. R. SPENCER.
10. Traumatic Lumbago, By R. ROMER.

2. **Functional Mental Disorders.**—Savage, in the Lettsomian lecture, says that there are many cases in which disorder of mental function cannot be directly associated with material change in the brain or nervous system. Many cases may depend upon alterations of nutrition of a temporary character in the nerve centres, central or peripheral. Besides this there are certain disorders which depend upon the disharmony existing between the nervous system of the patient and his surroundings. Such disharmony may be original and ineradicable and is met with in certain persons who seem to have been born out of due time, being only suited to primitive states of civilization. There may also be misjudgments of parts of the nervous system, want of will or directing power—want of proper adjustment of what have been called the functions of mind. In obsessions there may exist perfect knowledge and all the necessary constituents of the mind, yet their association may be morbid, and the result may be unreasonable and impulsive action, unreasonable belief, or obsessions of ideas. Insanity, mental disorder, depends as much on the surroundings as on the individual's bodily condition.

3. **Insular Sclerosis.**—Hobhouse discusses the early symptoms of insular sclerosis from the point of view of the general practitioner. The disease is of great importance for three reasons: 1. It is the commonest of all the chronic diseases of the

central nervous system. In five years the writer has seen nine cases in which he was absolutely sure of the diagnosis, and eight more in which the diagnosis was doubtful. 2. Owing to the great diversity of its symptoms it may come first in the early stage under the notice of any physician, whether he be a surgeon, an aurist, a laryngologist, a gynæcologist, etc. The majority of cases begin in one of two or three ways. Most patients first complain of weakness of one or both legs, or of nervousness and trembling. Many go first to the ophthalmic surgeon. Of the sixteen cases on which the author's paper is based, three began with purely ocular symptoms—ophthalmoplegia, failing vision, diplopia, etc. In all the others loss of power or sensation was the first symptom. Menorrhagia is a very frequent symptom in women. 3. The disease is by no means easy to recognize in its early stages, and is extremely apt to be confounded with hysteria, if, indeed, it be not more correct to say that hysteria is not rarely the prelude to insular sclerosis. Once the diagnosis is made, a good deal of harm to the patient is avoided, by not treating them as hysterical and not insisting on exposing them to the ridicule or reproaches of their family. The transitory nature of the symptoms is the most misleading thing about the early stage of the disease. The symptoms may come and go with startling suddenness. Many of the patients also have a typically hysterical manner. Babinski's toe phenomenon is the most valuable of all the reflex symptoms of the disease. The slower the onset of symptoms the more hopeful is the prognosis as to remissions and the less likely is any given attack to be finally crippling to mind or body. The fact that the earliest symptoms are cerebral does not necessarily imply that those will be predominant later. In two cases ocular symptoms came first, but the brain and the upper cord were comparatively little affected, whilst the paraplegic symptoms had been prominent for years.

4. **Ringworm.**—Bunch warmly recommends Sabouraud's method of treatment of ringworm of the scalp by means of x rays. All chemical and antiseptic methods fail because the root of the hair is inaccessible. Radiotherapy causes the hair to fall out, but hitherto it has not been successful in ringworm, because of the absence or imperfect measurement of the quantity and quality of the rays applied. Sabouraud has worked out a successful method of measurement of the rays, and as practised by him it is painless, the actual time necessary for the treatment is short, and the diseased hairs fall out at a definite interval after application of the x rays, and are replaced after a certain time by a growth of healthy hair. The writer goes on to describe the apparatus used and how the rays are applied to the diseased area.

6. **Colles's Fracture.**—Fullerton's article is based upon a series of sixty-nine cases of fractures and disjunctions of the lower end of the radius and ulna. In dorsal displacements two splints should be applied, the anterior one not coming below the fracture, and the posterior one

being so padded that the hand is flexed to an angle of 45° . If there is impaction it must in all cases be first broken down if possible, and the parts must be firmly pushed into position before the splints are applied. Splints should not be kept on longer than two weeks and the patient should be early encouraged to use his fingers.

7. Acute Pancreatitis.—Jones reports a case of acute pancreatitis occurring in a woman aged twenty-six years, coming on with symptoms of intestinal obstruction. A diagnosis was made of some gastric lesion (perforation) and the abdomen was opened, when a large quantity of bright blood and serum was liberated. The pancreas, which was three times the normal size, was discolored, oedematous, and hæmorrhagic. It was incised and packed with gauze, which checked the hæmorrhage, and the patient made a good recovery. When the packing was removed pancreatic juice was discharged for some time.

8. Seborrhœa.—Brunacombe, in this paper, attempts to demonstrate the close connection between seborrhœa, seborrhœic dermatitis, and psoriasis by means of a study of the histopathology of these conditions. In seborrhœic dermatitis he thinks that the condition is due to atrophy of the sebaceous glands, and formation of a horny material in the hair follicles. Microorganisms play only a secondary part.

9. Endocarditis.—Spencer reports the case of a boy, aged five years, who, after an attack of scarlet fever, developed endo and pericarditis. His condition became very critical, and antistreptococcus serum was used with excellent results. From a study of the literature of the serum treatment of endocarditis, the author concludes: 1. The earlier the treatment is begun the better the hope of recovery. 2. It is undesirable to wait for a positive confirmation of the diagnosis, such as embolism, before beginning treatment. 3. The size of the dose should be regulated, not by the age of the patient, but by the gravity of his condition.

10. Traumatic Lumbago.—Romer reports ten cases of traumatic lumbago. The history is that of some definite, though frequently slight sprain of the back, after which the pain does not quite disappear, and as time goes on becomes more persistent. Lumbar stiffness increases and a condition arises similar to chronic lumbago. The pain is usually referred to one particular spot. On examination the lumbar muscles are usually found to be wasted, while on the affected side they are rigid and contracted. Early spinal caries must be excluded. The treatment consists in stretching the affected muscles under an anæsthetic, and rupturing any adhesions.

BRITISH MEDICAL JOURNAL.

February 18, 1905.

1. The Hunterian Oration, By J. TWEEDY.
2. Visceroptosis: Its Symptoms and Treatment By H. A. McCALLUM.
3. Recurrent Vomiting in Children, By H. B. SHAW and R. H. TRIBE.

4. Recurrent Vomiting of Children (Cyclical Vomiting), with the Reports of Two Cases, By F. LANGMEAD.
5. A Case of Hæmatemesis and Melæna in an Infant Two Days Old: Recovery, By B. MORRIS and M. FELDMAN.
6. A Case of Long Standing Constipation, By H. GREY.
7. Ergot and Arsenic in Chorea, By C. RIVIÈRE.

2. Visceroptosis.—McCallum tells us that the displacement downward of any of the viscera is without symptoms, so long as the patient is in good physical condition. The disease comes to our notice in association with neurasthenia, and no mechanical replacement can cure the neurasthenia. On the other hand, a cure of the neurasthenia goes far to make a symptomatic cure of the visceroptosis. Over ninety per cent. of cases of neurasthenia in the female depend upon visceroptosis. It is less prevalent in male neurasthenics. The important clinical ætiological factors are bad standing posture, badly fitting garments, imperfect use of the lower zone of the thorax, the absence of fat, and the want of tonicity in the abdominal musculature leading to defective intraabdominal pressure. The symptoms, when well marked, are practically those of neurasthenia with or without direct local distress. Some form of gastric disturbance is the one usually complained of. Pain may be felt anywhere, but is most frequently referred to the small of the back. The crisis of movable kidney has been taken for appendicitis, and intermittent hydronephrosis for ovarian tumor. Gynaecologists are coming to recognize that prolapse and displacement of the uterus is but part of the general visceroptosis. There is usually a mild form of secondary anæmia. Presenility is occasionally found, and this may be attended with early arteriosclerosis. The most constant symptom is emaciation or malnutrition. The skin is markedly free from fat, and devoid of elasticity. Dermography is a stigma of the disease. The abdominal musculature is flabby and atrophied, and there is absence of the stomach resonance in Traube's semilunar space. In many cases the tenth rib floats. The inflation of the stomach and colon should be carried out, after the solid organs have been palpated. The Weir-Mitchell treatment when applied to visceroptosis is curative, stress being laid upon the following features: a. Recumbent posture in bed, if possible without pillows, for from four to six weeks. b. Cool baths before massage to get muscular relaxation. c. General massage, with an attempt to build up the abdominal wall. d. Raising up the thorax, so as to expand its lower zone, and thus make room for the viscera. e. Proper feeding. f. Training of mind and body. The muscular tone of the levator ani in bringing the pelvic viscera to their normal position. The tone of this muscle is largely dependent upon the tonus of the lower half of the abdominal wall.

3, 4. Recurrent Vomiting in Children.—Shaw and Tribe state that recurrent, cyclical, fitful, or periodic vomiting in children, begins generally after the first year of life, and may persist until the eleventh year. In many cases the symptoms

pass off altogether, or they may develop into migrainous attacks. Very often there is a prodromal stage, during which the child shows general malaise: then the vomiting begins, whatever food is taken being returned, and this is succeeded by the ejection of mucus, bile, and even blood. The attacks may last several hours or days, and occur from once a month up to once a year. Constipation is common and may resist all treatment. Pain is almost entirely absent; thirst is very common and very intense; the appetite is quite lost, the tongue coated, the breath of a peculiar odor attributable to acetone, and the urine may contain acetone and indican. The abdomen is usually greatly retracted or flattened in prolonged cases. When the attacks first occur it may be very difficult to exclude acute gastritis, meningitis, appendicitis, and intussusception. The treatment consists in the exclusion of all food except barley water and broths. Morphine may be necessary in some cases, but rectal infusions of normal saline solution are probably more useful. Some authors strongly recommend large doses of alkalies. Langmead reports two cases of recurrent vomiting, one of which ended fatally. He mentions most of the points brought out by Shaw and Tribe. In addition he states that the vomiting is very frequent—often every quarter of an hour for twelve hours. Free hydrochloric acid may or may not be present in the vomitus. The usual frequency of the attacks is three or four times a year. The duration varies from three hours to seven weeks. They are not traceable to any errors in diet. The excessive thirst is due to the loss of fluid. The state of some of the worst of these cases is very similar to that of a fatal case of diabetes. Respiratory difficulty of the "air hunger" type occurs, drowsiness deepens into coma, the breath reeks with acetone, and the urine (while sugar is absent) contains acetone, diacetic acid, and β -oxybutyric acid. Anorexia occurs in spite of the great thirst. The prognosis is, as a rule, favorable. Authorities agree on only one point in the ætiology—namely, the influence of a hereditary neurotic tendency.

5. Melæna Neonatorum.—Morris and Feldman report a case of melæna neonatorum occurring in a child aged one day. The illness began with severe vomiting of blood, about a tablespoonful being brought up every hour. Blood later appeared in the stools. The child had not been injured during birth, and physical examination showed nothing abnormal. On a treatment of bismuth and calcium chloride, the child recovered. Gastric ulcer has been found to be a cause of melæna neonatorum, and was probably present in this case as the attacks followed immediately after feeding. The cases usually prove fatal.

6. Constipation.—Grey reports the case of a boy aged thirteen years, who for eleven years had had his bowels relieved only at intervals of from three to six weeks. On one occasion two months elapsed between the acts of defæcation. An enormous abdominal tumor was present, which felt like a full term fetus. The treatment

consisted of removal of the fæces by means of enemata of warm olive oil, morphine being given to relieve the pain. In nine days almost thirty pounds were removed—practically a third of the body weight.

7. Ergot and Arsenic in Choreæ.—Rivière uses a mixture of ergot and arsenic in choreæ, with excellent results, one drachm of extract of ergot and three minims of liquor arsenicalis being given at a dose. The unbenefited cases consisted mainly of those violent choreas for which so little beyond isolation can be done.

MONTREAL MEDICAL JOURNAL.

February, 1905.

1. Discussion on Actinomycoses. Introduction and Recital of Cases, By BELL.
2. Certain Points in Connection with Our Knowledge of Actinomycosis and Its Causation, By ADAMI.
3. The Clinical Aspect of Actinomycosis, By CHIPMAN.
4. Actinomycosis from the Medical Point of View, By HAMILTON.
5. The Bacteriology of Actinomycosis, By NICHOLLS.
6. The Value of Urinary Examinations in Nephritis, By FRANCIS.
7. Panotitis During Typhoid Fever, By GRIMMER.
8. Malignant Pustule, By CAMPBELL.
9. Septicopyæmia, By MACKENZIE and GILLIES.

EDINBURGH MEDICAL JOURNAL.

February, 1905.

1. Laryngeal Tuberculosis. Its Treatment and Prognosis, By BARWELL.
2. Presidential Address Before the Edinburgh Obstetrical Society, By BREWIS.
3. Some Observations on Anæsthetic Mixtures and Sequences in General Anæsthesia, By DANIELL.
4. The Relations of the Insanities to Criminal Responsibility and Civil Capacity, By TUKE and HOWDEN.

3. Anæsthetic Mixtures and General Anæsthesia.—Daniell narrates briefly the history of anæsthetic substances and notes the evidences of progress and wider intelligence in their use. He thinks the wise anæsthetist, and the wise surgeon as well no longer limits himself to ether or chloroform or to both, but takes advantage of combinations of one or both of these with other substances, varying them according to the exigencies of the case. He shows that more and more intelligence is being exercised in the choice and administration of anæsthetics, and that the devotion of one's entire time to the study and administration of anæsthetics, which has been the case with a considerable number of men in different countries has resulted in benefit to patients and surgeons alike. There is no ideal single substance or combination and, furthermore, there are very few individuals who are unable, whatever their disease may be, to take some form of anæsthetic with comparative safety. The method of sequences, beginning the anæsthesia with nitrous oxide or some other substance and changing to a suitable combination at the proper moment is highly approved.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, January 5, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

A Consideration of Fibroid Tumors of the Uterus, Based Upon a Series of Cases Treated Surgically.—Dr. J. CLARENCE WEBSTER, of Chicago, read this paper. He had found in 210 cases of fibromyoma of the uterus the following degeneration:

Calcareous	2 cases.
Cystic	13 cases.
Edematous	6 cases.
Myomatous	4 cases.
Suppurating	10 cases.
Adenocarcinoma of the cervix.....	1 case.
Sarcoma	2 cases.
Hæmorrhagic	3 cases.
Necrosis	11 cases.

Pelvic complications were noted as follows:

Broad ligament development.....	11 cases.
Prolapsus uteri.....	7 cases.
Retroversion of the uterus.....	11 cases.
Hæmatosalpinx	6 cases.
Ovarian cystomata.....	12 cases.
Unilateral salpingo-oophoritis.....	7 cases.
Bilateral salpingo-oophoritis.....	12 cases.
Unilateral oophoritis.....	3 cases.
Bilateral oophoritis.....	20 cases.
Hernia	4 cases.
Appendicitis	26 cases.
Pregnancy	6 cases.

Attention was called to the frequency of diseases of the appendages. In 99 instances there were pathological changes in the tubes and ovaries. The association of malignancy was noted only in two cases. In two there was sarcoma of the corpus uteri involving the fibroid growth; in a third, early adenocarcinoma of the cervix. Cardiovascular symptoms were present in about twenty-five per cent. of the cases.

It was possible that cardiac hypertrophy might sometimes result when the tumor was only of moderate size. A question of considerable interest was that relating to the influence which might be exerted by products of the uterine growth on the heart and other organs through the medium of the circulation. Dr. Webster believed that renal disturbances were more common in association with fibroids than was generally believed. In about thirty per cent. of his cases one or more of the following conditions had been noted: Deficient amount of urine or urea, albumin, casts, and oedema of the feet. In no instance was there evidence of previous organic renal disease, nor did treatment fail to bring about marked improvement prior to operation.

Attention was directed to Noble's views concerning the influence of degenerations and complications of fibroid tumors in influencing morbidity and mortality. The majority of writers had undoubtedly underestimated their influence. The widely held views as to the comparative harmlessness of uterine fibroids, he thought, must be greatly modified. Taking into consideration

the pressure effects, the tumor degenerations, the pelvic and abdominal complications, the changes in the heart, large vessels, kidneys, and liver, the chronic anæmia of hæmorrhagic cases, and other occasional associations, *c. g.*, suppuration, gangrene, peritonitis, phlebitis, embolism, and the influence of pregnancy and labor, the new growth must be considered as seriously increasing morbidity and mortality in women in whom they occurred.

The view held by some that all fibroids of the uterus should be removed surgically unless there was some marked contraindication to operation was not upheld. All large or growing tumors or small ones which caused troublesome or serious symptoms should be treated surgically. In attempting to establish indications for surgical treatment various factors must be considered. Thus, the site of the growth might indicate early removal of a tumor, *c. g.*, a submucous polypoidal fibroid, a cervical growth, one developing extraperitoneally, a subperitoneal tumor tending to fall within the pelvic cavity, etc.

The nature of the tumor might afford an indication, as shown by rapid growth, cystic change, necrobiosis or infection, malignancy, or association with pregnancy.

The size and number of the tumors, within a somewhat ill defined limit, were considered by many authorities as secondary to the other factors in determining surgical interference. One pedunculated subserous tumor, by falling below the pelvic brim, might cause serious pressure symptoms which might never be found with multiple sessile growths. Fibroids should never be allowed to reach such a large size as to become palpable abdominal swellings. The nature of the associated complications might often afford the indication for surgical measures, and it was due to his special study of these complications that Noble had so strongly advised early operation in fibroid disease of the uterus.

In regard to the choice of surgical procedure, ligation of the uterine arteries had scarcely any place in treatment. Removal of the uterine appendages should only be carried out in the rare cases in which other procedures were inadvisable on account of the patient's general condition, or when the relationships of the tumor made removal impossible.

Myomectomy had been less practised than it should have been in recent years, owing to the brilliant results obtained in the reduction of the death rate following total extirpation and supravaginal amputation of the uterus. The conservative procedure had been carried out by the author 48 times in the 210 cases. He thought that more attention should be given to this operation by gynecologists. Supravaginal amputation had been practised in preference to total extirpation as a routine operation, because it might usually be performed in a somewhat shorter time. There was less hæmorrhage, the anatomical relationships of the pelvic floor were better preserved, and there was less risk of wounding the ureters. Owing to recent studies of the complications of fibroids, a serious objection had been raised to the

performance of this operation, namely, the occasional association of fibromyoma and malignant disease. From this standpoint it must be concluded that total extirpation of the uterus was the most scientific procedure.

Dr. ELLICE McDONALD, of Albany, considered the subject of fibroids to be still a very open question and one that was attracting great attention, not only in this country, but in other countries, particularly now in Germany as shown by the recent papers of Winter and Martin. A certain percentage of fibroids were prone to degenerate into sarcoma. He did not believe it entirely settled whether a fibroid might degenerate directly into a sarcoma or whether the sarcoma was grafted on to the fibroid. Since the paper of Whitridge Williams, of Baltimore, published in the *American Journal of Obstetrics* some years ago, the greater number of gynecologists and pathologists had been turning to the idea of a fibroid degenerating directly into a sarcoma. This he considered of great importance, not only to the gynecologist and pathologist, but to the embryologist. The embryologist, he was sure, would finally accept the idea, though it was contrary to all his theories. While carcinoma of the cervix was not more common in fibroid than in the ordinary run of cases, it did seem to Dr. McDonald that adenocarcinoma of the fundus was a little more common in diseased conditions of the fundus or with multiple fibroids.

Tubal complications he considers among the most important in regard to fibroids, because upon the presence or absence of these complications must depend the choice of operation. If it was true that the ovaries were diseased in a great number of these cases, if cystic degeneration of the ovary was more common in fibroid disease of the uterus than in other tumors, it was a question whether the ovaries should be left with cystic disease uneradicated.

One of the most important studies was for some one to give some true idea of the conditions of the surgical menopause. If this was as severe as was taught, if the condition passed off or lasted for a term of years, he asked whether patients should be subjected to this long convalescence; and this question, he said, was not yet satisfactorily worked out. Winter had made a few scattered observations, but no definite study of the condition. In regard to the question of cardiovascular disease, in his fourteen post mortems his findings corresponded with Dr. Webster's, but in three cases there was cardiovascular disease associated with fibroid disease of the uterus—in one case aortic valvular disease, in one brown atrophy of the heart, and in another mitral disease.

The question of the predisposition of the various races was to him interesting, and he thought it should form the basis of all studies of fibroids, because before the study of the mortality and morbidity was undertaken there should be some knowledge of the percentage of occurrence. In his paper read before the Obstetrical Society last winter, he had found from post mortem records, mainly in women of Dutch extraction, that one

woman in every seven in the upper part of the State of New York had a fibroid. The well known predisposition of the negro race to fibroids was borne out by experience. In his service at the lying-in hospital in the city of New York for the last six months, in 2,570 cases, fibroids were found thirteen times, a percentage of less than one half of one per cent. This might be taken as a fairly good estimate of the status of fibroids in women on the east side of New York. In three of these thirteen cases there was post partum hemorrhage. The fibroids were all of the interstitial variety; in two cases the uterus contracted well, but in one case there was alarming hemorrhage. In three cases manual extraction of the membranes was necessary, with immediate packing. In three cases there was malposition of the uterus, two of which were curetted. In five cases there were some pathological lesions of the placenta. In all cases in which there was some alteration in the placenta it was adherent to the fibroid. There was a large area of necrosis which seemed in one case to be a calcareous degeneration of the placenta, but in consideration of the frequency with which this occurred, he thought the fibroid had nothing to do with it. Of the thirteen cases of fibroids, only one came to Cæsarean section. He noted that in obstetrical cases there was this tendency to post partum hemorrhage in all fibroids situated in the uterine wall. He cited one case of pedunculated fibroid in which abortion occurred at three months. Root said that there was abortion in twenty-one per cent. of all fibroids, but Root had not eliminated the cases of gonorrhoeal infection. In the recent paper of Winter there was considered the question of mortality from the standpoint of the various operations. In hysterectomy by the vagina his mortality is $2\frac{1}{2}$ per cent.; in abdominal operation, 4.6 per cent.; in the conservative operation, 5 per cent, and in the conservative abdominal operation, 9 per cent. This bore out Dr. McDonald's views and what Clark and Cullen had laid particular stress upon recently in regard to the danger of doing myomectomy in the presence of disease of the tubes or kidneys. He thought one must look, not only on direct disease of the tubes when pus was present, but on disease of the tubes of any sort as being potential sites of infection. He stated that Miller, of Washington, found streptococci in adhesions ten years after an operation. While Dr. McDonald did not say that there was infection from adhesions in every case, he regarded them as potential sites.

Dr. REUBEN PETERSON, of Ann Arbor, thought it particularly fitting that such a paper should be read before the Obstetrical Society, where the pioneer work along these lines in this country had been done by Dr. Noble, who began at the right end of the problem in giving statistics. In the same way Dr. Webster, by careful tabulation, was able to tell, out of two hundred odd cases, how many of various conditions are present. In approximately eighty recent cases Dr. Peterson's proportion of malignancy was greater than that of Dr. Webster. There were two cases of sarcoma and one of adenocarcinoma. This finding, he be-

lieved, was due to the microscopical examination of every bit of tissue. He cited the following case in which malignancy had been overlooked from lack of such examination: Ten years ago he removed as much as he could of a large fibroid of the uterus. It was supposed to be a common fibroid and reached above the umbilicus. About ten years later the patient returned with a large cystic growth in the right hypochondriac region and the pelvis filled with a large mass, evidently malignant. Concluding that there was a cystic kidney present, he removed it, and it was as large as an adult head. It was found that the supposed fibroid which had failed of removal from the right broad ligament ten years before had been pressing upon the ureter and caused the condition mentioned. Microscopical examination showed the growth to be a slowly growing fibrosarcoma.

Dr. Peterson believed that the patient should be told of the risk of myomectomy compared with total or supravaginal hysterectomy. Dr. McDonald's figures showed a greater risk even than he had supposed. Dr. Peterson's proportion of cases of degeneration of fibroids was not so great as that shown by Dr. Webster and Dr. Noble. From the fact that degenerations did occur, that there were malignancy and cardiac change, he was more inclined than formerly to advise an operation.

Dr. E. E. MONTGOMERY, in considering the question of malignancy, thought it obvious that the mere presence of a fibroid growth, from the increased amount of congestion and irritation, would of itself tend toward the development of malignant disease. In view of the frequency with which fibroid growths occurred, it did not seem to him that the proportion of malignant infection was sufficiently great to assume that the growth was an essential feature in its development. The contraction which took place in fibroid tissue led to atrophy and arrest of its circulation, tending to the development of oedema. This oedema occurred, not only in cases in which strangulation had taken place as the result of the twisting of the pedicle of a subserous fibroid, but also in growths in which there was a tendency to degeneration of the arteries, shown in associated ovarian hæmatoma. He was inclined to think that the disease of the heart and other organs was more frequently found in cases in which the fibroid was of the submucous or interstitial form, where the tendency to hæmorrhage was marked. It was readily appreciated that a fibroid occupying its position in the pelvis and attaining to any size must affect the kidneys by pressure upon the ureters.

Dr. Montgomery agreed with the author that it was difficult to fix a rule for the time of operation. The mere presence of a fibroid growth of the subperitoneal variety he did not consider an indication for operation, but increase of the size of the growth, disturbance of circulation, and degenerative changes warranted an operation. He did not approve of the ligation of the arteries for the control of the growth of the tumor. While he had performed this operation, he had never regarded it favorably from a theoretical standpoint. With the cutting off of the blood supply

sufficiently to limit the growth there was danger of arrest of circulation with resultant necrotic change in the tumor.

The operation of myomectomy appealed to him in women under thirty, in whom it seemed undesirable to bring about the cessation of the sexual function. It was readily understood that a more stormy convalescence from this operation was to be expected from the fact that in the enucleation of a number of single fibroid growths from the uterine wall there was a large amount of tissue of low vitality which was readily infected, and an accumulation of blood in dead spaces from which the patient ran an increased danger. He cited a case in which he did myomectomy for removal of a tumor in a woman thirty years of age. She had a prolonged convalescence, elevation of temperature, and discharge of material through the uterus. Through the induration of the abdominal wall he made an incision by which necrotic tissue discharged. Though convalescence was progressing favorably, the patient encountered serious danger in the effort to save the uterus.

In performing hysterectomy, Dr. Montgomery had for the last four years preferred panhysterectomy to the supravaginal operation, because in an occasional case cancer involved the cervix, and in some cases there had been injury to the cervix. In addition, he believed there was a better drainage, with less likelihood of elevation of temperature, and the convalescence of the patient was more satisfactory after the complete operation.

(To be concluded.)

Book Notices.

The Influence of Growth on Congenital and Acquired Deformities. By ADONIRAM BROWN JUDSON, A. M., M. D., Orthopaedic Surgeon the Out Patient Department, New York Hospital, 1878-1903, etc. New York: William Wood & Co., 1905. Pp. x-276.

Every orthopaedist might study this little book to advantage, and no beginner in orthopaedic surgery can afford to forego the gain that would come to him as a result of studying it. Moreover, parents, teachers and all others who are charged with the care of children may be enabled by it to rescue many a child from serious deformity. It is written in a remarkably clear style, and it sets forth the mature views of a practitioner of great experience.

Atlas and Epitome of General Pathological Histology. By Docent Dr. HERMANN DÜRCHE of the Pathological Institute, Munich. Authorized translation from the German. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology in Rush Medical College, Chicago. With 176 Colored Illustrations and 36 Figures in Black and Colors. Philadelphia: W. B. Saunders & Co., 1904. Pp. 371. (Cloth, \$5.00.)

It certainly seems a misfortune that the beautiful colored plates and the numerous cuts which accompany this new volume of the Hand Atlases should be forever condemned to be united with a text so

incomplete as this one is on general pathological histology. Not that the text as it stands does not rise far above the standard of the average quiz compend, both in literary form and subject matter. The translation is in general excellent and smooth, the annotations of the editor are well chosen, the selection of the scanty material which accompanies the plates has been well done within the limits given, but the reviewer cannot but feel that a fuller presentation of the difficult topics included under the heading of general pathology should some day be prepared by the author, an able pathologist, well known in his native land as a teacher and investigator.

The Anatomy of the Brain. A Manual for Students and Practitioners of Medicine. The Brain of the Sheep (Ovis aries). By J. F. BURKHOLDER, M. D., Professor of Anatomy in the Illinois Medical College, etc. With an Introduction by Professor HENRY H. DONALDSON, of the Neurological Laboratory of the University of Chicago. With 36 Full Page Plates (5 of them Colored) from Original Drawings by the Author. Chicago: G. P. Engelhard & Co., 1904. Pp. 174. (\$2.00.)

The purpose of this little book is to place in the hands of medical students a laboratory manual describing briefly and succinctly and illustrating by many well executed plates the microscopical anatomy of the brains of the sheep. The brain of this animal is chosen for the purpose because it is of fair size and easily procured at small expense. The book will find a limited field among those medical colleges where the dissection material is not sufficiently abundant for laboratory study of the human brain, but practically an unlimited field in all high schools and literary and scientific colleges where students are taking courses preparatory to entering a medical college. Such preparatory training in dissection and study would be of great practical value to the prospective medical student.

A slight error is noted in naming plates viii and ix. The titles have been exchanged.

Miscellany.

The Fango Treatment.—The establishment of an institution for this treatment in New York renders interesting the following extracts from an article on the subject by Dr. R. Scot Skirving in *Indian Public Health*, for January, 1905:

Fango treatment is the term used in many parts of Europe for the medical application of mud to the affected parts of the body. In Italian the word "fango" means mud, and the variety used is of a specially adhesive, glutinous type. The mud used is of two main varieties: (1) True fango chiefly found in Italy, where its use has been known for ages; (2) and the peaty soils used in central Europe in the Moorbad of German and Austrian health resorts.

The fango of North Italy—of such places as Battaglia or Acqui—is described as a vegetomineral substance, a large portion of which is no doubt of volcanic origin. Its composition is com-

plex and varied. It contains some 35 per cent. of moisture, and among the many inorganic substances the following: the oxides of iron and aluminum, the carbonates of calcium and magnesium, and the sulphide of calcium. Potassium, sodium, barium, and lithium are also represented. Sulphur and a bituminous material of organic origin do not even complete the varied components of the extremely heavy mud. In the Acqui fango there is a relatively high percentage of iron. The Moorbad of places such as Franzenbad is composed of peat. This substance contains a considerable amount of formic acid, as indeed does the peaty soil of various places in the British Islands—a fact well known in connection with lead poisoning by water obtained from a peaty catchment area.

Fango treatment is by no means strictly confined to the districts in which the mud is obtained. On the contrary, in many other places, the treatment is carried out with mud obtained from Italy, and artificially heated in suitable contrived appliances. For instance, at Bex-les-Bains, in the Rhone Valley, the mud used is imported there from Battaglia. In these various places where the mud treatment is practiced various other remedial measures are likewise carried out, such as saline and sulphur baths, douching, Nauheim baths, massage, and electricity. It is especially, however, in places such as Acqui, Battaglia, Dax, and Franzenbad, that the mud treatment is the special feature. In some places the patients sit bodily in the natural mud, but in most of them the hot mud is applied topically to the affected parts in a room suitably warmed and arranged. The application is essentially that of a gigantic poultice—a poultice which, like all poultices, bleeds congested areas, deeply seated, into more superficially placed vascular expansions, and by this temporary depletion and the subsequent reactionary filling, stimulates a healthier tissue change, and thus is favored that removal of inflammatory products which in not a few cases is happily witnessed. If this is the mode of action, one can readily understand why the most benefits are observed in fairly recent cases. Now what are the conditions likely to receive good from fango treatment? Rheumatism in all its forms, gout, rheumatoid arthritis, neuritis, especially sciatica, whether due to nerve inflammation or not; neurasthenia and hysteria; habitual constipation; all kinds of local arthritis, traumatic or otherwise; appendicitis, especially if an indolent phlegmon persists in the iliac region; and, lastly, in pelvic and uterine inflammations. Recent cases of arthritis due to rheumatism, gout, or traumatism very frequently receive marked relief or cure. In Acqui, where the Italian Government have a large establishment for soldiers with injuries and rheumatic affections, the benefits are indisputable. Cases of neuritis of short duration, and especially sciatica, sometimes get well with startling rapidity, combined, of course, with rest. It seems certain also that women with non-suppurative inflammatory troubles in the pelvis or in connection with the uterus and ovaries do likewise receive great benefit, loss of pain and disappearance of exudates being often reported.

The mode of application varies in different places, and with the parts of the body affected. Generally speaking the patient lies on a bed or couch with a rubber cloth and linen sheet spread under him. Mud, either naturally hot or artificially heated (47° C. to 50° C.), is thickly and quickly applied over the affected area. The sheeting is then deftly made to enclose the whole of the limb or body, as the case may be, and usually further coverings are applied if a profuse general diaphoresis is desired. In this poultice pack the patient remains from twenty to forty minutes as ordered, after which time he enters either a simple or sulphurated warm bath, and is washed clean of the fango. He then at once goes to his bed and remains there from one to two hours till his skin is dry and the superficial vessels have returned to their normal calibre. This process is repeated daily for three, four, or five days in succession, and then a day off is allowed, when the sequence is again repeated. From 15 to 21 applications constitute a cure. It is right to say that at first pains in the affected parts are often aggravated; the treatment is said to be "waking up the disease," and further that the benefits to be expected are often not observed "till after the patient has left the place of cure." Massage and electricity form frequent adjuncts to the cure. Little or no medicine is ordered, and there seems less insistence on a rigid regimen than used to obtain some years ago. At Aix in Savoy, strawberries and tomatoes used to be strongly forbidden to rheumatics; now, from certain recent observations on the composition of tomatoes, I find medical men no longer forbid the latter vegetable.

The Treatment of the Muscular Hæmic, and Mechanical Factors in Heart Disease.—Morison, in the *Edinburgh Medical Journal*, for November, 1904, in referring to the distribution of the blood recalls the fact that during the period of physiological activity all the organs of the body are congested. But the organs contain a relatively small portion of the total quantity of blood in the body. The muscles on the other hand form the greatest portion of the body, for they are especially required in all the efforts of the body to obtain its subsistence. To the muscles, consequently, the greatest portion of the volume of blood comes, and from them the blood and lymph go.

Muscular exercise dilates the peripheral vessels and increases the energy of the heart.

In heart disease mechanical treatment has often been found very efficient, though it is not equal to the active movements of the body itself when these are advisable.

The treatment of the hæmic factor in heart disease concerns the quality, quantity, and distribution of the blood.

The quality may be defective in elaboration in oxygenation, or by contamination with infective agents and processes.

The first of these difficulties is to be overcome, if possible, by rest, simple fare, and suitable hæmatinies, the second by deep inspirations of uncontaminated air or of pure oxygen, the third

by antitoxines, bactericidal remedies, and by various stimulating, soothing, and supporting means.

The quantity of blood can seldom be directly diminished by blood letting, though there are occasional cases in which venesection, leeching, or cupping may be indicated, but it is frequently desirable to divert the excess of blood from one part to another by diet, cathartics, nitrites, etc.

The mechanical factor in heart disease refers to the lesion of one or more of the valves or to any form of obstacle in the pericardium. Digitalis helps the heart chambers to contract, but its action is on the heart muscle rather than on the valves; therefore in obstructive lesions of the valves (mitral and tricuspid) or when the resting places of the projected column of blood (aortic and pulmonary valves) are imperfect digitalis is not indicated, but rather belladonna, strychnine, and the nitrites.

On Tactile Sensation.—Horsley, in the *Practitioner*, for November, 1904, contributes an important paper on the subject. He refers to the ancient character of investigations upon the subject of sensation, and to the valuable pioneer work which was done by Galen. The mode of transmission of sensory impulses to the cortex of the brain is still a matter of controversy. The sensory side of nerve physiology must be particularly investigated with reference to the determination of diseases of the cortex, for eight tenths of the hemisphere are concerned with sensation.

Physiologists and neurologists are divided into two camps, in one of which it is believed that the sensory channels terminate in the centres of the optic thalamus, and that new channels start from the optic thalamus to the cortex, while in the other it is believed that the fibres of the fillet go straight through the optic thalamus to the cortex.

Beginning with the peripheral nerves the author asserts that if a fibre of such a nerve is interrupted in any part of its course, it will cause complete loss of tactile sensation in the part of the skin from which it originally started. In his opinion there is no overlapping of the anæsthetic area, the anæsthesia shading off gradually, but on the contrary, the anæsthetic area is divided from the area of sensation by a sharp line.

He next refers to the spinal cord. While the posterior columns are the media for the transmission of sensory impulses the lateral columns also contain channels which go to the brain. When the spinal cord is cut across the loss of sensation is absolute; if only certain segments are injured we shall have lines of anæsthesia which are distinct, and do not overlap, corresponding with the distribution of the injured nerves. In other words, we may have total cord anæsthesia, and root anæsthesia.

Horsley then proceeds to the termini of the sensory channels. The fillet is shown to be in the direct line of the path of sensory impulses and the conclusion is affirmed that the fibres of the fillet coming from the posterior column nuclei simply terminate in the thalamus and that from the thalamus a separate set of fibres goes to the cortex cerebri. In the cortex there is a division

into the motor and sensory part, the former including the convolutions near the fissure of Rolando, and the latter the middle aspect of the hemisphere. But the Rolandic area also receives sensory fibres and hence when diseased may give rise to sensory phenomena. In other words, in every destruction of the motor region of the cortex producing localized paralysis there will also be localized paralysis of sensation and touch, or incoordination. The anaesthesia will be in proportion to the amount of cortex destroyed.

Tactile impressions are therefore located in the Rolandic area, not only impressions of slight tactile sensation in the skin, but the ability to localize exactly the point which may have been touched.

It is therefore possible to differentiate the different kinds of anaesthesia according as the lesion resides in a peripheral nerve, the spinal cord, the part immediately above the spinal cord, or the cortex cerebri.

The Cause and Prevention of Appendicitis.—The *Lancet*, for February 11th, says: Under this heading there appears in the *Nineteenth Century* for January an article which professes to have solved the problem of the aetiology of appendicitis. The author of this communication strongly denounces the use of "Hungarian waters, aperient salts, and liver pills." He then remarks: "It is natural to ask what have aperient waters and salts to do with appendicitis? To that a very true answer is that the action of saline purgatives is to cause a flow of water through the intestinal canal. This passes off quickly, but alas! it leaves the solid portions to accumulate in the caecum at the right side, near the appendix, where the small intestine ends and the large one commences. The solid portions left in the colon become more and more putrid, cause obstruction, and infect the appendix." The meaning of the above sentence is somewhat ambiguous, but we conclude that it is intended to convey the idea that those individuals who habitually take laxatives to insure an action of the bowels are liable to faecal collections in the caecum which produce inflammation of the mucous membrane of the bowel and so cause appendicitis. We venture to express an emphatic opinion that there is no basis for this statement either on pathological or clinical grounds. Any practitioner who has had experience in the post mortem room knows that the contents of the small intestine are liquid, and it is not until the colon is reached that the faecal matters become solid. It is most unusual to find solid faecal accumulations in the caecum; yet this condition is distinctly implied in the remarks which we have quoted above. Further, in post mortem examinations of those who have died from appendicitis, although small concretions may be found in the appendix, no large mass is found in the colon, as would be the case if the aetiology which we are considering were the correct one. Such a causation of appendicitis is also contradicted by clinical experience. The age at which appendicitis usually occurs (*System of Medicine*, by Professor Clifford Allbutt, Vol. iii, p. 806) is from ten to twenty years, which is not the period of life at which such purgatives are

generally habitually taken. Again, constipation is more frequent among women than among men, and the former are more addicted to the habitual use of purgatives, yet appendicitis is nearly four times as common in men as it is by women. It is certainly desirable to overcome constipation by natural means, notably by diet, if possible. But there are numerous cases in which artificial stimulus to the intestines is absolutely necessary and in such circumstances aperient waters and salts are most valuable remedies.

Treatment of Inoperable Cancer of the Breast by Ovarian Castration.—Reynès, in the *Revue de chirurgie*, for November 10, 1904, presented to the French congress of surgery a woman from whom he had removed the ovaries eighteen months previously for inoperable cancer of both breasts. She was 32 years of age, regular in her menses, a nullipara, and the disease which had been proved to be malignant by microscopical examination had rapidly ameliorated after the operation, the ulceration had healed, and the enlarged glands had diminished in size and then disappeared. In a second inoperable tumor of the left breast the ovaries were also removed, but there was no influence upon the cancerous disease, and the patient died in six months.

In the first case the ovaries were healthy, menstruation was regular, and no pregnancy had ever occurred. In the second case the patient's age was 38 years, she had nursed four children from 12 to 14 months, had not menstruated for almost a year before her operation, though her ovaries appeared to be healthy when removed. She nursed her last child from both breasts for two months. The left one then became diseased and the nursing was continued from the other four months longer. The progress of the disease was rapid and castration apparently had no influence upon it.

The condition of the ovaries, as well as that of the mammae, with reference to their functional integrity, must be regarded as of paramount importance in considering the results which are to be hoped for or expected from castration.

In another case of bilateral and inoperable cancer of both breasts in a woman, 41 years of age, the author declined to remove the ovaries inasmuch as the patient no longer menstruated and her genital organs were more or less atrophied. Further experience must clear up the obscurity of this question, but it cannot be denied that there are great possibilities connected with it.

Decapsulation and Fixation of the Kidneys.—Ceccherelli, in the *Revue de chirurgie*, for November 10, 1904, declares that decapsulation of the kidney is a very benign operation, and that a fatal case has never occurred in his practice.

For the first few days after such an operation the urine is concentrated, its density and its cryoscopic point are elevated, and it contains much urea and much solid material.

The kidney being composed of two distinct parts, with different functions, the glomerular portion serving for the secretion of the urine, while the tubular portion serves for the elimination of the solid matter, it is logical to suppose that when

the compression of the fibrous capsule is removed a vascular dilatation will result for a few days, with slowing of the rate of the current. The blood flowing slowly across the kidneys and into the circumtubular vessels, it follows that the urine becomes more concentrated. This hypothesis has been confirmed by Cordera and others who found in their experiments upon animals that decapsulation caused increase in the quantity of urine and congestion of the kidney for a few days. After the first week there was in several cases a marked increase beyond the normal daily average. This shows that the newly formed cortical blood channels found by the writer and other investigators, and by Edebohls himself, at three autopsies which he was able to make, favor diuresis by increasing the irrigation of the cortical substance which received the blood from the ramifications of the renal artery and from the newly formed vessels. When the capsule is reformed the vessels are again subjected to physiological pressure and the blood again flows at its normal rate.

In one of the writer's cases the blood had very little molecular concentration, as observed after cryoscopy. Before decapsulation it had been 0.65 and seven days afterward it had diminished to 0.59. Other cases also gave evidence of deparative renal activity after decapsulation. Similar modifications have been observed both in healthy kidneys and those which were the seat of microbic inflammation.

The author believes that decapsulation should be advised when there is acute functional insufficiency of the organ, the parenchyma being healthy, and that the result will be the prompt deparation of the blood. Decapsulation and drainage should be employed instead of nephrotomy in hemorrhagic nephritis of microbic origin in which the lesions are in the cortex. In cases of prolapsus of the kidneys we are dealing with diseased organs, the circulation being abnormal. If assistance is not rendered a true nephritis will result.

Tuffier observed in 1889 that decapsulation resulted in firm fixation of the kidney to the surrounding tissues, and the author states that he has practised the operation since 1894.

The passage of horse hair sutures through the side of the kidney, and the removal of a sufficient portion of the fatty capsule, show that decapsulation adds an element of success to nephropexy. The modifications in the renal circulation which follow this operation seem to prove that the physiological function of the organ becomes more active and this accords with that which has been observed in the treatment of chronic nephritis by decapsulation.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from February 26 to March 3, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Florida—Jacksonville	Feb. 1-25	15	2
Illinois—Chicago	Feb. 18-25	38	
Illinois—Danville	Feb. 18-25	4	
Illinois—Galesburg	Feb. 18-25	1	
Kentucky—Louisville	Feb. 16-23	3	
Louisiana—New Orleans	Feb. 18-25	14	1
Massachusetts—Boston	Feb. 18-25	1	
Michigan—At 62 places	Feb. 4-11	Present.	
Missouri—St. Louis	Feb. 18-25	38	5
Nebraska—Omaha	Feb. 18-25	1	
New York—New York	Feb. 18-25	5	1
Pennsylvania—Johnstown	Feb. 18-25	1	
South Carolina—Greenville	Feb. 11-25	5	2
Tennessee—Memphis	Feb. 18-25	20	2
Tennessee—Nashville	Feb. 18-25	2	

Five cases imported.

Smallpox—Foreign.

Argentina—Buenos Ayres	Jan. 1-29	102	25
Brazil—Niteroy	Jan. 1-31	44	
Brazil—Para	Jan. 28-Feb. 11	4	
Brazil—Pernambuco	Jan. 1-15	131	
China—Shanghai	Jan. 7-21	21 foreign- ers, 98 deaths, natives.	
Ecuador—Cota	Feb. 9	Present.	
Ecuador—Columbe	Feb. 9	Present.	
Ecuador—Guamote	Feb. 9	Present.	
Ecuador—Guayaquil	Jan. 31-Feb. 7	23	1
France—Paris	Feb. 1-11	7	1
Great Britain—Hull	Jan. 28-Feb. 4	7	
Great Britain—Leeds	Feb. 4-11	12	
Great Britain—London	Feb. 4-11	6	
Great Britain—Newcastle-on-Tyne	Feb. 4-11	6	
Great Britain—South Shields	Feb. 4-11	2	
Great Britain—West Hartlepool	Feb. 4-11	3	
India—Bombay	Jan. 21-28	109	2
India—Calcutta	Jan. 21-28	1	
India—Karachi	Jan. 22-29	1	
India—Madras	Jan. 21-27	5	
Italy—Catania	Jan. 28-Feb. 9	43	4
Italy—Palermo	Jan. 28-Feb. 11	6	1
Norway—Christiania	Jan. 28-Feb. 11	5	1
Russia—Moscow	Jan. 28-Feb. 4	5	1
Russia—Odessa	Feb. 4-11	2	1
Straits Settlements—Singapore	Jan. 7-14	2	1
Switzerland—Geneva	Jan. 21-Feb. 4	2	
Turkey—Constantinople	Jan. 30-Feb. 6	6	
West Indies—Grenada	Jan. 26-Feb. 9	8	

Yellow Fever.

Brazil—Manaos	Jan. 25-Feb. 8	2	
Brazil—Para	Jan. 28-Feb. 11	2	
Ecuador—Guayaquil	Jan. 31-Feb. 7	2	
Mexico—Coatzacoalcas	Feb. 12-18	1	
Panama—Panama	Feb. 1-14	27	7

Cholera.

India—Calcutta	Jan. 21-28	103	
Russia	Jan. 16-23	6	4
Turkey in Asia—Van	Jan. 9-24	59	20
Turkey in Asia—Van	To Jan. 24	1,200 cases, 500 deaths, estimated.	

Plague.

Africa (Portuguese)—Lorenco	Jan. 17	5 (Suspect)	
Marquez	Jan. 17	9	8
Africa (British)—Port Flor.	Jan. 5-12	154	128
ence	Jan. 5-12	154	128
Arabia—Aden	Jan. 21-28	154	128
Week ended Jan. 21, 113 cases, corrected by Aden plague authority.			

Argentina—Buenos Ayres	Jan. 28	9 (Suspect)	
Brazil—Niteroy	Dec. 1-31	1	
Brazil—Para	Jan. 28-Feb. 11	2	
Egypt—Suez	Jan. 21-28	3	1
India—General	Jan. 14-21	33,083	28,104
India—Bombay	Jan. 24-31	408	
India—Calcutta	Jan. 21-28	58	
India—Karachi	Jan. 21-28	60	53
Straits Settlements—Singapore	Dec. 31-Jan. 14	2	3

Public Health and Marine Hospital Service:

List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 1, 1905:

ACHENBACH, JOHN, Pharmacist. Granted leave of absence for four days from February 17, 1905, under provisions of paragraph 210 of the regulations.

BANKS, C. E., Surgeon. Relieved from duty at Chicago, Ill., and directed to proceed to Key West, Fla., and assume command of the service, relieving Passed Assistant Surgeon C. H. Gardner. February 13, 1905.

EERSOLE, R. E., Assistant Surgeon. Granted leave of absence for three days, on account of sickness. March 1, 1905.

GARDNER, C. H., Passed Assistant Surgeon. Upon being relieved from duty at Key West, Fla., by Surgeon C. E. Banks, to proceed to Galveston, Texas, and assume command of the service. February 13, 1905.

GLENNAN, A. H., Assistant Surgeon General. Granted leave of absence for fifteen days from March 6th.

HEISER, V. G., Passed Assistant Surgeon. To report to the Governor General of the Philippine Islands as Health Commissioner in addition to duties as Chief Quarantine Officer of the Islands. February 25, 1905.

RAMUS, CARL, Passed Assistant Surgeon. Detailed as inspector of unserviceable property at Honolulu, T. H. February 27, 1905.

STEVENSON, J. W., Acting Assistant Surgeon. Granted leave of absence for seven days from February 27, 1905, under provisions of paragraph 210 of the regulations.

STONER, G. W., Surgeon. To proceed to Boston, Mass., for special temporary duty. February 23, 1905.

THURSTON, E. J., Pharmacist. Granted leave of absence for ten days from March 10th. February 23, 1905.

Casualty.

Acting Assistant Surgeon ESTEBAN LOPEZ died at Fajardo, Porto Rico, February 4, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 4, 1905:

BARNEY, CHARLES N., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, N. Y., and ordered to Manila, P. I., for duty in the Division of the Philippines, on the transport to sail from San Francisco, Cal., about March 31, 1905.

CRAIG, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty at the United States General Hospital, Presidio of San Francisco, Cal., and ordered to Manila, P. I., for duty in the Division of the Philippines.

DE LOFFE, SAMUEL M., First Lieutenant and Assistant Surgeon. Ordered to accompany Second Lieutenant Leshier, Second Cavalry, from Fort Assiniboine, Mont., to Government Hospital for Insane, Washington, D. C.

EKWURZEL, GEORGE M., First Lieutenant and Assistant Surgeon. Left West Point, N. Y., on March 2, 1905, with detachment Cavalry to Washington, D. C.

FIELD, PETER C., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Robinson, Neb., and ordered to Manila, P. I., for duty in the Division of the Philippines.

GOSMAN, GEORGE H. R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Caswell, N. C., and ordered to Manila, P. I., for duty in the Division of the Philippines, on transport to sail from San Francisco, Cal., about March 31, 1905.

GRAY, WILLIAM W., Major and Surgeon. Relieved from duty at Fort McPherson, Ga., and assigned to duty in the Division of the Philippines. Order revoked.

HOWELL, PARK, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort McPherson, Ga., and ordered to Manila, P. I., with Sixteenth Infantry, for duty in Division of the Philippines.

MURTAGH, JOHN A., First Lieutenant and Assistant Surgeon. Relieved from duty on the transport *Thomas* and ordered to Fort Mason, Cal., for duty and as attending surgeon and examiner of recruits, San Francisco, Cal.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon. Relieved from duty as transport surgeon on the *Sherman* and ordered to the United States General Hospital, Presidio of San Francisco, Cal., for duty.

STRAUB, PAUL F., Captain and Assistant Surgeon. Reports arrival at Fort Myer, Va., with squadron, Ninth Cavalry.

DUDLEY—SLINGLUFF.—In Baltimore, Maryland, on Tuesday, February 21st, Dr. Benjamin William Dudley and Miss Ethel Crossall Slingluff.

KIMBALL—GALLOGLY.—In St. Louis, Missouri, on Tuesday, February 21st, Mr. Charles Frederick Kimball and Dr. Cecilia P. Gallogly.

MCCUTCHEON—PHILLIPS.—In Brooklyn, N. Y., on Monday, February 27th, Dr. William Hawthorn McCutcheon and Mrs. William E. Phillips.

Died.

BEAN.—In Waukegan, Illinois, on Wednesday, February 22nd, Dr. L. C. Bean, in the eighty-fifth year of his age.

BERRY.—In Anita Springs, Kentucky, on Tuesday, February 21st, Dr. James T. Berry, in the sixty-fifth year of his age.

BOON.—In Chetopa, Kansas, on Monday, February 20th, Dr. G. D. Boon.

BULLITT.—In San Antonio, Texas, on Thursday, February 9th, Dr. Cuthbert Bullitt, in the eighty-fourth year of his age.

CLAIBORNE.—In Petersburg, Virginia, on Friday, February 24th, Dr. John Herbert Claiborne, in the seventy-eighth year of his age.

CLARK.—In Colorado Springs, Colorado, on Friday, February 17th, Dr. C. E. Clark, in the forty-eighth year of his age.

CLARK.—In Pontotoc, Mississippi, on Thursday, February 16th, Dr. Malcolm R. Clark.

DOWNER.—In Newberry, Michigan, on Sunday, February 19th, Dr. F. J. Downer, in the sixty-eighth year of his age.

EDSON.—In Windsor, N. Y., on Thursday, February 23rd, Dr. Isaac C. Edson, in the eighty-second year of his age.

EVERHARDT.—In Detroit, Michigan, on Friday, February 17th, Dr. John F. Everhardt, in the seventy-third year of his age.

FRENCH.—In Denver, Colorado, on Thursday, February 23rd, Dr. Charles Parker French, in the eighty-second year of his age.

HALLEY.—In Kansas City, Missouri, on Tuesday, February 21st, Dr. H. J. Halley, in the seventy-fourth year of his age.

HAMMER.—In Baltimore, Maryland, on Thursday, February 24th, Dr. Milton Elmer Hammer, in the fortieth year of his age.

HYSLOP.—In New York, on Friday, February 25th, Dr. George Lederman Hyslop, in the eightieth year of his age.

LANIER.—In Columbus, Mississippi, on Sunday, February 19th, Dr. Henry M. Lanier.

LEWIS.—In Hubbardville, Kentucky, on Monday, February 20th, Dr. James Fielding Lewis, in the seventy-second year of his age.

LINDLEY.—In Minneapolis, Minnesota, on Thursday, February 16th, Dr. Alfred H. Lindley, in the eighty-fourth year of his age.

O'BRIEN.—In Buffalo, N. Y., on Sunday, February 26th, Dr. Edward C. O'Brien, in the sixty-fifth year of his age.

PENSE.—In Battle Creek, Michigan, on Monday, February 20th, Dr. N. W. Pense.

PIRTLE.—In St. Louis, Missouri, on Sunday, February 19th, Dr. James Taylor Pirtle, in the seventieth year of his age.

PRENDERGAST.—In Brooklyn, N. Y., on Wednesday, March 1st, Dr. John J. Prendergast, in the fifty-eighth year of his age.

PRESCOTT.—In Ann Arbor, Michigan, on Saturday, February 25th, Dr. Albert Benjamin Prescott, in the seventy-third year of his age.

ROBINSON.—In East Freetown, Massachusetts, on Thursday, March 2nd, Dr. William G. Robinson, in the fifty-fifth year of his age.

SCOTT.—In Chillicothe, Ohio, on Saturday, February 25th, Dr. David H. Scott, in the seventy-seventh year of his age.

STAFFORD.—In Rochester, N. Y., on Friday, February 24th, Dr. John Stafford, in the one hundredth year of his age.

WALLACE.—In Pittsburgh, Pennsylvania, on Thursday, February 16th, Dr. Thomas Cushing Wallace, Sr., in the sixty-seventh year of his age.

Births, Marriages, and Deaths.

Married.

COIT—QUACKENBOS.—In New York, on Tuesday, February 28th, Mr. Ralph Bolles Coit and Miss Alice P. Quackenbos, daughter of Dr. John D. Quackenbos.

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WHOLE No. 1372.

Original Communications.

GONOCOCCUS INFECTIONS IN CHILDREN, WITH ESPECIAL REFERENCE TO THEIR PREVALENCE IN INSTITUTIONS AND MEANS OF PREVENTION.*

By L. EMMETT HOLT, M. D.

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This subject is important to several groups of specialists as well as to the general practitioner. The genitourinary and orthopædic surgeons, the obstetrician, the gynecologist, and the oculist are all alike concerned in the manifestations of this form of infection, quite as well as those whose interest lies in pædiatrics. Gonococcus infections in children are not limited to hospital or institution practice, nor even to the tenements, although they are much more frequently seen under these circumstances; but may be met with even in children living under the best surroundings and often where least suspected and hence very frequently are overlooked.

I would like to substitute for the commonly employed terms gonorrhœal ophthalmia, vaginitis, and arthritis, the terms gonococcus ophthalmia, vaginitis, arthritis, or pyæmia, since the old terms strongly suggest a venereal origin for these infections. This I believe is the opinion generally held by the laity, but it is seldom the case. On account of its association I think therefore there will be a positive advantage in our discussion if the old term is dropped entirely.

Perhaps I cannot better introduce this subject than by giving a brief account of our experience with gonococcus infections in the Babies' Hospital for the past eleven years. A history of the first five years is given for the sake of comparison with what followed.

In 1894 no bacteriological examinations were made. A diagnosis of gonococcus vaginitis was

based upon clinical symptoms and hence only the most marked or severe cases were entered in the histories either as vaginitis or ophthalmia. Only 7 cases of vaginitis were recorded, all of these having been admitted with the disease; 4 cases of ophthalmia were admitted, all in newly born or very young infants. The only treatment of vaginitis at this time consisted in the use of boric acid lotion every time the napkins were changed, if the discharge was at all abundant. Napkins were boiled, but no special pains was taken in the disinfection or isolation of cases and there is no record of a patient having acquired the disease while in the hospital.

In 1895 the procedure was nearly a repetition of that of the previous year. The total number of recorded cases was 15; 6 cases of vaginitis and 7 cases of ophthalmia being admitted, and 2 having acquired vaginitis in the hospital.

In 1896: For the first eight months of this year there was no case of gonococcus infection recorded. This year the clinical laboratory was opened in the hospital and microscopical examinations made of vaginal discharges in many of the cases, establishing the fact that cases of vaginitis such as we had been seeing were due to the gonococcus. The total number of cases for the year was only 9; 4 of vaginitis and 2 of ophthalmia being admitted, while 2 cases of vaginitis and one case of arthritis developed in the hospital. The last was a case of gonococcus arthritis and general pyæmia in a little boy, five months old, admitted for marasmus. This child had many joints affected and died of a meningitis seventeen days after admission. Inasmuch as he had occupied the same ward with three marked cases of vaginitis, in two of which the nature of the infection was determined by bacteriological examination, there seems little doubt that the disease was acquired in this way. At the time, however, this possibility was not thought of, but in the light of experience of later years there now seems to be no doubt that this was a case of direct contagion.

In 1897 an increasing prevalence of the disease

* Read before the Academy of Medicine.

was noted, possibly because now bacteriological examinations were more frequently made and we were more watchful for mild cases. There were 11 cases of vaginitis and 6 cases of ophthalmia admitted; 5 cases of vaginitis and one case of ophthalmia developed in the hospital, the latter being in a patient who had also a gonococcus vaginitis. This incident showed the importance of applying napkins to all children no matter what age.

The year 1898 was much like the preceding years, 5 cases of vaginitis and 12 cases of ophthalmia being admitted; 5 cases of vaginitis developed in the hospital. In spite of this rather large number of ophthalmia cases no accident was noted, except in the case of one nurse, whose eye became infected and the sight permanently impaired in spite of early and energetic treatment.

During 1899 we experienced our first epidemic and realized what a scourge gonococcus vaginitis might become in an institution. In the first five months of this year only 5 cases are recorded; 4 of vaginitis and one of ophthalmia. But in the beginning of June three children were admitted and transferred at once to the country branch before it was discovered that they were suffering from vaginitis. All of them came from the same day nursery. These children proved to be the beginning from which there developed a serious house epidemic which continued during the entire summer. Eight other children who were admitted were found to have the disease, and 15 girls contracted gonococcus vaginitis while in the hospital, these being practically all the inmates of one of the cottages.

The united efforts of the physicians and superintendent in quarantine and disinfection proved ineffectual in checking the spread of the disease. No special care was taken this summer to exclude cases of gonococcus infection from the admission ward in the city, but as soon as cases were discovered after they were sent to the country they were immediately transferred to the infected cottage. The means of prevention employed at this time consisted in separate nurses for infected cases and boiling and disinfection of the napkins. The napkins of the infected cottage were washed separately from the others. Yet in spite of these precautions every girl placed in the infected cottage, which was a dormitory for the larger children, contracted vaginitis. Occasionally a case would break out in one of the other cottages, but immediately was transferred.

The type of disease seen in this epidemic was moderately severe, most of the cases being characterized by a profuse discharge of yellowish

green mucus. Owing to the fact that special precautions were taken not a single child or nurse contracted ophthalmia.

The experience of this summer made a deep impression upon all the physicians and nurses at the hospital. Care was taken that no children should be returned to the city hospital from the country branch. At the end of the season not only napkins, but all bed linen, blankets, and children's underclothing were boiled, then fumigated, and all the wards, closets, etc., were cleaned and submitted to as thorough a fumigation as after scarlet fever.

Greater care and watchfulness were exercised from this time forward regarding the admission of infected children to the wards; a few such, being found to have the disease, were when possible immediately discharged, or at once quarantined, and for the time no more cases of ophthalmia were received. The result of these efforts was that for the rest of the year 1899 and during the whole of the year 1900, a period of sixteen months only, 10 cases of gonococcus infection were recorded, 4 of these being admitted, and 6 having acquired the disease from them.

The year 1901 was almost a repetition of 1899. Very little trouble was experienced in the city hospital with the gonococcus infections during the first five months. There were 11 cases recorded, 6 patients being admitted. Unfortunately one child, a girl of two years of age with gonococcus vaginitis, was sent to the country branch, where on account of her other ailments she was retained for three months, and we innocently received from another hospital in New York two children, both of whom were found to be suffering from gonococcus vaginitis. These three cases proved to be the starting point of another house epidemic, and 22 cases of vaginitis occurred during the four months of summer, 14 developing the disease in the house. The same inability to check the spread of the disease among the children who occupied the infected cottage was experienced as two years previously, so that it became necessary in the middle of the season to stop admitting female children altogether. On reopening the city branch of the hospital in the fall, the disease was quickly brought under control and during the last three months of the year only three children acquired it, although five were found to be suffering from it on admission. When at its height in the summer no amount of napkin disinfection had any effect in checking it, and a general house infection seemed to be the only explanation of the development of these cases.

The record for the year 1901 was: Total 47

cases, 16 cases of vaginitis being received and 22 developing in the wards; 6 cases of ophthalmia admitted and 3 cases acquired. Four children with ophthalmia had also vaginitis, but in three it is interesting to note the ophthalmia appeared before the vaginitis.

In the first five months of 1902 only 3 cases of gonococcus infection were recorded, 2 being admitted with vaginitis and one having acquired the disease. More stringent regulations were now enforced regarding the admission of children, particularly those who were to be transferred to the country. Yet notwithstanding these precautions, 6 children with vaginitis were unintentionally admitted at various times during the summer, 3 of these having been received from other institutions. These were quarantined as soon as they were discovered, but 11 secondary cases occurred.

The development in the wards of 3 cases of multiple gonococcus arthritis was a new phase of the disease, especially as one occurred in a male infant only two and a half months old and another in a female infant of one year, without vaginitis, and none of the children had ophthalmia. All these cases were confirmed by bacteriological examination. They forced us to seek for some other portal of entry for the organism than the eyes or the vaginal mucous membrane. The first case seen occurred in a child three months old, whose symptoms so closely resembled acute articular rheumatism that she was treated with salicylates until suppuration of the joints became so evident that a needle was inserted and pus containing gonococci withdrawn.

In November, 1902, the new building of the Babies' Hospital was opened, and into our paradise the serpent came in the form of a child with a severe gonococcus vaginitis, who was unintentionally readmitted as she had been known as an intractable case during the previous summer. Although no other cases of vaginitis were received, and but one ophthalmia, during the next few weeks with absolutely clean new wards 11 fresh cases developed, including 3 of gonococcus arthritis, all in boys under two and a half months old. In spite of all the precautions taken it seemed almost impossible to check the spread of the infection. For a time female children were refused admission unless suffering from urgent symptoms requiring hospital treatment, and if then received were put in the infected ward and kept there in quarantine. At first we allowed male children to remain in the same ward with cases of vaginitis, until the occurrence of arthritis indicated their susceptibility. Every imaginable mode of spreading the disease was taken

up for consideration and precautions enforced. These will be discussed later.

Our experience of the first six months in the new hospital building emphasizes more forcibly than anything else can do how extremely contagious is this form of infection and how difficult to control. During this period from 5 cases admitted there developed 29 cases of vaginitis and 8 cases of gonococcus arthritis; one case of ophthalmia was admitted, none acquired.

During the following summer, 1903, renewed precautions were taken to prevent the spread to the country branch, but here accidentally infection was introduced by a child admitted from another hospital. The summer cases, while not quite so numerous as were those of the two previous years, were still sufficient to cause us great anxiety. Six cases were admitted and 24 acquired. The same precautions as heretofore were taken and more energetically carried out; however, it was found impossible to prevent their contracting the disease when occupying a cottage where there were cases of gonococcus vaginitis. The city hospital was not closed during this year, and consequently we were never at any time entirely rid of the infection there.

The record for the year was: 10 cases of vaginitis admitted, 55 acquired; 1 case of ophthalmia admitted, 1 acquired; 2 cases of arthritis admitted, 10 acquired. It should, however, be stated concerning these figures that the larger number of vaginitis recorded is in part to be explained by the fact that routine examinations at the house were regularly made and many mild cases discovered which without such examinations would not have been recognized as gonococcus infections. Such were fully 60 per cent. of the vaginitis cases.

In the early part of 1904 there was a continuance of the epidemic of the winter of 1903, but from the first of April until the end of the year the cases admitted were few and any general extension of the infection readily prevented by the adoption of the most rigorous measures with the appearance of the first cases.

A new rule was inaugurated during the summer, viz., admitting no female child without a microscopical examination of the vaginal secretion and refusing infected children unless they were in urgent need of hospital treatment, under which circumstances they were received and placed in quarantine.

The record for the year 1904 was: total number of cases, 52, of which there were 46 cases of vaginitis, but only 16 of these would have been diagnosed as such without a bacteriological examination, the amount of discharge being so

slight that they would easily have been passed over had we relied upon the clinical condition. One case of gonococcus ophthalmia was admitted and 6 cases of gonococcus arthritis developed in the wards.

Such is a brief summary of our struggle to combat this form of infection in the Babies' Hospital during the past eleven years.

The impression having gained a certain currency that this institution has had more vaginitis and other forms of gonococcus infection than other institutions of the city receiving children, I have been at some pains to ascertain what conditions prevailed elsewhere. The conclusion has been that there has not been more vaginitis in the Babies' Hospital than in other institutions for children, but since the adoption of vigorous measures of quarantine and treatment much less than most of them.

In seeking to determine how much vaginitis existed elsewhere I have not depended upon annual reports, for it is seldom even mentioned there. Occasionally physicians, but more frequently head nurses and hospital superintendents have been our informants. These have come to us from almost every large hospital in the city, endeavoring to learn what they could do in their own institutions to eradicate this form of infection from their children's wards, since they found it almost constantly present. Another source of information has been the infected cases which we have received from other institutions, the list of which includes almost every large hospital in New York; we have received also very many more cases from the day nurseries. The matrons and managers of these institutions are I believe seldom aware of the prevalence of such a form of infection and of its very contagious character. Possibly from motives of modesty or fearing publicity cases of vaginitis have been concealed or ignored. Besides the above sources of information, bacteriological examinations have been permitted in three institutions for children by our resident physician, Dr. Dorothy Reed, who with Miss Wheeler, the superintendent of the Babies' Hospital, has worked most indefatigably in the solution of this problem. To them I am indebted for many of the details presented in this paper.

The institutions selected were of different kinds, and it was thought might give some idea of how generally prevalent gonococcus vaginitis is.

I. An institution receiving infants and young children. No isolation is practised; no examination of vaginal discharge on admission. The only treatment employed is douches where the dis-

charges are noticed. The authorities stated that there was no vaginitis in the house.

Smears were made from the vaginal secretions of 100 infants and young children, the cases being taken in order; no selection was made.

Findings.—Twelve children showed a yellow purulent discharge. Pus and gonococci were found in all by microscopical examination. Twenty other cases showed a very slight discharge; the microscope revealed many pus cells, but no gonococci. A considerable proportion of cases like this from our previous experience we have found subsequently show organisms if repeated examinations are made.

II. An institution receiving infants and young children. Smears are reported to be made on the admission of children, and cases are said to be isolated when recognized. The authorities conceded the existence of two cases of vaginitis.

There were 56 children examined. Smears in 6 cases showed gonococcus and vaginal discharge of pus; in 4 it was abundant. In none of these cases was any attempt at isolation made. Numerous pus cells were found in the secretion of 13 other children, but no gonococci were present. They may justly be regarded as suspicious cases. The superintendent of this institution regretted she did not know the time of the intended visit, that the children might have been previously bathed.

III. A home for children from two to ten years old. No microscopical examinations are made; children are quarantined for six weeks before they are received into the general household. Careful inspection is made by an efficient superintendent twice a week for vaginal discharge. She reports that during her residence of seventeen years there has never been an epidemic of vaginitis.

Smears were made from the vaginal secretion of 77 children; 2 positive cases found, i. e., purulent vaginitis with the gonococcus present in the smears. There were 10 suspicious cases, i. e., considerable pus in the discharge, but no specific organisms found.

This was a remarkably clean house and the children showed every evidence of being well cared for.

It will I think be evident from these facts that gonococcus infections, especially vaginitis, are exceedingly frequent in institutions for children, highly contagious, and very difficult to control. I cannot resist the conclusion that they are steadily increasing in New York city. In a single day in the summer of 1904 five children who applied for admission were found to be suffering

from gonococcus vaginitis; this was of course an exceptional experience. Usually in summer several such cases are discovered each week; in the winter there are not generally so many, but there are rarely less than five or six a month among an average of 125 applications.

Of the greatest difficulties in eradicating gonococcus vaginitis from institutions is due to the prolonged duration of the cases and the obstacles in the way of complete cure. Where this infection is known, it is justly regarded as the *bête noire* of institutions for children, the importance of which has only just begun to be appreciated.

CLINICAL MANIFESTATIONS.

The statistics previously presented in the paper relate only to the three principal clinical forms of gonococcus infection which we have observed: vaginitis, ophthalmia, and arthritis. It should be remembered that these observations have been made upon infants and children up to three years of age. Besides these, three cases of meningitis occurred in children suffering from gonococcus arthritis, in no one of which, however, was the gonococcus found in the meninges, one was staphylococcus, one is put down as pneumococcus. As this was several years ago this may possibly be regarded as doubtful; in the third no bacteriological examination of the exudate was made. In two instances abscesses containing the gonococcus elsewhere than in the joints were observed, one in the axilla and one in the wall of the trachea, to which I shall refer in another connection. Only one case of gonococcus urethritis in a male child was seen; this boy, two years old, was admitted with it and a clear history was obtained of infection in his home. There were no instances of endocarditis or pericarditis, of peritonitis or pelvic inflammation, and none of proctitis.

Vaginitis.—There were in all 273 cases of vaginitis observed, 101 of which were admitted with the disease and in 172 cases it was acquired. In well marked cases of gonococcus vaginitis in young children the symptoms are fairly easy of recognition. The discharge is moderately abundant, of a yellow or greenish yellow color, occasionally tinged with blood. An extension of the inflammation to the uterus, tubes, and peritonæum we did not observe, nor was cystitis met with; urethritis also was not common and seldom severe.

In the milder cases in infants the discharge may be so slight as to escape observation except by close inspection. If in such cases careful attention to cleanliness is practised the disease may remain unnoticed for a long time. The detection of such cases we have found to be facilitated by placing

between the labia a fold of gauze upon which the yellow discharge can readily be seen. The hospital nurses are instructed to report such a condition and the microscopical examination almost invariably establishes the fact that with such discharges the gonococcus is present.

The question has often arisen whether these mild cases which remain mild are really cases of gonococcus vaginitis. There can I think be no doubt upon this point, both from the bacteriological examinations and from the clinical course, since some such cases may if neglected grow worse and develop into a typical form of the disease. The infection seems to be due to a less virulent type of organism, or else the local conditions do not favor its growth. At all times in the hospital mild and severe cases have been found associated, exactly as they are seen in other forms of infection. Constitutional symptoms with gonococcus vaginitis even when of a severe form are very few and insignificant; seldom was there a temperature noted over 101°.

A few words may be permitted about the microscopical examination of smears from vaginal secretions. It is well known that the gonococcus is a diplococcus which decolorizes when stained by Gram's method; also that to be diagnostic it must be found within the pus cells. It is characteristic of gonococcus vaginitis that this organism, though existing in large numbers, is usually the only variety present, which fact materially assists in diagnosis. If there are many varieties of bacteria in a vaginal secretion, the case will seldom be one of gonococcus vaginitis. If pus is found and few organisms detected, it is probably a case of gonococcus vaginitis, even though pus may be small in amount; in such cases subsequent examinations usually reveal the gonococcus. It has been the custom in the Babies' Hospital to class as "suspicious" all cases of vaginal discharge in infants in which many leucocytes were present, most such turning out to be genuine cases. In our experience a non-specific purulent vaginitis has been uncommon, such cases forming hardly five per cent. of the vaginitis cases seen in the hospital.

One of the most troublesome features of gonococcus vaginitis is not its severity, but its intractability. Frequently cases that were only moderately severe would continue for six or eight weeks in spite of constant local treatment. One of the greatest difficulties is in the use of proper local measures in these very young patients.

Ophthalmia.—I have nothing to add to what is well known regarding the gonococcus ophthalmia of young infants. Early in the history of the hos-

pital it was customary to admit these cases in small numbers, almost all of them being in newly born children and of a very severe type. We do not now receive these cases, for although hospital treatment is absolutely necessary, they can be best cared for in special hospitals for diseases of the eye. It is gratifying to record the fact that during the eleven years there were only 6 children who contracted gonococcus ophthalmia in the institution, and as 4 of these had also a gonococcus vaginitis they may be considered cases of autoinfection. Only one nurse became infected.

Arthritis.—On account of the acute febrile nature of the joint symptoms accompanying gonococcus infection these cases may perhaps be more exactly characterized as gonococcus pyæmia. Clinically this was the most interesting phase of the gonococcus infection observed in the Babies' Hospital. Dr. R. B. Kimball has already made a report upon 8 of these cases,¹ but a study of the entire series of 26 is interesting, since I believe that nowhere in the literature of gonococcus infections is there a record of so large a group of cases of this kind in a single institution.

It is a striking fact that 19 of these were male children and 7 female. Four of the females suffered also from vaginitis, while in only one of the males was there other clinical evidence of gonococcus infection, this patient having also ophthalmia.

Sixteen of these joint patients were three months old or under, two of them being under one month; one of these was the boy with ophthalmia and the other had also vaginitis. Five cases occurred between the fourth and sixth months, three in the second and two in the third year.

A single joint only was involved in but 5 cases, twice the knee, and once each the ankle, wrist, and metacarpus. Three or more joints were involved in 16 cases, the largest number being 8 joints, viz., both wrists, both ankles, both knees, one shoulder, and one temporomaxillary. In most of the cases four or five joints were affected. The order of frequency in which the joints were involved was as follows:

	Times.
Finger or metacarpal.....	20
Ankle.....	18
Knee.....	17
Wrist.....	12
Toe or metatarsal.....	10
Shoulder.....	9
Elbow.....	5
Temporomaxillary.....	1
Hip.....	1

¹ Medical Record, 1904.

The local symptoms were best seen in the superficial joints, such as ankle, wrist, or knee. There was a rapidly developing articular swelling with early redness, very acute tenderness and, in the cases going on to suppuration, usually fluctuation at the end of a week. There was not much œdema or swelling in the neighborhood of the joints, but all the usual characteristics of an acute pyæmic arthritis were seen. I cannot state accurately the number of joints in which the inflammation terminated in suppuration, but fully one third and I think rather more than this resolved. The pus drawn by a needle or evacuated by incision was more frequently a thin seropus than thick and creamy. The diagnosis of gonococcus infection was determined by bacteriological examination in every case.

The general symptoms were of a pyæmic character. Of the 21 cases in which temperature charts are preserved, the fever reached 103° or over in 15 cases; in 5 it was 104° and in one 105°. The usual range was between 100° and 102° or 103°. The temperature curve was an irregular one, exacerbations in the fever occurring very often as the successive joints became involved. The fever lasted in one case for eight weeks; in nine cases either three or four weeks, in four cases two weeks, and in seven but one week. The other symptoms were wasting, prostration, and exhaustion. Fourteen of the children died and twelve recovered or were discharged and subsequently lost sight of. In many of the cases death was not due to gonococcus pyæmia, but to the condition of general marasmus with which it was often associated.

The pathological process in the joints in so far as we had an opportunity to observe it was an acute inflammation chiefly affecting the synovial membrane, rarely involving the cartilage or other joint structures and no destructive changes were observed. A very considerable number, but not all of those which survived, were followed, so that the ultimate result of the joint inflammation could be obtained, some being seen as late as a year after the attack. There was complete recovery of function in many and slight stiffness in a small number, and marked fibrous ankylosis in only one or two. In none was bony ankylosis seen. In children whose general condition was even fairly good, early incision and washing out usually sufficed for a rapid cure, and in some incision only was practised and the joints were healed inside of a week. Prolonged discharge with the formation of sinuses was not seen.

The difficulty in diagnosis in some of these cases has already been referred to, the first case

seen very closely resembling acute articular rheumatism. The latter disease, however, is so exceedingly rare in an infant under a year that a pyæmic arthritis should always be suspected with such symptoms as those which we have described. A pyæmic arthritis in a young infant I believe is very much more frequently due to the gonococcus than to the streptococcus or any other pyogenic organism.

(To be concluded.)

THE AFTER-TREATMENT OF ABDOMINAL SECTIONS WITH ESERINE SALICYLATE.*

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Having, in two previous papers,¹ gone somewhat explicitly into details as to the mode of origin and the physiological and pathological modus operandi of postoperative intestinal paresis, together with the exact physiological action and therapeutics of eserine salicylate in antagonizing such paresis, I have determined, in order to keep this paper within proper time limits, notwithstanding the generous liberality of your chairman in assigning me no hard and fast time limitation in his invitation to appear before you, to confine my remarks upon this occasion to the actual details of the after-treatment of abdominal sections with eserine salicylate. This is fortunately rendered the more easy by the receipt of numerous letters of inquiry and still more by personal discussion with the members of the Southern Surgical and Gynæcological Association at their recent meeting. It shall be my purpose to elucidate such points as have been ill understood or misunderstood so far as they shall have come to my knowledge. And inasmuch as most if not all of the disappointments of which I have learned have originated in a misapplication of the principles involved, this brings me thus early to the point of urging upon any one who may deem this method of treatment worthy of a trial the close following of the suggested line of procedure, which is the result of many months of careful experimentation, until such time as thorough familiarity may suggest changes or improvements. The advisability of this course is shown by such articles as that by Pankow,² in

which, through an incorrect employment of eserine, his deductions appear worthless. In the first place he used too small doses to get uniform results, and in the second he classified his cases so badly as to demonstrate the fact that his variable results were in no wise dependent upon the failure of eserine as used, or rather misused, by him. The too small doses employed by Pankow were at one time used in my own experiments and nearly led to the abandonment of the entire work. Lastly, he classed the intestinal action following one hundred Alexander-Adams operations with the abdominal sections. Needless to say, if the Alexander-Adams technics was followed no cause for postoperative intestinal paresis existed. Pankow's work was undoubtedly inspired by the work of von Noorden and Oppenheim with eserine, rather than by mine.

While speaking of the dosage permit me to explain that there is and should be no one routine dose, but the amount employed should be adjusted, whenever possible, to the demands of the individual patient. Inquire carefully into the general state of the ordinary bowel activity and in a patient giving a history of normally active bowels, in whom the bowels are always readily influenced by relatively small doses of cathartics, one sixtieth of a grain is usually all sufficient, especially if the bowels are fairly or thoroughly empty at the time of operation. When used in this small dose it may be repeated even in a very short time if it is found that the judgment is at fault and the dose too small.

If, on the other hand, the patient gives a history of chronic constipation, the full therapeutic dose of one thirtieth of a grain should be used, and if it is clearly shown that the constipation is due to atony of the intestinal muscles or if the patient has been persistently dependent for a considerable time upon frequent enemata, a larger dose, one twenty-fourth, or even one twentieth, of a grain should be given.

Lastly, in a third class of cases in which, owing to a lack of time or to a lack of adequate intelligence on the part of the patient, no satisfactory bowel data can be obtained, it is best to give a medium dose of one fortieth of a grain, and repeat at the first indication that the dose has been inadequate.

I thus speak of the repetition of the original dose, but as a matter of fact, since arriving at a thorough understanding of the correct dosage, repetition has been very rarely indicated.

Moreover, eserine salicylate should never be thus used except in conjunction with atropine, be-

* Read by invitation before the New York Academy of Medicine, Section in Obstetrics and Gynæcology.

¹ The Prevention of Postoperative Intestinal Paresis and Adhesions. *Am. Jour. of Obstet.*, etc., April, 1904. Postoperative Intestinal Paresis, *Am. Jour. of Obstet.*, etc., September, 1904.

² *Zentralblatt, f. Gynäk.*, June, 1904.

cause, as shown in my original paper, atropine systematically antagonizes all the undesirable actions of eserine and vice versa, while they unite in stimulating intestinal peristalsis. This latter action of atropine has recently received emphatic confirmation in an elaborate series of experiments by Riedel³ who has thus shown that atropine always stimulates peristalsis whether the dose is the minimum which will produce any effect or one so powerful as to be fatally poisonous.

The eserine should be administered subcutaneously. No advantage has been seen in giving it deeply in the muscles.

The time of its administration is of prime importance. The atropine should always be given, as it is so commonly used by surgeons generally, before the anæsthesia, first, because its action is slower than that of eserine, and, secondly, because when so used it gives great aid to the anæsthetist in doing away with most if not all of the excessive pharyngeal secretion excited by the first inhalations of the ether. I give the atropine in a dose of one one hundredth of a grain by the mouth one hour before anæsthesia when there is time, otherwise one one hundred and fiftieth of a grain subcutaneously immediately before. I do not find that it greatly matters which course is pursued.

The chosen dose of eserine is placed in a hypodermic syringe while the patient is being prepared for the abdominal incision, and is kept warm and ready for instant use. As soon as practicable after the opening of the peritoneal cavity, the entire field of operation is explored, and if no condition is found which offers the slightest possibility of jeopardizing the integrity of the intestinal tunics below the peritonæum, the eserine is ordered to be administered at once. In pelvic surgery it is not uncommon to order the eserine from two to five minutes after the initial incision through the parietal peritonæum.

But just here is where some have misinterpreted me in thinking that I advocate its administration at this point in all cases, which I do not. Others have tried to improve the whole matter by giving the eserine before the operation is begun, but such a practice cannot, in my opinion, be too emphatically condemned, because, while well maintained or quickly restored normal peristalsis is a boon to both surgeon and patient alike in the vast majority of cases, it is none the less true that there is a well defined class of cases, of which instances are unexpectedly encountered, in which absolute intestinal rest is imperatively demanded, making such an early administration of any form of cathartic unjustifiable. When such

examples are encountered in the course of an operation, the eserine should be withheld until such especial indication for intestinal quietude has passed. Such cases are those in which strong or numerous adhesions are encountered, in the liberation of which the intestinal musculature may be so injured as to render rest necessary, in which case the eserine should be withheld until all adhesions have been liberated without inflicting such injury, when it should be given at once. Also in intestinal resections or anastomosis it should be withheld during the process of healing, just as we have heretofore allowed intestinal rest. There is also a third class of cases in which for one reason or another we are forced to terminate an operation, feeling certain that we are leaving more or less septic material within the peritoneal cavity. In all such no form of cathartic or peristaltic stimulant which would interfere with the protective walling off process should be given. In a letter, Wetherill, inclosing a reprint of his paper, arraigns me for giving eserine "in the face of peritoneal sepsis or inflammation." Unless active potential peritoneal sepsis and infection are to be expected after every aseptic opening of the peritoneal cavity, such an employment of eserine has never been advocated by me, and, while Wetherill and I have points upon which we differ, we at least agree that in the presence of active advancing peritoneal infection or inflammation either the source of infection must be thoroughly eradicated or the walling off process must be favored to the utmost. Whether or not eserine should be used after or during a case in which peritoneal infection or inflammation has been a factor, must be left, as it safely may, to the judgment of the surgeon in each case as to whether or not the source of such infection or inflammation has been so thoroughly removed as to render further intestinal rest unnecessary. It is probable that Wetherill's error as to my views arose from my advocacy of eserine in the prevention of adhesions, but I at no time referred to the form of adhesions which nature throws out as a protective barrier about inflammatory foci, but rather to such adhesions as follow abraded peritoneal surfaces in the course of operations which subsequently prove to be at least practically aseptic; in other words, to the same class of adhesions for which careful peritoneal covering of all raw surfaces is practised, for which the omentum has been stitched over the raw surface, and for which the Cargile membrane has been used. Certainly we all agree that this class of adhesions may with safety be eliminated by any means not involving greater danger than the adhesions themselves.

³ *Rousky Vrach.*, June, 1904.

Then, too, the necessity of eserine in every case has been questioned, and here, again, I have been misinterpreted. Stone, in a paper yet to be published, but presented at the recent session of the Southern Surgical and Gynecological Association, cites me as expecting intestinal paresis after each and every abdominal section. Yet such is not and never has been my position. What I do maintain is that it is a fact that the abdomen is never opened without in a greater or less, usually less, degree inhibiting normal peristalsis. The cases in which this inhibition reaches the point of becoming a fatal or even dangerous paresis are exceptional, but they do nevertheless occasionally occur, and when such a case is encountered I know of no condition which so completely demonstrates, both to the surgeon himself and to all concerned with the patient, the surgeon's utter impotence to combat it. Moreover, it is impossible from the most minute study of the literature of the subject, the reports of such fatal cases, or the histories of patients about to be subjected to operation to forecast in the least degree which cases will develop such a paresis. Therefore, when we possess a preventive remedy so absolutely harmless as eserine salicylate, used in conjunction with atropine has proved, we are not only justified in employing it in each suitable case, but it is a question if it is justifiable to omit its use.

Without going into details, which have been elsewhere given, the manner in which eserine prevents intestinal paresis is briefly as follows: The exposure of the visceral peritonæum to the lower temperature, to the drying of evaporation, and above all to manipulation immediately establishes an irritation of the sympathetic nerve terminations in the intestine, which, generating a centripetal nerve impulse immediately, in turn invokes a marked reflex inhibition of all muscular movement, which reflex inhibition is conveyed to the bowel over the fibres of the splanchnics. But in Auerbach's and Meissner's plexuses the intestine has been shown to possess a nervous mechanism which is so powerful as to render it absolutely autonomous when freed absolutely from all central nervous connection. Therefore the moment splanchnic inhibition is instituted the ganglia of Auerbach's and Meissner's plexuses institute a nugatory muscular excitation, and in the overwhelming majority of cases the force in these intrinsic plexuses is so much more than equal to the task of overcoming the splanchnic inhibition that, after a temporary battle, the normal peristalsis is completely restored, which is materially aided by the fact that the splanchnic inhibition apparently ceases promptly upon the restoration

of the visceral peritonæum and intestine to their normal conditions as to temperature and manipulatory irritation. But it is in those cases in which either the splanchnic inhibition is abnormally persistent or the intrinsic resistance is abnormally weak that a serious degree of paresis results and in which eserine is able so to equalize these forces as to prevent serious symptoms.

This form of peristaltic arrest is, therefore, of an entirely different mode of generation from that instituted by nature apparently for the protection of infected or inflamed peritoneal areas. For while it is entirely true that absolute asepsis is probably never achieved, it is also as certainly true, as demonstrated by innumerable cases in which, for one reason or another, the abdomen has been reopened both early and late after abdominal sections in which eserine has not been used, that asepsis has been sufficiently complete to leave no traces of peritonitis behind, and in my cases in which I have used eserine the charts have failed to show any additional labor on the part of the organism in disposing of the minimal quantity of infection introduced. Indeed, on the contrary, thanks, as I believe, to the omission of the depletion of the blood stream by saline catharsis, the charts have been noticeably better, the so called "reaction" temperature, which is probably in reality an index of the work of "resistance" in disposing of the infectious material introduced, has been less both in degree and in duration.

To quote Wetherill once more, he further says: "Nobody maintains that autointoxication from intestinal decomposition and extreme distention of the abdomen from tympanites, aperistalsis, and antiperistalsis, are not dangerous in themselves." He further says, very correctly, that when a choice is forced upon us between treating this condition and that of peritoneal infection and inflammation we must certainly give the latter first consideration. To this I emphatically assent, but in the absence of this latter, at least in any potential degree, are we to neglect the former? Wetherill says yes and I say no.

The last point in his paper which I wish to mention here is the following statement: "Even aperistalsis, or so called reversed peristalsis, is not without its beneficent agency in so far as it serves to empty the intestines of decomposing and fermenting materials which are producing autointoxication." This statement is remarkable, as he uses it, as he apparently fails to take into consideration that muscular activity and intestinal movements are as active, and indeed often abnormally so, in forcing the intestinal contents upward, if we admit the occurrence of "reversed

peristalsis," which is denied by some able observers, as in passing these contents in the normal direction. As such activity would be as fatal to peritoneal and intestinal rest as any other, he appears to be hoist with his own petard.

To return to our subject, eserine belongs to the same group of spinal depressants as pilocarpine, and one of its most marked effects, usually accomplished within fifteen minutes of its administration, is the great diminution of the activity of the spinal reflexes. It thus plainly lessens the activity of the reflex centres in which our splanchnic inhibition is generated and thus relieves the intrinsic plexuses. But this is only one of its actions. Eserine has long been known by oculists to possess a selective action upon the ciliary muscle causing a marked narrowing of the pupil, and it possesses an equal if not greater selective activity upon the intestinal musculature. Whether the action is direct upon the muscle fibre or upon the delicate nerve termination within it, is not known and does not affect our purposes. Thus, not being satisfied with relieving the intrinsic plexuses of their task, it endows their muscles with a capacity for performing far more work than is demanded of them even under such exceptional circumstances.

This process of inhibition and its combating is exactly analogous to the processes of infection and resistance, except that it is far more readily explained, in which infection figures as the analogue of the splanchnic inhibition, and resistance as the analogue of the intrinsic nervous and muscular activity.

Some have preferred, even in those cases in which none of the mentioned contraindications to postoperative peristalsis exist, to delay the administration of the eserine until a later period varying from the time of the patient's return to bed to her return to consciousness or even later, but to what purpose I have yet to learn. To me it seems irrational procrastination. What is gained by allowing the contention between activity and inhibition to go on? So far as is apparent it can result merely in the exhaustion of both, and it certainly seems unwise to weary the intrinsic plexuses and then stimulate the muscles when the former seems so easily avoidable.

If the administration of the eserine involved even one detrimental result, always be it understood in proper cases, this procrastination would be justified; but quite the contrary has been my experience. The lack of interruption of peristalsis, or its prompt restoration, has in my cases, and in those of a no less keen observer than Dr. John C. Da Costa, markedly lessened postopera-

tive vomiting, and its action, analogous to that of pilocarpine, causes a considerable degree of pharyngeal moisture which, doing away with the no longer desired throat dryness induced by the early administration of the atropine, relieves the thirst so commonly experienced.

The only untoward effect which has ever been reported to me was that of a sensation of marked weakness and muscular depression, which was very transient and occurred in a case in which no atropine was given.

It certainly seems, then, that the routine administration of eserine is justified in all cases except those stated, with the object of rendering recovery easier for all and occasionally saving a life by preventing postoperative paresis.

The concomitant treatment after the administration of the eserine differs in no way from that ordinarily followed, except as to the omission of cathartics. No such cathartic is administered by the mouth until especially indicated. In my earlier report upon this use of eserine I was quite insistent upon the use of sufficient doses to excite so active an intestinal movement as to give rise to audible or at least perceptible peristalsis. This I no longer expect nor exact, although there have thus far been no harmful results from thus stimulating the bowel, yet it is in excess of the normal activity and therefore not to be especially desired.

If normal activity is restored we have absolute indication of the fact, even in the entire absence of all rumblings, in the practically entire abdominal comfort of the patient with a soft, absolutely undistended abdomen. If a binder is employed about the abdomen it will be found too loose at the end of from twelve to twenty-four hours instead of tightly distended by a more or less tympanitic abdomen as was formerly the rule. Two explanations present for this entire lack of intestinal distention and I am unable to select the correct one. First, Wood says that eserine increases the intestinal secretions. This might lessen fermentation and so lessen distention. On the other hand, it is generally conceded that any bolus within the intestinal lumen constitutes the best of all stimuli of peristaltic contraction. Postoperative distention may, then, be due simply to fermentation or it may be nature's way of providing such a stimulant bolus. In this case the absence of the bolus is due to the absence of indication, as peristalsis is well maintained without it.

My indication for the administration of a further postoperative cathartic is the least degree of intestinal and abdominal distention, when an enema of suds, salts, and glycerin will usually be

found all sufficient. But such enema need not be given unless specially indicated. The same treatment is instituted if the ordinary symptoms of copræmia supervene, such as a coated tongue, a bad breath, or a headache. Under such circumstances if any treatment in addition to the enema seems required I usually administer a tablet containing aloin, one fifth of a grain; strychnine, one sixtieth of a grain; extract of belladonna, one eighth of a grain, and eserine salicylate, one hundredth of a grain. These may be used just as the ordinary aloin, strychnine, and belladonna tablets are used.

If the patient seems in every way well and there is no abdominal distention, there need be no haste about getting a bowel movement upon any particular day, and my charts show that the first movement has occurred at periods varying from eight hours to the fourth day after operation with no perceptible difference in the ultimate or immediate condition of the patient. Full house diet is usually allowed upon the fourth day, and if the bowels have not moved up to this time they will usually do so promptly as the result of the alimentary residue thus supplied. While in no case, since the employment of proper dosage, in which, through the immediate urgency of the symptoms, no bowel preparation has been carried out, has it failed to thoroughly evacuate all bowel contents within from eight to forty-eight hours, I do not yet feel it advisable to deliberately omit a rational bowel preparation. Any other details of management may be in accordance with the individual preferences of the surgeon and need no discussion here.

Just a word should be said, however, as to the eserine to be employed. Eserine, being as it is a vegetable active principle, an occasional failure of action may be expected, although not one has been personally experienced since the dosage of the drug has been managed as above. But certain precautions seem imperative. Only eserine (physostigmine) salicylate should ever be used. The sulphate is so soluble as to be practically deliquescent, and is extremely unstable and unreliable. The various preparations of physostigma itself should not be used, as they contain calabarine, which is strongly depressant and tetanizing, and is the portion of the drug which gave it its vogue as the "ordeal bean" of Africa.

No stock or operating room solution of the salicylate should be used, as it deteriorates in a very few hours so as to be unreliable and therefore dangerous. The hypodermic tablets of some thoroughly reliable maker should be obtained in the small tubes direct from the maker unless

every confidence is felt in the local druggist. Tablets kept in a retail druggist's stock for two months have proved perfectly active.

The most striking feature of all cases in which the foregoing suggestions are employed is the very unusual comfort and well being of the patient. Morphine has been very rarely needed or even desired, except for distinctly extraabdominal pain, but when so demanded either morphine or codeine can be given with greater freedom than without the eserine, as there is less danger of obnoxious constipation following its use.

386 COMMONWEALTH AVENUE.

Zomotherapy in Pulmonary Tuberculosis.—

Philip, in the *Practitioner*, for January, 1905, defines zomotherapy as the systematic continued exhibition of raw meat or muscle juice in the treatment of disease. Its form and dosage are to be regulated as the exhibition of any drug is regulated. It was placed on a scientific basis by Héricourt and Richet.

Its therapeutic efficacy depends on the presence of certain ferments, or on the production of certain substances resulting from the special stimulation.

Muscle tissue of all the living tissues is that on which the tubercle bacillus finds the greatest difficulty of implantation and development.

Galbraith's experiments showed that: 1. The exhibition of raw meat was followed by a marked increase of nitrogen retention, provided the heat value and nitrogen of the diet exceeded the actual requirements of the individual per kilo of body weight. 2. Intestinal metabolism was improved, an improvement which continued for some time after return to cooked meat. 3. There was a rapid increase in hæmoglobin. 4. Digestive leucocytosis was remarkably increased.

The method of treatment was as follows: 1. Pounded fresh raw beef, slightly seasoned with salt, one half pound, two or three times daily, cold or gently warmed. 2. Beef juice, one half pound of meat, one half pint of cold water, one half teaspoonful of salt, percolated through a linen cloth one and a half to two hours, at 100° F. 3. Raw meat soup made from one half pound minced fresh meat mixed to a paste with milk, one half pint of milk at 150° F. being added. 4. One to three raw eggs with salt or pepper. This treatment was very efficient in the early stages of the disease. Anæmia disappeared, the tissues became firmer, the weight increased, and the pulse rate and temperature diminished. The functions of the stomach and bowels improved, and the hæmoglobin of the blood increased. Quiescence and cicatrization in the lungs became apparent, also similar improvement in the larynx, glands, and intestine. The expectoration together with the bacilli diminished, and the same was true of the other discharges. The principal objections to this mode of treatment are the natural distaste for this form of diet and the danger of introducing intestinal parasites with the uncooked food.

THE NEW YORK BOARD OF HEALTH AND THE ANTISPITTING CRUSADE.

By WOLFF FREUDENTHAL, M. D.,

NEW YORK.

The other day when coming from my clinic I met a gentleman of my acquaintance on the street, and we walked up a few blocks together. All of a sudden I had to expectorate, and did so on the freshly fallen snow. My companion was quite surprised that I, "an up to date, progressive physician," should do such a thing. "Why," he exclaimed, "only yesterday there was a meeting of prominent medical men and all agreed as to the great danger of expectorating on the streets."

A few days later, I read in a newspaper that the war against spitters was on in earnest. Twenty-five sanitary squad policemen had been detailed to look after this class of offenders during the evenings (!) in the streets of the city, and a large number of arrests had been made! I am sure my friend was delighted over this activity of our health department, while I felt that we were wasting our efforts in an entirely useless and, what is worse, harmful manner. No doubt the majority of my readers will be surprised at the stand I take on this question, but I hope to convince them that I am right. Section 178 of our sanitary code, which I received through the courtesy of the department of health, reads as follows: "Spitting upon the sidewalk of any public street, avenue, park, is hereby forbidden." It is natural to assume that by mentioning the sidewalk first the sanitary board desired to give it the greatest prominence.

As one who has studied for years the ætiology of tuberculosis, I asked myself, Is there any real danger of infection from spitting on the sidewalk in a city like New York? As I have mentioned elsewhere, there are three possibilities to be considered here.

1. The tubercle bacilli contained in some of these expectorations could be inhaled by passers by.

2. They would stick to our shoes and would thus be carried into our homes.

3. It was stated repeatedly that women with their long skirts would sweep the streets, thus carrying the bacilli on their dresses to their houses. The person cleaning such dresses would be exposed to the danger of tuberculous infection.

As far as the writer is able to judge, about one person out of a hundred who frequent our streets is consumptive. This in itself does not make the

danger appear to us great, aside from the fact that nowadays the average physician instructs his consumptive patient that he has no right to expectorate otherwise than into his flask or his handkerchief. Furthermore, it must be remembered that street cleaners who are constantly occupied in sweeping the streets do not suffer more from tuberculosis than other people. Nor are laryngologists oftener stricken with that disease than any other class of men. This proves that the occasional inhalation of a few bacilli will not produce tuberculosis. More is required to do that.

In regard to the second point, let us suppose that somebody does step on sputum containing live tubercle bacilli in walking on the street, thus carrying them to his home. Is it in any way likely that an infection could follow? If so I want to see the first case of infection thus acquired.

Long street dresses certainly do sweep the streets and are a nuisance from every point of view. But what do they sweep up? Is it only what is deposited on the sidewalk, or more? Imagine for a moment a number of dry cold winter days, when the temperature is below the freezing point so that the streets cannot be sprinkled. The dust that is on the roadway is whirled up by the wind, by rapidly passing vehicles, etc., and is widely disseminated on the sidewalks as well as elsewhere. If live bacilli were on the streets or gutters, we ought to find them soon on the sidewalks, too. Thus the trailing dresses will gather these bacilli as well, and then there is danger not only for the one servant who cleans the dress afterwards, but more so for all the unfortunate people who have to walk behind such a dust raising woman. And the question now arises, Is it not better to prohibit long dresses on the street rather than spitting?

It is far more important that the city authorities should try to reduce the dust in the streets to a minimum. How this can be accomplished in winter I am unable to say. But whenever the temperature is above the freezing point much more water ought to be used in cleaning the streets than is the custom in this city. It is nothing unusual to see the street cleaners sweep the streets without first sprinkling them. The time they commence their work is generally when the children go to school. Thus these youngsters get a large quantity of the dust on the streets at that time into their respiratory organs. That is a real danger that should be prevented. If the men have to sweep the streets dry, then let them begin early in the morning or work during the night. If this cannot be done, it is preferable not to sweep them at all. I, for one, should prefer the

dirt on the streets to inhaling it myself or having others inhale it. The dust we get into our throats, and probably our lungs, that dust is the great danger, not the few tubercle bacilli we may occasionally inspire.

This brings us to the question: Is expectorating necessary under the conditions we live in or not? The answer is emphatically Yes! And everything that tends to suppress it will be detrimental. Whether we work in factories, offices, or in hospitals and clinics, a great deal of harmful bacteria and other foreign bodies (soot, dust, etc.) are inhaled. All this must naturally be expelled from the body, for otherwise it becomes dangerous to health. This is accomplished by the action of the ciliated epithelium. These foreign particles are carried away by the current of the cilia which swing from the bronchi towards the nares. Thus "with great intelligence" the cilia sweep out during the night the dust that is inhaled during the daytime; and in the morning it is found deposited at the entrance, when, with a little hawking, etc., it is easily removed. This is the case in many instances. There are, however, a great many people who cannot get rid of the sputum during their morning toilet. They walk a short distance, during which time it is easy for them to expel it. Now, is it not far preferable to eject this sputum into the streets or even sidewalks than into a handkerchief? In the open air the sun, even on cloudy days, or the oxygen of the air, or both combined do all to destroy the bacteria. In the pocket of a person there is every chance for drying the sputum and for the propagation of the bacilli. By repeated use of the same handkerchief the germs can be inhaled with the greatest ease. Thus the greatest danger lies in not expectorating on the street.

The board of health does not forbid expectorating, but its ordinance by creating the impression that spitting at any rate is nothing but a bad habit may work detrimentally. It has done so in cases I have come across in my practice. The majority of these people simply swallow their saliva, which is much worse than spitting on the sidewalks. They are perhaps classical examples of autoinfection.

And now to return to my personal experience with the gentleman mentioned above. He was an exceptionally intelligent man who had acquired that wrong idea about spitting through reading the orders of the board of health, and did not expectorate at all, if he could help it, not even on the middle of the street. From his point of view he was right in being surprised at my spitting on the snow in the street. But what do

we as physicians think about it? Let us consider the case once more. On the afternoon referred to I had been working for more than two hours with several assistants in a closed room of the dispensary. We had treated about fifty patients, and I myself had examined many with follicular angina, diphtheria, influenza, laryngeal tuberculosis, etc. There was no question that many infective germs had located in my throat and nose. Now should I have brought this infective material home to my family, and put the handkerchief into the dry washbasket, where the bacilli had time to develop? I believe that the danger to my family and to the community is far less if such sputum is deposited on the street and sidewalk. Of course, such pronounced cases are not of every day occurrence, and we as medical men know that an infected handkerchief should be disinfected immediately. But how many other people know and are able to do it? The majority of men who go to business in the morning, for example, would carry the infectious material in their pockets all day long. If that is not worse than to have it exposed to the germicidal effect of the air and sun, then I am free to confess I do not know anything at all about medicine.

In factories, sweatshops, and similar closed places it is entirely different. There the antispitting law cannot be enforced too rigidly. In the stations of the underground railroad nobody should be allowed to spit on the floor. But at the same time no dust should be created there by sweeping.

In conclusion I wish to say with gratitude that the horrid custom of spitting on the floor of cars, etc., is a thing of the past. But a law by which a person is dragged to court for spitting on the sidewalk is harmful. It has done harm already by producing a fear of expectorating, and is apt to hurt the masses of the population to a still greater extent in the future.

Woman Founder of Forty-six Hospitals.—The Columbus Hospital, Chicago, which was dedicated and opened on February 26th, is the forty-sixth institution of its kind which has been founded by Mother Superior Francis Xavier Cabrini, head of the order of the Missionary Sisters of the Sacred Heart. It is located at Deming Place and Lincoln Park, and formerly was the North Shore Hotel. It has been rebuilt in part and entirely refitted at a cost of more than \$30,000. Mother Cabrini was born in Lodi, near Milan, Italy, nearly fifty years ago. Pope Leo XIII. became interested in the work of the order of which she was the founder and established a home in Rome for the training of the sisters.

OPIUM SMOKING READILY CURED.

By W. H. JEFFERYS, A. M., M. D.,

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It is not perhaps generally known that "foreign civilization," after being largely responsible for the spread of opium smoking among the Chinese, has been, on the other hand, in a measure responsible for the introduction and now awaits the general adoption of a readily administered and positively efficient cure for the habit.

Morphine is the remedy which is sold in China at the present time as a foreign "sure cure for the opium habit," and a good profit¹ it brings to the manufacturer and to the retailer, for it easily takes in both the dollars and the Chinese. This trade is not, I believe, carried on by any of the respectable druggists in the treaty ports, but is in the hands of dispensaries owned by more or less irregular persons, foreign and Chinese, who handle chiefly patent medicines. (Therein also lie numerous and surprising tales.) It is not necessary to add that morphine proves itself, as advertised, an easily administered and sure cure for the opium habit and gives pretty general sat-

isfaction. Of course it invariably substitutes a well developed morphine habit for the original disease, and this former is in my experience less hopeful of cure than the latter, and the margin of hope in the case of opium is rather to be measured with the micrometer than with the yard stick.

The inevitable result of this practice is an ever increasing number of Chinese with a chronic morphine habit. If it has been acquired in the manner referred to, it may be continued by consumption of the morphine pills, or by hypodermic medication as securable in many of the up to date opium shops and tea houses of Shanghai and the treaty ports. On the other hand, the morphine habit may have been acquired directly in the opium den, even as a primary affection.

It is not easy to gather reliable information concerning these matters. For a foreigner to appear in person would, in the treaty ports, be fatal to the attempt. Some facts, however, come to us directly in connection with our work. Morphine is indulged in largely, not only by the well to do, but also by the coolie class who pay as little as 14 cash (one cent, American) for an injection, which is of sufficient strength to satisfy the ordinary consumer. It is probable that this morphine, so cheap is it, is prepared in Shanghai from the native drug. The well to do may own their syringes and learn to use them with some faint regard to asepsis, or, rather, cleanliness, but in the common shops there is no slightest attempt made to protect the victim. The syringe shown in the photograph (Fig. 1) is of native make. It is an exceedingly crude affair when viewed from our standpoint, though copied from a foreign model, and the needle projects only one eighth inch and in use is jabbed up to its hilt in the skin of the arm or leg. The instrument, the hands of the operator, and the skin of the patient are not cleansed in any way whatever.

The syringe is made of four or five different metals and fits into a rough bamboo case; the morphine is kept in an empty old brass rifle cartridge with a rolled paper stopper. All these are filthy. This instrument I bought from an opium den in Shanghai, and had to pay a good price for it, too.

As a conclusion from these premises, the immediate or ultimate infection of the part is assured. Two of my cases are here illustrated. In both instances treatment was asked for the infective process, not for the morphine habit.

CASE I (Fig. 2).—A coolie; presented himself for the treatment of three medium sized carbuncles on his back. They were of average se-

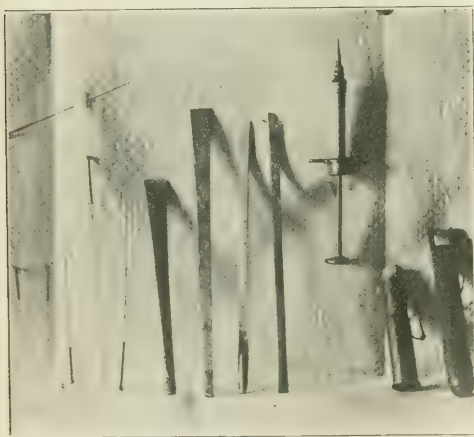


FIG. 1.—A Chinese hypodermic needle. The four native knives shown make up a set for use upon the toes and toenails, especially in the treatment of corns. The six needles are the commonly used Chinese acupuncture needles. Thereby hang many thrilling tales. I have treated panophthalmitis due to the passage of such a needle clean through the eye in the treatment of trachoma. One man presented himself to me for radical cure of berrials. He "had been operated upon by a native doctor who had passed several needles through his tumor but had not cured it." The fact that these needles are usually heated before use will explain his "being still about."

¹ One dollar, Mexican currency, about fifty cents, buys a box of sure cure pills.



FIG. 2.—Scar tissue, furuncles, etc., caused by septic hypodermic syringe.

verity, but so constantly and deeply under the influence of morphine did the patient keep himself that he made no complaint of pain either in the tumors or in the arms or legs of which the extensor surfaces were a mass of scar tissue, active furuncles, and ulcers. The position of the carbuncles interfered with his work, which consisted of carrying heavy loads on his shoulders. We made crucial incisions in all three swellings without the patient's seeming to suffer at all. Patient refused to be admitted to the wards, and declined to allow us to try to break up his habit which he "enjoyed," and did not wish to be deprived of. His general condition was septic, and mentally he was dead. Patient probably died at home.

CASE II (Fig. 3).—Was also a coolie. His



FIG. 3.—Cavity following slough from septic cellulitis.

arms showed the same scarred and actively inflamed condition. (Apologies are due for the poor focusing of this photograph.) The dark surface over the shoulder is the cavity left after the separation of a large slough, due, of course, to septic cellulitis. Recovery from condition took place with much scarring.

Scientific medicine is putting up a good fight in China, and the old empiricism of the empire is campaigning on Kuropatkin's methods, but this morphine guerilla business is not the first thing of the kind that I have reported as found harassing our Ouyaman rear guard.

SUBCUTANEOUS INJURIES OF THE ABDOMINAL WALLS AND VISCERA.

By DANIEL N. EISENDRATH, A. B., M. D.,

CHICAGO.

(Concluded from page 474.)

RUPTURES OF THE SPLEEN.

CASE I.—Boy, 16 years of age, had a monkey wrench thrown at his abdomen during a fight. Stated that he was struck over the left hypochondriac region, and there was a slight ecchymosis at this point. He fainted immediately after the accident, but recovered rapidly, and was admitted to the hospital two hours after the injury, but was not seen by the writer until ten hours after the injury, when an immediate laparotomy was made. I found upon examination before operation that he was extremely pale, pulse 96, very soft; there were tenderness and rigidity over the left hypochondriac region, and dullness in the flanks. The anterior border of this dullness changed somewhat with change of position, indicating that some of the blood was still fluid. There was considerable tympanites, and the tenderness was becoming more marked, all over the abdomen, indicating a beginning peritonitis. The incision was made in the left border of the left rectus muscle, beginning at the costal arch. Enormous quantities of fluid and clotted blood were removed from the peritoneal cavity, and a rupture of the lower border of the spleen extending towards the hilum was found to be the source of the bleeding. Several attempts were made to suture this, but were of no avail, and splenectomy was performed. He made an uneventful recovery from the operation for the first thirty-six hours, but from that time until the time of his death, on the third day, the pulse began to rise rapidly, and the symptoms of peritonitis recurred. The autopsy by the coroner showed a septic peritonitis. The writer feels confident that if he had been able to operate upon this boy within two to four hours after the injury, recovery would have followed.

CASE II.—An Italian, unable to speak English, was admitted to my service with the following history, which I personally obtained from his friends: He had been ill for two days with pain in the abdomen, which both the patient and his friends told me was most marked in the right iliac region. Pulse was 110; temperature 102°, and

there was considerable tympanites. He was extremely pale. I diagnosed the case as one of appendicitis with probable septic peritonitis, and had the patient prepared for operation. Just before the latter I learned from my house surgeon that he had been told by another friend of the patient's that the condition did not start spontaneously, but that he had been run over two days before the time we first saw him. Although I felt that in this case the outlook for operation was exceedingly dark, I nevertheless felt that there was a slight chance for recovery. I made an incision over the region of the spleen, where the friends said the wheel had passed over, and found in addition to enormously distended coils of intestine a large amount of clotted and fluid blood in the free peritoneal cavity. This was rapidly removed, and it was found there was an extensive laceration of the spleen. The splenectomy was exceedingly difficult on account of the distention of the bowel. After the pedicle of the spleen had been firmly tied and the organ removed, the bleeding still continued, and seemed to come from the beginning of the mesentery at the left side of the second lumbar vertebra. I attempted in vain to insert forceps and tampons in this direction, and was compelled to desist from further operation on account of the condition of the patient, who died shortly afterwards. The coroner's autopsy showed a tear of the mesentery involving the superior mesenteric artery. This case emphasizes the importance not only of early diagnosis, but of obtaining as accurate a history as possible of the mode of injury, which latter is at times difficult in foreigners.

CASE III.—Rupture of the kidney. This patient was a man, 40 years of age, who was crushed between a heavy packing case, which fell across his abdomen, and a projecting piece of iron which pressed upon his lumbar region. When admitted to the hospital, he complained of severe pain over the left lumbar region, and was suffering from considerable shock; he was moderately pale; pulse 100. There was a distinct swelling over the region of the left kidney, and in place of the normal resonance of the descending colon in the space between the left costal arch and crest of the ilium there was dullness, which, however, did not change with change of position of the patient. The first urine voided after the accident consisted almost entirely of blood. On account of the favorable prognosis in these cases of rupture of the kidney, under expectant treatment, an ice bag was applied over the left renal region, and the patient carefully watched for evidences of increasing hemorrhage. He was given a drachm of fluid extract of ergot every four hours. The area of dullness in the flanks did not increase during the following twenty-four hours, his general condition improved greatly, and in place of fluid blood the urine contained worm-like clots, which were passed with symptoms of renal colic. The hæmaturia gradually decreased; the urine was practically clear within forty-eight hours. This case was undoubtedly one of rupture of the kidney with recovery under expectant treatment.

CASE IV.—Extraperitoneal rupture of the bladder. The patient was a boy, 5 years of age, who had been run over by a street car, the wheels passing across the region of the pubes. He was seen by me twenty-three hours after the injury in consultation with Dr. M. L. Goodkind, who had seen him one hour previously. Dr. Goodkind had made a diagnosis of rupture of the bladder, on account of the presence of dullness extending from the umbilicus on each side to the anterior superior spine of the ilium, so that the entire lower half of the abdomen was dull on percussion. This dullness did not change on turning the patient. Attempts to catheterize the patient were followed by the escape of a few drops of bloody urine. Pulse was 140, and the distention of the bowel interfered considerably with breathing, which was rapid and shallow. Temperature was 101°. Before proceeding to operate, I thought that I would make a final test by means of injecting four ounces of boric acid solution into the bladder through a catheter. The catheter was inserted and apparently seemed to enter a cavity corresponding about in distance from the external meatus, to the bladder. Four ounces of boric acid solution came back through the catheter, stained with blood. I mention this test to show how fallacious it may be, as referred to under the head of diagnosis, and that not too much reliance should be placed upon it in a diagnosis of rupture of the bladder. If it had not been for the presence of dullness above the pubis, and evidences of beginning sepsis, I would undoubtedly have left the case to its certain fatal outcome. However, I made an incision above the pubis, and upon opening the pelvic cellular tissue, a considerable quantity of fluid escaped. This had pushed the peritonæum covering the bladder up to the level of the umbilicus, and infiltrated the anterior abdominal wall up to the level of the external dullness. A separation of the symphysis pubis was readily found, and a perforation of the anterior wall of the bladder just opposite this fracture of the symphysis. The perforation was sutured; no attempt was made to correct the deformity caused by the separation of the pubic bone. Further exploration showed a complete rupture of the membranous portion of the urethra, so that the bladder lay practically free in the pelvis, and the cavity into which the four ounces of boric solution used as a test had escaped was a free space beneath the pubis and in front of the bladder. The catheter had never entered the bladder at all. The bladder was brought up into the incision in the abdomen and sutured. A rubber tube was inserted into it, and the extraperitoneal tissue drained with gauze drains. A perineal section was then performed, and the catheter introduced through the intact portion of the urethra across the intervening gap, where the membranous portion had been torn, into the bladder, it being necessary to introduce it from the bladder outwards (retrograde catheterization), on account of the difficulty of finding the proximal end of the urethra. This is a far more rapid way of finding the bladder end of the urethra, and greatly facilitates the operation. The boy made an uneventful re-

covery, but a stricture still remains at the point of the rupture of the urethra, which it will not be possible to deal with until the boy is old enough to have sounds introduced for the purpose of dilating the same.

CASE V.—Extraperitoneal rupture of the bladder. My chief reason for publishing this case is for the purpose of emphasizing the necessity for looking for ruptures of the viscera when least expected. A Bohemian child, 3 years of age, was admitted to my service with the following history: Six days before, the child, while its mother was away from the house, had fallen from a high chair to the floor, where it was found by the mother. The mother did not observe any immediate effects, and it was only after the second day that she noticed the child did not seem as well, and that the right side of the abdomen was gradually swelling. When admitted to the hospital, on the sixth day after the accident, the temperature was 102.6° ; pulse, 150. The child looked septic. Examination of the abdomen showed a doughy infiltration of the skin, more or less limited in front by the median line, and extending posteriorly almost to the spine. Downwards, it extended as far as Poupart's ligament, and upwards towards the clavicle, there being marked oedema of the mammary region. The child was catheterized and clear urine obtained, three ounces each time. There was dullness over the right half of the abdomen from the Poupart's ligament to the costal arch, merging into the liver dullness. This did not change on moving the patient. Every symptom pointed to a rupture of the bladder into the pelvic cellular tissue, but the clearness and quantity of the urine were puzzling, and rather contradictory of such a tear. Although this case also seemed hopeless, I made an incision above the pubis and found a considerable distention of the bladder, and an enormous infiltration of the tissues of the anterior abdominal wall and right half of the pelvis with urine. Examination of the bladder showed a tear in all of the coats of the viscus, except the mucous membrane, just opposite the brim of the pelvis, and after sponging away the urine one could observe how it escaped through this pseudofilter drop by drop. This is not the first case which has been described in which only a partial rupture of the coats of the bladder has occurred, the effects being equal to those of a complete rupture.

I was at first puzzled to know how this injury could have occurred, but upon remembering that the bladder in children is almost entirely an intra-abdominal organ, one can readily understand how a child of this age can have fallen with its bladder full of urine and the organ strike upon the pelvic brim, opposite which we found the rupture. The extraperitoneal tissue was drained, and a number of incisions were made into the infiltrated abdominal wall, but were of no avail, the child dying after a few days.

CASE VI.—Subcutaneous rupture of the abdominal wall. This patient was a man, 40 years of age; he was admitted to my service, after having been crushed between two street cars pass-

ing in opposite directions. He was admitted to the hospital, suffering greatly from shock, and was seen by me about two hours after the injury. A diagnosis of traumatic hernia situated over the middle of the crest of the ilium had been previously made by my house surgeon, Dr. Snyder. Over the point just described there was a tumor about the size of two fists, which was tympanitic on percussion, and which could be readily reduced into the abdominal cavity with a gurgle, similar to that obtained in the reduction of a hernia. After this manipulation a gap could be found in the muscles just above the crest of the ilium. In addition to this injury, there was a fracture of the clavicle and of the fifth and sixth left ribs. The patient had recovered somewhat from his initial shock, but would not consent to operation until the following morning, fifteen hours after the injury. An incision made parallel to the crest of the ilium showed that all of the abdominal muscles attached to that crest from a point corresponding behind to the erector spinæ had been torn off, and the same condition existed as far as the middle of Poupart's ligament, so that upon incising the skin one entered at once into the general peritoneal cavity, where a number of loose pieces of omentum were lying in a cavity which had been formed through adhesions of the ascending colon to the anterior abdominal wall, thus separating the area of the injury in great part from the general peritoneal cavity. There was a slight contusion of the ascending colon. The abdominal muscles showed along their free edges evidences of extensive laceration. By means of fourteen kangaroo tendon sutures inserted in mattress fashion, the torn muscles were brought down and anchored to the gluteal fascia as far as the anterior superior spine of the ilium in front, and from that point to the middle of Poupart's ligament they were sutured to the shelving edge of that structure, in a manner similar to that used in the Bassini operation. The patient made a rapid recovery, and examination one year after the injury shows that there is no recurrence of the hernia. This case is one of the first to be published of such extensive laceration of the abdominal muscles without external signs of injury, other than the slight hernial protrusion which upon first examination resembled somewhat a blood clot, and could only be distinguished from the latter by careful manipulation.

103 STATE STREET.

Ulster County, N. Y., Medical Association.—

The annual meeting of this association was held at the Kingston City Hospital on February 20th. The following officers were elected for the ensuing year: President, Dr. J. L. Preston; vice-president, Dr. Frederick Huhne; secretary, Dr. Mary Gage Day; treasurer, Dr. Alice Divine, of Ellenville; member of the executive committee at large, Dr. C. V. Hasbrouck, of Rosendale; member of the nominating committee to the Fifth District Branch, Dr. J. Preston, of Milton-on-Hudson; fellow to the State Medical Association, Dr. A. H. Palmer, of Marlborough; alternate, Dr. E. Osterhoudt, of Plattekill.

TUBERCULOUS MENINGITIS WITH CONGENITAL STRICTURE OF THE RECTUM. CLINICAL AND PATHOLOGICAL REPORTS.

By HENRY S. WIEDER, M. D.,

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AND

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The following is a brief report of the clinical history and the pathological findings of a case of tuberculous meningitis with congenital stricture of the rectum.

The tuberculous meningitis occurred in a child four and one half years of age, with a family history containing a record of tuberculosis on the mother's side in three members of the family. Of bearing in the previous medical history was the fact that she was very obstinately constipated during the first six months of her life, never obtaining a bowel movement except by artificial means. Also is to be noted the fact that her cervical glands were much enlarged the winter before her death:

For a couple of weeks before admission the child complained of being tired and sleepy. This was followed a week later by profuse nosebleed and pain over the root of the nose. Later she vomited frequently, held her arms up behind her head and complained of pain on straightening them out. She began to suffer with fever five days before admission, became peevish, complained of noise, and shrieked out at times. She became stuporous the day before admission.

On admission to the hospital on May 19, 1903, the child was stuporous, slow to obey instructions, would not talk, and refused nourishment. Her pupils were equal and not dilated, responding to light; no strabismus present; tongue, moist brown coating, no tremor; pulse small, soft, not dicrotic, 128; heart and lungs normal; liver extended to one finger's breadth below the edge of the ribs; abdomen soft, no distention, no spots; spleen not enlarged or palpable; legs, no oedema, tremor, or rigidity.

On successive days she developed symptoms in the following order: increasing stupor, tendency to retraction of the head, lead pipe movements of all the joints, imperfect Koenig's sign, internal strabismus, inequality, dilatation, and immobility of the pupils, doubtful Babinski's reflex, *tâche cérébrale*, rolling of the eyes, difficulty in swallowing, pulse of 200, and oedema of the lungs; death soon followed. She frequently uttered a shrill cry. Twice, on the 12th instant, on being turned on her side, she developed a convulsion, her right foot shooting backward with opisthotonos and retraction of the head. Both were of very short duration. Her leucocytes were between 19,000

and 42,000 and her Widal reactions were negative.

Four spinal punctures were performed, obtaining the following amounts of a clear, colorless fluid: 20 c.c., 35 c.c., 3 c.c., and 11 c.c. After the first two punctures there was an apparent decrease in the severity of the symptoms. Tubercle bacilli were not obtained from the spinal fluid.

The temperature never reached above 102.1°, except the terminal temperature, which rose to 105.1° at 5 p. m., the patient dying at 11 p. m. The temperature had touched normal on two different occasions.

NECROPSY REPORT.

Upon removing the skull cap the dura was found not to be adherent to it. Upon opening the dura there was an escape of a considerable amount of cerebrospinal fluid. The pia mater of the base was thick and opaque, with some pus under it. Around the optic chiasm on the vessels about the circle of Willis were numerous small bodies the size of mustard seeds and much resembling miliary tubercles. These were more numerous along the Sylvian artery. The section of the brain showed nothing abnormal except dilatation of the ventricle from excess of cerebrospinal fluid. There were no tubercles upon the chorioid plexus.

In the anterior mediastinum, just under the first portion of the sternum, was a large and softened lymph gland that on section was found to contain a yellow purulent fluid probably tuberculous. The bronchial lymph glands were much enlarged, but the lung showed no evidence of tuberculosis.

The heart was normal except some cloudy swelling of its muscle.

The liver, kidneys, pancreas, adrenals, and stomach were all normal.

There were irregular areas of congestion of the large bowel which appeared to be somewhat hæmorrhagic in places, but with no ulcers.

In the rectum, three inches from the anus, was a constriction of the bowel. The bowel appeared to be somewhat thickened, and the interior of the constricted portion was white and hard and marked by longitudinal striations. There was no dilatation of the bowel above this point. Above this point was retained a quantity of nutritive enema which had been given on the day of death.

Pathological Diagnosis.—Tuberculous meningitis; cloudy swelling of the liver, kidneys, and heart; congestion of the lower bowel; and stricture of rectum.

MICROSCOPICAL REPORT.

The bronchial lymph glands showed tuberculosis in the stage of caseation. One had gone on to pus formation.

A section was cut from the middle of the constricted area in the rectum and examined microscopically with the following results: The mucous and submucous layers of the rectum were almost entirely absent, there being a congestion only of the mucous membrane present. The muscular coats were entirely absent. A growth of fibrous tissue had taken the place of these normal layers,

so that the section seemed to be one of fibrous tissue instead of intestinal wall.

The absence of inflammation of the rectum, as evidenced by the previous history and microscopical examination and the history of constipation during the first six months of life, make it probable that the stricture was congenital. The fact that no further difficulty was experienced after the first six months may be explained by a compensatory hypertrophy of the bowel immediately above the site of stricture.

A STUDY OF THE STOMACH FUNCTION IN PULMONARY TUBERCULOSIS.

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Dyspepsias have long been recognized as common accompaniments of the tuberculous process, in all its stages, and are characterized by the ordinary symptoms of gastric disturbances. Certain stages of these dyspepsias are spoken of, the terminal and the initial, one form of which has been brought into especial prominence; namely, a form of beginning tuberculosis in which stomach symptoms alone are noted by the patient, who thus comes to the physician with a stomach case.

We have two distinct indications, calling our attention to the stomach in lung tuberculosis. First, we need its assistance in the problem of better nutrition; and, second, we must relieve the gastric disturbance. To meet these indications intelligently, we must have an exact knowledge of the activities of the stomach—a knowledge which can only be ascertained by examination of the stomach contents after test meals of known stimulation.

It was suggested to me by Dr. Dock, that a study of the stomach function in pulmonary tuberculosis, as observed in this clinic, and a review of the literature on this subject, would be an instructive bit of work. I wish to take this opportunity to express my thanks for the advice and assistance I have received from Dr. Dock and from Dr. Cowie, who has charge of the stomach work in the clinic.

The subject has already been investigated by several authors.

Brieger (1) reports 64 cases, on which 300 separate examinations were carried out. He divided his cases into three groups, advanced cases, cases of moderate intensity, and beginning cases. The stomach contents in the advanced cases (31 in number) were always acid after the test meal and mostly also after the test breakfast, though in some cases neutral juices were obtained, by rea-

son of the admixture of alkaline sputum. The acidity after the test breakfast was between 14 and 56, and after the test dinner 69; the values of these being respectively 0.05, 0.09, and 0.24 per cent. In the first group, free hydrochloric acid was always present in three of the cases (to which should be added two cases in which the occasional lack of hydrochloric was due to alkaline sputum), and was always lacking in 19. In seven cases, free hydrochloric acid was at times present. There was no relation to fever. Rennet was absent with lack of free hydrochloric acid. The second group contained twenty-seven cases; of these, fifteen showed the constant lack of hydrochloric acid, and nine its constant presence. The secretion was variable in the other three. The group of beginning cases showed hydrochloric acid constantly absent in three and present in the same number. In this and in the preceding group, the ferments and their zymogens were always present; in cases with great disturbance of the chemical composition of the juice, there was considerable lessening of the motor power.

Brieger summarizes his findings as follows: In severe phthisis, the chemical composition was normal in 16 per cent., and in the remainder of the group a greater or less insufficiency; in 9.6 per cent. the secretory products were absent. In the intermediate cases, the findings were normal in 33 per cent., a lack of secretion in 6.6 per cent. and a varying intensity in the remaining cases of this group. One half the beginning cases were normal. The motor power is impaired in proportion to the chemical disturbance. The admixture of sputum may change the reaction. The relation of fever to secretion is not well established. The restoration of anorexia did not cause the re-appearance of free hydrochloric acid; but in two cases, the appearance of fever corresponded with the disappearance of previously present hydrochloric acid.

Klemperer (2) reports 14 cases. The secretions were obtained after a meal of milk and rolls; the motor power he tested by giving 100 grammes of oil; two hours later, all that remained in the stomach was removed and measured. In the initial group he places 10 cases, two of which he sub-groups as pretuberculous dyspepsias. Of the remaining four cases, three are classed in the terminal group and one intermediate between the two groups. In the cases of pretuberculous dyspepsia, the average free hydrochloric acid value was 1.84 parts per thousand; the average total acidity was 2.84 parts per thousand and the oil recovered was 50 c.c. In the remaining 8 initial

cases, the average acidity was 2.4 parts of hydrochloric acid per thousand, and the total acidity 2.84 parts per thousand; the oil recovered amounted to 36.44 grammes. The intermediate case showed a hydrochloric acid value of 0.38, after a meal of milk alone. In this case there was considerable food in the stomach seven hours after the midday meal. The advanced cases were marked by "lessening of the motor power, dilatation, and fermentative processes." "In all cases of phthisis, the diminution of the motor power is slight at first and marked in the later stages. The secretory activity is at first normal or increased; in the end, greatly diminished."

Hildebrand (3) reports some cases in which the relation of hydrochloric acid to fever is especially noted. He divides his cases into groups according to the temperature. In one group (a. m. temp. 36.8° C. to 37.4° C.; p. m. temp. 36.7° C. to 37.8° C., and in one case 38° C.) he found hydrochloric acid constantly present. In another group, with a temperature always above 38° C., he found hydrochloric acid always absent. In a third group, in which the fever was not always present, it was noted that hydrochloric acid was lacking with high evening temperatures and present with low. He concludes that hydrochloric acid is not found with temperatures above 37.8° C.

Cahn and von Mering (4) report the case of a young consumptive, having fever and amyloid cachexia, who was examined twenty-six hours before death. With milk as food, his stomach contents gave a hydrochloric acid value of 0.4 parts per thousand, and 0.54 parts per thousand of lactic acid.

Schetty (5) reports 25 cases which may be summarized as follows:

	Hydrochloric acid (per cent.).		
	Average.	High.	Low.
In 6 incipient cases.....	0.175	0.31	0.10
In 19 of long duration:			
2 without fever.....	0.195	0.25	0.14
9 with evening fever only.....	0.203	0.4	0.10
and 8 with morning and evening fever.	0.20	0.29	0.10

He says that in all cases the reaction of the stomach contents was acid, due to hydrochloric acid, the production of which was not diminished and was even increased. There was a normal amount of hydrochloric acid in the advanced cases and in those with morning fever. The digestive power of the juice, for albumin, appeared about normal. There seemed to be no motor insufficiency following the midday and evening meals.

Rosenthal (6) has prepared a brief review of the preceding investigations. In this he adds, parenthetically, that he has been unable to find free hydrochloric acid in a number of cases of consumption. This refers to a report (7) in

which he says: "It is established that the stomach contents of patients with clearly recognized tuberculosis, both in early and advanced stages, contain no free hydrochloric acid, though appetite and digestion appear normal." His table shows the acidity from 2 to 7.

Immermann (8) studied the function of the stomach, using consumptives of all grades. He first studied the motor power; giving a Leube's test meal at midday and withdrawing it in from six to seven hours. In 51 out of his 54 cases, the stomach was empty after six hours, and in two of the other cases contained only a little fluid. A second investigation consisted in the study of the morning secretion, obtained after a test breakfast composed of the whites of two hard boiled eggs, with 100 c.c. of distilled water. In normal cases, this meal yielded a considerable quantity of sour fluid contents, with undigested egg. Gunzberg's test was very strong and titration with N-10 sodium hydroxide solution gave an acidity of 1 to 2 parts per thousand of hydrochloric acid, not often so small as 1 and often more than 2 (2.2 to 2.3). Consumptives gave homologous results. The contents with one exception contained only egg particles; 38 cases out of 44 in this series showed from 1 to 4 parts per thousand, with an average value of 1.9. "It was of special interest to note high hydrochloric acid values in decrepit patients, in whom one would least expect it. In six of these cases, Gunzberg's test was negative; in two the contents were weakly alkaline. In four cases, the contents were acid, but the acidity was not due to organic acids." He assumes this acidity to be due to hydrochloric acid and that the contents of the stomach were withdrawn at a time at which no free hydrochloric acid existed.

He continues: "Taken all in all, I do not think that these few exceptions speak much against the rule, that the morning value of hydrochloric acid is not inferior, in general, to that of health." He farther found that the time consumed by the digestive juices of consumptives, in digesting an egg disk (6 mm. x 1 mm.) was 1½ hours; where healthy juices required one to two hours for the same purpose. He regards the dyspepsias of phthisis as complications, and not as attributes of the disease.

Von Ruck (9) speaks of cases in which he "found no free hydrochloric acid in the stomach contents two hours after trial meals." He also speaks of cases in which there were hyperacidity and markedly increased motility.

Hayem (10) reports a number of cases of incipient and advanced tuberculosis. Of 32 incipient cases, 15 showed hyperacidity, 16 hypo-

acidity, and 2 apepsia. In 48 cases of advanced disease, 15 showed hyperacidity, 38 hypoacidity, and 12 hypoaclidity to apepsia.

Einhorn (11) studied some 15 cases of this kind, using Ewald's test meal. Of these, free hydrochloric acid was absent in two cases and once out of three examinations in a third case. In all other cases, free hydrochloric acid was always present. Concerning the degree of acidity, 5 were found to have a normal acidity (50 to 54), 5 others were above normal (50 to 72), and 5 cases showed a diminution of acid (46 to 15). Retention was noted only once in all the examinations, so that one may assume that the stomach was empty before taking the test meal and that, therefore, the motor power is not disabled. Appetite is not correlated with the hydrochloric acid and total acidity. He also suggests that the sputum swallowed by the patient may be the cause of the dyspepsia, by irritation of the gastric mucosa.

A reclassification of Einhorn's cases, according to duration, gives 8 cases, of from 6 to 9 months' duration and 7 of from 1 to 2 years. In the first group, the highest total acidity was 70, the lowest 50, and the average 58.9. In the second group, the average was lower—33.8, the highest being 70, the lowest 15.

Gluzinski (12) in a study of the stomach's condition in various fevers, reports among others, a case of double apical tuberculosis. In this case the highest morning temperature was 37.5° C., the highest evening temperature was 39.7° C. The average quantity removed after test meals was 125 c.c., and the highest acidity was 16; the digestive power appeared normal.

Fenwick (13) speaks of some instances of dyspepsia preceding phthisis, in which "the hydrochloric acid of the gastric juice appeared to be secreted to an abnormal extent." As a rule, he found the secretions diminished in the later stages of the disease. Fenwick believes that this form of inquiry (i. e., stomach examination) has no clinical value in phthisis. For not only does he look on the hydrochloric acid values as varying from day to day, but the degree of acidity and the severity of the symptoms are not correlated. He has repeatedly observed that with continued pyrexia and diminished hydrochloric acid, digestion was carried on with less subjective distress than in another possessed of normal temperature and hydrochloric acid. This apparent discrepancy he explains by the presence of sufficient combined hydrochloric acid for the purposes of digestion.

Bordoni (14) says that the lack of hydrochloric acid occurs in tuberculosis, among other diseases.

Chelmonski (15) in 8 out of 11 cases of this disease failed to find free hydrochloric acid. There was retention in two cases. It is interesting to note in passing that in 15 cases of emphysema with cedema, dyspnoea, and chronic bronchitis which he reports, there was none which showed free hydrochloric acid. It is especially interesting to note that in two of these cases, the symptoms cleared up and the gastric juice was then normal. Chelmonski seems to think the stomach condition a result of circulatory disturbances in the gastric mucosa, due to the disturbance of the pulmonary circulation. He concludes that there is a lack of free hydrochloric acid in pulmonary tuberculosis independent of fever; and that there is often a lack of hydrochloric acid in emphysema.

Robin and Du Pasquier (16) studied 85 cases, using a test meal of egg, bread, and water, removed in one hour. In beginning cases they find that 69 per cent. have hypermotility and hyperchlorhydria; the hydrochloric acid values are never very high and rarely exceed 1.5 parts per thousand; there was hypomotility in about 19 per cent. and about 12 per cent. have normal hydrochloric acid values. The second stage is a transitional one, in which the secretions are variable. The terminal period, the time of cavity formation, is characterized by mucous degeneration and atrophy of the gastric glands, and by hypo- and anachlorhydria (0.76 per cent.). They describe these changes as a gastric cycle, following the course of the disease, even to the abolition of function.

Reed (17) reports a case of consumption which presented stomach symptoms only, showing hyperacidity, which at times exceeded 0.1 per cent. of acid. He concludes that in early stages of pulmonary tuberculosis, the secretion of hydrochloric acid is often excessive and that the motor power is decreased.

Grusdew (18) found hydrochloric acid lacking three times out of eighteen examinations, in mild cases.

Bernstein (19), in 17 cases, found that hydrochloric acid was more often lacking in cases without fever (7 out of 9) than in those with (4 out of 8). The total acidity was mostly lowered, as was the hydrochloric acid content; there was never hyperacidity.

Croner (20) used the Ewald meal. He says there was no weakening of motility, having recovered, on the average, 300 c.c. The total acidity was between 21 and 80, mostly normal, but more often too low than too high. In 5 out of 36 cases, there was no acidity. He found no relation between the subjective and the chemical conditions.

GROUP I.—CASES IN THE EARLY STAGE.

Sex.	Duration.	Temp. of Day Before.			Temp. of Day of Meal.			Kind of Meal.	Digestion Time.	Quantity Removed.	Mucous.	Glanzberg.	Dimethyl.	Congo Red.	Free Hcl.	Comb.	H ₂ Cl ₂ .	Organic Acids.	Total Acidity.	Pepsin.*	Pepsinogen.	Remarks.
		A.	M.	P.	A.	M.	P.															
f	7 mos.	98.2	98.0	98.2	99.3	98.2	98.6	S. W. B.	1 hr.	10cc.	++	+	0	0	20	5	12	37	P. V. = 7.20.		Indigestion at times, distress in gastric region. Not affected by eating. Stomach above umbilicus.	
		98.3	99.9	98.2	98.6	99	99	S. W. B.	1 hr.	10	+++	0	0	0	1	0	1	13	P. V. = 1.21			
		98.2	98.6					S. W. B.	1 hr.	150									P. V. = 1.77		Stomach symptoms began 6 weeks ago, after gripe. Lower border stomach 1 in. below umbilicus.	
m	6 wks.							Gran.	1 hr.	60		+							64	Slight dig.	Slight dig.	Stomach symptoms began 6 weeks ago, after gripe. Lower border stomach 1 in. below umbilicus.
								Gran.	1 hr.	40		0	+	+			+	22	Slight dig.	Slight dig.	Hyperacidity for 3 years. Cervical glands involved. Enteropneosis is a dilatation.	
f	2 mos.	98.6	99.4	98.2	99.2	99.4	100.6	Gran.	1 hr.	70		+	+	+	16	22	13	51	No dig. 5 hrs.	Slight dig. 5 hrs.	Stomach symptoms for several months, beginning 12-14 mos. ago. Recovered from this.	
		99	100					Gran.	1 hr.	50	+	0	0	+	0	0	44	66				
								Gran.	1 hr.	50		+	0	0	0	0	5	16				
f	3 mos.							Gran.	1 hr.	75	0	+		+					42	1/3 dig. 6 hrs.	2/3 dig. 6 hrs.	Stomach symptoms for several months, beginning 12-14 mos. ago. Recovered from this.
m	8 mos.	100	100	99.4	101.2			Gran.	1 hr.	10		+			57	2	15	20				Comes for stomach and lungs. Incipient tuberculosis.
m	Incip.	98.4	100	101	101.8	99.8		Gran.	1 hr.	32.4	+++	+		+	57	10	8	73	All dig. 15 hrs.			Lower border stomach below navel.
		101	101.8	99	98.8	98.4		Gran.	1 hr.	52	+	+		+	73	8	5	88	All dig. 7 hrs.			Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
		99	98.8	98	98.4			Gran.	1 hr.	52					73	11	9	55				Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
m		98.6	98.8					Gran.	1 1/2 hr.	0					30	19	10	59				Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
		97.9	98.6	98	98.6	98		Gran.	1 hr.	40	+		+	+	35	11	9	55				Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
f	7-8 mos.		99.6	99	100.3			Gran.	3/4 hr.	110	+		0	0	0	0	5	10	0 3/4 hr.	Complete, 20 min.		Stomach symptoms began 7 mos. ago. Greater curvature above umbilicus. Fibrom in dig. tests.
		99	100.3	98.2	99.8			Gran.	3/4 hr.	20	++		0	+	0	8	6	14	0 1/2 hr.	Complete, 15 min.		Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
		98.2	98.8	98.2	99.8			Gran.	3/4 hr.	30	+++	+		+	10	16	4	30	Part dig. 3/4 hr.			Stomach symptoms and some lung symptoms for 3 yrs. Has coughed 4 mos. Simple chr. gastritis.
								Gran.	1 hr.	35	+	0	0	0	0	2	3	5				Stomach low and dilated.
m	3 mos.	98.8	99	98.2	99.4			Gran.	1 hr.	30	+	+		+	19.6	9.4	7.8	36.8	Almost all dig. 24 hrs.	Complete, 24 hrs.		Epigastric pain after meals. Belching for past month. Stomach dilated.
		98.2	99.4	98	99.8			Gran.	1 hr.	45	+	0	+	+	245	157	9.8	51	Almost all dig. 24 hrs.	Complete, 24 hrs.		Stomach dilated.
		98	99.8	98.8	99			Gran.	1 hr.	80	+	0	+	+	245	2	4	31				Stomach dilated.

*NOTE. P. V. or Peptic Value is the square of the number of mm. of mettl tubes dissolved in 10 hours. Other results are with egg disks.

GROUP II. INTERMEDIATE CASES.

Sex.	Duration.	Temp. of Day Before.			Temp. of Day of Meal.			Kind of Meal.	Digestion Time	Quantity Removed cc.	Mucous.	Günzberg.	Dimethyl.	Congo-Red.	Free Hcl.	Comb. Hcl.	Organic Acids.	Total Acidity.	Pepsin.	Pepsinogen	Remarks.	
		A. M.	P. M.	A. M.	P. M.	P. M.																
-	18 mos.	96.8 97.1	98.9 98.4	96.8 97.4	98.6 98.4		Gran.	1 hr.	60cc.				+	+	18	6	12	36	0 dig.	0 dig.	Some distress in stomach early in sickness. Lower border stomach 1 in. above navel.	
				Noon 98	98.2 99.6		Gran.	1 1/4 hr.	12				0	0	0	6	6	12		Some dig. 4 hrs.		Lower border stomach 1 in. above navel.
m	?	97	99.8				Gran.	1 hr.	70			0					8	16	30	0 dig.	0	Stomach symptoms for 2 years. Intestinal tuberculosis. Lower border, 1 in. above navel.
		99	100	98.8	102.4		Gran.	1 hr.	160			0	+					28			More or less pain in stomach for 10 yrs. Lower border 4 finger too low.	
m	2 yrs.		98.6	98.2	98.6		Gran.	1 hr.	70			+	+					45			Lower border stomach below navel (?)	
m	3 mos.	98	101.8	99.2	101.8		Gran.	1 hr.				+	0	+				46			Lower border stomach at navel.	
m	2 yrs.	98.8	99.2	96.6	99.6		Gran.	1 hr.	70			+	+		+	+	48				Lower border stomach at navel.	
f	7 mos.	98.6	100	98.8	99.4		Gran.	1 hr.	100			0						36			Stomach symptoms for past 6 years.	
m	6 mos.						Gran.	1 hr.	40			+	+					33			Lower border just above navel.	
m	1 1/2 yrs.	101.1	100.8	101	101		Gran.	1 hr.	70		++		+	+	14	20	2	36	0 dig.	Slight dig. 4 hrs.	Stomach symptoms and cough came together. Pain after eating. Vomiting.	
			101	100.8	101		Gran.	1 hr.	125		++		+	+	18	8	12	38	0 dig.	Considerable 24 hrs.	Stomach symptoms and cough came together. Pain after eating. Vomiting.	
		100.8	101	101.2	101.8		Gran.	1 hr.	40		+		+	+	12	18	8	38	0 dig.	Considerable 24 hrs.	Stomach symptoms and cough came together. Pain after eating. Vomiting.	
		100	99.8	99.7	101.6		O. M.	4 hrs.	120				+	+	12	21	12	48		Slight, 4 hrs.	O. M. Ordinary meal.	
f	1 1/2 yrs.	99	102.4	98.6	99.6		S. W. B.	1 hr.	50		+++	+	+	+	23	6	7	36	P. V. = 6.86		"Poor digestion" - liable to vomit after eating and coughing. Stomach large and low.	
		98.6	99.6	98.2	101		S. W. B.	1 hr.	95		+++	+	+	+	38	12	7	56	P. V. = 3.8		Stomach large and a little low.	
f	8 mos.						S. W. B.	1 hr.	95			+	+	+	25	0	2	10	0 dig.	P. V. = 2.3		Stomach large and a little low.
							S. W. B.	1 hr.	84		++	+	+	+	25	0	2	15	0 dig.	P. V. = 1.0		
							S. W. B.	2 1/2 hr.	140		++	+	+	+	25	0	2	9	0 dig.	P. V. = 1.44		

(GROUP III.—ADVANCED CASES.)

Sex.	Duration.	Temp. of Day Before.				Temp of Day of Meal.				Kind of Meal.	Digestion Time.	Quantity Removed cc.	Mucus.	Glanzberg.	Dimethyl.	Congo-Red.	Free Hcl.	Comb. Hcl.	Organic Acids.	Total Acidity.	Pepsin.	Pepsinogen.	Remarks.	
		A.	M.	P.	M.	A.	M.	P.	M.															
3 yrs.		99.4	103			98.6	102.4			Gran.	1 hr.	60cc.			0		0	+	30	0 dig.	Trace	dig. 2 hrs.	Lactic Acid==+ Lower border of stomach at navel.	
2 yrs.										Gran.	1 hr.	10		+	+			20		90			Moderate beer drinker; lower border stomach at navel.	
2 yrs.		98.8	101.8			99.5	101			Gran.	1 hr.	55		0	0	0	0			4	0 dig.			No stomach symptoms.
2 yrs.		99.5	101			99	100.8			Gran.	1 hr.			0	0	0	0			5				P. V. = 0.9
		101.4	100.6			102	103.6			S.W.B.	1 hr.	15	0	+	+		10	0	5	15				P. V. = 0.25
3 mos.		98.8	99.5			99.4	100.5			Gran.	1 hr.	100		+	+									Stomach slightly large.
		99.4	100.5			98.6	100.6			Gran.	1 hr.		+	+	+	+	10	11		46	P. V. = 7.4	P. V. = 12.7		
		98.6	100.6			99.4	100.4			Gran.	1 hr.	60	+	+	+		8	10		40	P. V. = 7.9	P. V. = 9.0		

In regard to the fever, he says it has some effect on the acidity, but that he cannot make a definite rule; there are cases showing no fever, in which no acid was found; the upper limit set by Hildebrand, for the secretion of hydrochloric acid, namely, 37.8° C., is too low.

I think that a short summary of the above will be useful for purposes of comparison with the cases I have to report. Brieger and Klemperer find the motor power of the stomach weakened in proportion to the chemical change. On the other hand, Schetty, Immermann, Einhorn, and Croner, find no weakening. As to the acids, Brieger, Klemperer, Fenwick, and Robin and De Pasquier, find a diminution proportional to the disease; all but the former reporting hyperacidity in the early stages. Croner and Immermann found the acidity mostly normal, while Rosenthal, Bordoni, Chelmonski, and Bernstein, often found anachlorhydria.

As a preface to the reports of the analyses which have been gathered from the records of consumptive patients treated in Professor Dock's clinic, it may be well to say a few words in explanation of the methods used. The text breakfast employed is either the "granose" or the "shredded wheat biscuit" meal, composed of 37 grammes of granose or one shredded wheat biscuit (weighing from 33 to 35 grammes) and 300 c.c. of water. It is customary to give this meal between 6.00 and 7.00 a. m., the patient having received neither food, drink, nor medicines after midnight. The meal is removed by aspiration one hour after the patient begins to eat. The acids are estimated by Töpfer's method,¹ and the results reported in terms of c.c.

¹A slight modification of the Töpfer method is used—namely, that, when titrating with phenolphthalein as an indicator to determine the total acidity, the end reaction is taken as the first permanent appearance of pink, instead of the deepest cherry obtainable, of N-10 acid in 100 C. C. of the filtered gastric juice. For some time pepsin and pepsinogen have been tested for after the Mett method, this method having superseded the employment of egg disks and fibrin. I also report the patient's temperature on the day of the meal and on the preceding day.

In arranging the cases for study, I have adopted the classification outlined above in the report of Brieger's work (page 2). Such a classification must, of course, be somewhat arbitrary; where there was doubt as to the group to which the case belonged, it was placed in the intermediate group. The probable duration of the disease is estimated from the history given by the patient; the physical examination of the stomach, at the time of the taking of the status præsens, furnishes the data, regarding its position and size. The following tables give a detailed analysis of the individual cases:

Before proceeding to draw conclusions from these cases, I think that it will be well to summarize the condition in each group.

Table I.—Group one includes ten cases early in the disease. The *duration* does not exceed nine months. In eight cases there is a history of *stomach symptoms*, which in some cases antedate the lung condition and in others introduce or accompany it. The *motor power* was on the average about normal, about 52 c.c., being recovered at the end of an hour. There was some retention in one case, having a history of stomach trouble of three years' duration; in two other cases there was variable motor power, each showing decreased motor power in one test meal out of three. In four cases *hydrochloric acid* was always found, in one it was always absent, and in five it was at times found, at others absent. In amount, the free hydrochloric acid averaged 30.3, the highest being 75 and the lowest 4. The *total acidity* ranges between 88 and 5, the average being 39.6. In five out of 17 estimations of *combined acid*, the average value was 19; in the other twelve it averaged about 6.6. In summing up the condition in this group, I would say that two cases showed an approximately normal acidity, one hyperacidity, two distinct hypoacidity, and the remainder a condition of hypoacidity, sometimes becoming anachlorhydria. The *peptic digestion* seems unchanged.

Table II.—Group two contains eleven cases of intermediate severity, with 16 examinations. The *duration* of the disease is five months to two years. The *quantity* recovered at the end of the hour was

78.7 c.c. *Hydrochloric acid* was present in every examination in 6 cases, constantly absent in 3, variable in one, and doubtful in one. The highest value of free hydrochloric acid was 38, the lowest 5 and the average of the examinations about 15. The *total acidity* varied between 5 and 56, the average being 32.5. When estimated, *combined acid* was low (average = 10), except in one case where it reached a value of about 17. *Peptic digestion* appears undiminished in this group.

Table III.—Group three contains 5 cases of advanced tuberculosis with 9 examinations. The quantity of stomach contents recovered was 43.5, one case showing once a value equal to 100 c.c. The qualitative tests for free hydrochloric acid were present once, at times found in two, and absent in two others. The hydrochloric acid did not exceed 22 nor fall below 10, when present. The average of the combined acid tests was 12. The average total acidity was 33, the highest being 90, in a case which also showed a combined acid value of 20. *Peptic digestion* was usually decreased.

A tabulation of these summaries will aid in studying the results:

	Group I.	Group II.	Group III.
QUANTITY RECOVERED.....	32 C.C.	78.7 C.C.	43 C.C.
Free HCl always present.....	4 cases.	6 cases.	1 case.
Free HCl always absent.....	1 case.	3 cases.	2 cases.
Free HCl sometimes absent.....	5 cases.	1 case.	2 cases.
Free HCl doubtful.....	0	1 case.	0
Free HCl (quantitative), average.....	30.3	15.0	18.0
Total acidity, average.....	39.6	32.5	33.0
CHEMICAL CONDITION:			
Normal.....	1	3	0
Hyperacidity.....	1	0	1
Hypocidity.....	2	3	1
Anachlorhydria.....	1	3	2
Variable.....	5d'tful=1		1

Peptic digestion weak in all the groups, as a whole, though normal in some instances.

An examination of the tables and summaries will show that the motor power is little disturbed. The acidity in the first group appears about normal, but in the other groups is markedly decreased. In a large proportion of all the cases the same individual shows, at different times, hypochlorhydria and anachlorhydria. In such cases, I cannot trace any connection with the fever; indeed, in view of Hildebrand's view that free hydrochloric acid was not present at temperatures above 37.8° C., it is of interest to note in several instances that, not only was free hydrochloric acid present with temperatures above this point, but that it was present in normal or increased amounts.

Cornet (21) has suggested that the disturbances are due to pressure on vagus fibres, by swollen gastric glands, and points out the resemblance of these dyspepsias to anorexia nervosa. Some, like Hildebrand, connect it with the fever; others with the anæmia or cachexia. Neither of these causes explains the pretuberculous and initial dyspepsias, as the dyspepsias often precede their occurrence (Cornet). Circulatory changes have been observed in the gastric mucosa, and in late stages

amyloid change has been recorded. In this connection the observation quoted above (Chelmonski, page 9) concerning the absence of free hydrochloric acid in cases of emphysema with complications, is of especial interest, for as he suggests the portal circulation would be altered, secondary to the pulmonary disturbance, thus changing the blood supply of the stomach. Some look upon the sputum swallowed by these patients as an irritant to the mucous membrane, and it is also said that the admixture of sputum will change the reaction of the stomach contents; however, the quantity of sputum must be very large or the acidity of the contents very small, for such a change. Some regard these dyspepsias as specific. From this point of view, the theory that the dyspepsias are due to substances circulating in the blood would appear rational. Others, however, believe the dyspepsias and the tuberculous process to be distinct and their coexistence a mere accident; an accident which seems exceedingly common. One may assume in cases where previous dyspepsias can be eliminated, that the digestive disturbances which introduce or accompany the tuberculous process are manifestations of the reaction of the system to toxic products; a reaction analogous, perhaps, to the rise of temperature following the administration of tuberculin. No other assumption appears to me to explain the pretuberculous and initial dyspepsias, occurring as they do before anæmia, fever, or cachexia, have come on, and often before physical signs can be made out; indeed, before the patient has any pulmonary symptoms whatever.

I cannot agree with Fenwick that the examination of the stomach contents of consumptives is without clinical value. If we can improve the condition of patients suffering from ordinary stomach disease, should not the consumptive have the benefit of treatment in this direction, especially as the main issue in the struggle against his disease is improvement of nutrition?

With or without digestion symptoms, the digestive processes must be studied; the mouth and teeth must be examined, and thorough mastication insisted on; the condition of the stomach must be studied, and the indications thus obtained carefully followed; lastly, the feces should be examined to ascertain if digestion is complete. These investigations, consciously carried out, will enable the physician to prescribe a diet suited to the patient. While it may be urged that an increase in weight is sufficient evidence of his improvement, we must remember that intestinal digestion may compensate for lowered stomach function, so that digestion is apparently perfect.

Again, while most of the food may be utilized some may be excreted in the feces undigested, a condition which will sooner or later lead to trouble. Gain in weight may take place in spite of such conditions, but only careful examination of the digestive tract will enable the physician to bring about the highest efficiency of digestion.

In conclusion, I would say that the number of cases reported is too small for the purpose of generalizing as to the condition of the stomach in pulmonary tuberculosis. The small amount of hyperacidity in my series, its occurrence in the third as well as in the first group, the marked tendency to hypoacidity, and its frequent transformation into anachlorhydria, and the undisturbed motor power, make up the picture presented by these cases.

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ready has secured the cooperation of many prominent business men, it being proposed to build and maintain the institution through the philanthropy of Milwaukee's citizens, instead of taxing the county to support it.

A CASE OF ACUTE TURPENTINE POISONING.

By GUSTAVE HAUSSER, M. D.,

CINCINNATI.

J. M., aged 37 years, upon the advice of friends, to rid himself of a tape worm, took the ordinary spirits of turpentine. Not knowing the dose, however, he took one tablespoonful of turpentine with an equal quantity of castor oil, every three hours, taking in all from four to five ounces in one day. He then was attacked with severe pains in the abdomen and frequent stools of a bright red character. He became alarmed and the next morning sent for medical advice.

I found him walking around, but stupid, dizzy, and with an unsteady gait, face flushed, and pupils widely dilated. Pulse 82 and of full tension. Temperature 98° F. Abdomen painful and extremely tender on pressure. During the night he passed a clot of blood about the size of an ordinary fist; otherwise stools had the appearance and consistency of blood.

Micturition was frequent and painful, the urine having the characteristic violet odor; also was of a bright red color, and upon examination was found to be loaded with albumin, while microscopically large amounts of red and white corpuscles, bloody, hyaline, and granular casts together with renal epithelium, were found.

Patient was put to bed, ordered large quantities of flax seed tea, together with enemata of same, twice daily; with milk, barley water, and egg nogg for nourishment.

The next day he developed very painful and frequent urination, together with a great amount of tenderness over the suprapubic region; microscopical examination of the urine showed a marked cystitis, which rapidly cleared in a few days, under treatment with tincture of belladonna and potassium acetate.

Red blood cells, renal and bladder epithelium, together with a large amount of albumin occurred in the urine for several days, but by the fourteenth day, and under the treatment with Basham's mixture, all traces of albumin disappeared, and since then he has been apparently none the worse for his experience.

The tape worm was passed in segments before I saw him, but evidently was not completely removed, recurring a few weeks later in large segments. A dose of pelletierine tannate was then prescribed, and a worm some twenty feet in length passed. As some segments from the ends were not brought to me, I failed to find the head, but after ten months no recurrence of the worm has taken place.

2909 VINE STREET.

Tuberculosis Hospital for Milwaukee.—Plans for the establishment of a special sanatorium in Milwaukee county for the care of consumptives are now in the hands of the tuberculosis commission of the Medical Society of Milwaukee County, and it is believed that such an institution will be established within a year. The commission al-

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

Adrenalon, which must not be confounded with adrenalin, is produced by the oxidation of tribenzosulphoadrenalin. It can also be produced synthetically by reacting upon chloracetylpyrocatechin with methylamin. It is credited with special properties in raising the blood pressure.

Agniadin is the name of a glucoside which has been recently introduced into medicine as a remedy for intermittent fever in doses of 2 to 4 grains. It is said to be identical with plumiariid.

Akaralgia is a new granular effervescent salt which is asserted to be especially efficacious in the treatment of migraine, particularly that of the chronic type. According to the makers, it is a combination of sodium sulphate, sodium salicylate (from wintergreen), magnesium sulphate, lithium benzoate, and tincture of nux vomica.

Almatein is an iodoform substitute which is stated to be a compound of hæmatoxylin with formaldehyde. It is described as an odorless powder, soluble in alcohol and glycerin.

Ammonium sulpholeate is an ichthyol substitute.

Anæmose milk is described as an iron iodide buttermilk jelly containing 0.15 per cent. of iron iodide. It is proposed as a milk food in the treatment of chlorosis and anæmia.

Anæsthol-Katz is said to be a mixture of acetyl chloride and methyl chloride. (Ethyl chloride is probably meant instead of acetyl chloride.)

Anæsthol-Meyer is said to be a mixture of acetyl (? ethyl) chloride, 17 per cent., and chloroform-ether mixture, 83 per cent. The chloroform-ether mixture consists of ether, 74 parts, and chloroform, 119.5 parts.

Anticarbuncle serum has been recently introduced and used with good results in the treatment of anthrax.

Antichoren is a peptonized mercuric iodochloride, which has been recently recommended for the treatment of syphilis. It is in the form of a dark brown extract-like substance, which is freely soluble in water. It is very poisonous. Dose, 0.01 gramme three or four times a day.

Antidol is the name applied to an antineuralgic and antipyretic compound which consists of a mixture of caffeine, salicylic acid, citric acid, and antipyrin.

Antimarin is a remedy against seasickness, put up in tablet form by a chemical institute in Berlin. Each tablet contains 3 grains of anæsthesin.

Antipyrin collodion, being a 25 per cent. solution of antipyrin in collodion, is said to be a useful styptic application for small cuts, etc.

Antistaphylococcus serum is, as its name indicates, a protective serum against the germ of suppuration, etc., of recent introduction.

Antiscrophulin is understood to contain potassium sulphoguaicolate, potassium iodide, and hæmoglobin. It is said to be useful as a prophylactic and curative in scrofula and tuberculosis.

Antistreptococcus serum is obtained from horses, in the same way as antidiphtheritic serum is, by inoculating the animals with the streptococci of sepsis, peritonitis, and puerperal fever. It is given in doses of 100 c.c., and frequently repeated in puerperal fever.

Apnol is a liquid preparation of periplocin (the glucoside from *Periploca graca*), which is also stated to contain glycerin, sodium iodide, menthol, pyridine, etc. It is employed by inhalations as spray in the treatment of asthmatic affections.

Aqua ferrocalcea "Terlik" is described as a pleasant tasting, easily digestible iron calcium preparation, the other ingredients of which are not made known.

Attritin (sometimes erroneously spelled Attivin) is the name given to a solution used intravenously in the treatment of rheumatic pains. Some doubt exists regarding the actual composition of the preparation, since the author has published two formulas, as follows: (1) Sodium salicylate, 8 grammes; caffeine-sodium salicylate, 2 grammes, and distilled water, enough to make 50 grammes. (2) Sodium salicylate, 8.75 grammes; distilled water, enough to make 50 grammes. Still another formula, and a more rational one pharmaceutically, in our opinion, has been published: Sodium salicylate, 17.5 grammes; caffeine, 2.5 grammes, and distilled water, enough to make 100 grammes. The journal which publishes this formula (*Pharmazeutische Zeitung*, 1905, 20) says that the sterilized solution is put up in small tubes containing 2.25 c.c., while in other publications the dose is stated at 2 grammes.

Babain is a new antipyrin, salicylic acid derivative, the exact composition of which is not stated.

Betalysol is said to correspond to the saponated solution of cresol of the German Pharmacopœia.

Bioplastica "Seron" is a specially prepared solution of lecithin intended for hypodermic use.

Bioplastin is the name given to a nutritive and strengthening preparation of egg yolk, which is said to contain lecithin and iron, and the phosphates of the egg.

Brandsanal, a remedy for burns, consists of a mixture of carbolic acid, 0.01; picric acid, 0.07; distilled water, 10.00, and glycerin, 0.23.

Brominol is a combination of bromine and sesame oil which is recommended in epilepsy, being a similar compound to bromipin.

Bromlecithin, containing 30 per cent. of bromine, is a new preparation of the Aktien-Gesellschaft für Anilinfabrikation, Berlin. It is recommended in the treatment of diseases of the nervous system for which its components find use.

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NON-OFFICIAL DRUGS AND THE AMERICAN MEDICAL ASSOCIATION.

Last week we published the rules recently adopted for governing the American Medical Association's Council on Pharmacy and Chemistry as to the admission of medicinal preparations to mention in a book to be published by the association, under the title of *New and Non-Official Remedies*. In these rules the association states more definitely than it has done heretofore its attitude toward the various non-official preparations, and especially toward the proprietary remedies.

The same rules, it is declared, are to govern the admission of advertisements into the advertising columns of the association's *Journal* and mention of the products to which they relate in its reading columns. The rule that is apparently most likely to bring out a divergence of views between the council and the manufacturers reads as follows: "No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication. (Sufficient information should be supplied to permit the council to verify the statements made regarding the article and to determine its status from time to time.)"

It seems to us that the requirements embodied in this rule, simple as they appear, will be con-

strued by many of the manufacturers as calling for such an exposition of their processes as they will feel themselves unable to furnish without peril to their business. The proportion of manufacturing pharmacists who will be inclined to take this view is probably a large one. But those who decline to conform to the rule will necessarily find their advertisements barred from the *Journal of the American Medical Association*. The financial showing of the association journal is so favorable, however, that any loss of advertising patronage in consequence of the enforcement of the rules can be borne with equanimity. Even were this not the case, there could be no question of recession from the rules without stultifying the council, the journal, and the association.

UNITY OF PURPOSE IN MEDICINE.

Unity in medical organization is an object that has been very diligently and devotedly pursued of late, and we hope that the pursuit is to be crowned with success everywhere before long. But there is another phase of unity that needs to be sought for in the profession, and, under the name of monism, it was recently well set forth by Dr. Abraham Jacobi before the New England Association of Graduates of the Medical Colleges of New York City, whose address is published in the February number of the *Annals of Gynecology and Pædiatry*. It is unity of purpose in medical study.

We should not approach the study of medicine, especially study having for its object the proving or disproving of old doctrines or the setting up of new ones, with the mind possessed by preconceived notions. Such notions hindered us woefully in the past. We have, it is true, emancipated ourselves from thick and thin maintenance of humoralism on the one hand and of solidism on the other, and from many another contest in which triumph was more prized than truth; and not from such contentions only, but from the conviction that they were in the least degree tolerable. It will doubtless long remain true that "doctors disagree," but their disagreements are surely growing less and less radical and more and more temporary. It does not now take so long as it formerly took to establish facts that are opposed

to tradition, and when they are established they are more universally recognized. What Dr. Jacobi spoke of as the medicine peculiar to any one nation or people is constantly assuming smaller dimensions as compared with the medicine that is accepted by the world, but local peculiarities in interpreting observed facts will doubtless for a long time yet obstruct complete unity among those who are laboring to advance the science as a whole. As Dr. Jacobi suggested, the survival of these small differences might perhaps be materially curtailed by imitating the German students in their tendency to go from one university to another during the course of study.

PHAGOCYTOSIS AND OPSONIC ACTION.

There seems to be reason for supposing that in phagocytosis the leucocytes do not play such a preponderating, not to say exclusive, part as has been insisted on by Metchnikoff and others. Some time ago it was shown by Wright and Douglas before the Royal Society that the serum acted upon the bacteria in such a way as to render them an easy prey for the multinuclear leucocytes. Those gentlemen's conclusions have recently been confirmed by Bulloch and Atkin (*Proceedings of the Royal Society*, February 24th).

This preliminary action of the serum is called opsonic, and the substance in the serum that accomplishes it is termed an opsonin. Bulloch and Atkin find that there is an opsonin present in normal serum. It is thermolabile and rapidly disappears when the serum is mixed with bacteria at the normal temperature of the blood or at any temperature below that down to the freezing point of water. The leucocyte is practically an indifferent factor when the phagocytic power of different bloods is compared. The opsonin is of relatively simple constitution, but it is not identical with any of the antibodies previously discovered in serum.

After all, it appears to be the leucocyte that accomplishes the actual phagocytosis, but it may be, for all that, that the opsonic action of the serum is the essential feature in the work of riding the blood of pathogenic bacteria, and that phagocytosis itself is merely a way of disposing of foreign material that has been rendered innoc-

uous. Such investigations as we have referred to, little as they may affect our estimate of the general powers of the blood over pathogenic bacteria, must prove distinctly helpful in leading the way to a final unraveling of the mechanism of immunization.

THE DIAGNOSIS OF PAPILLOMA OF THE BLADDER.

In subjects otherwise healthy, who have never presented bladder symptoms, papilloma of the urinary reservoir will make its presence known by the sudden appearance of blood in the urine, occurring without other conceivable cause. The hæmorrhage, of varying intensity, arises without any prodromes; the amount of blood voided is sometimes only small. The hæmorrhage recurs several times in decreasing quantity and may entirely disappear within three or four days, the patient's health being unaffected. Weeks, months, or even several years may pass before the hæmorrhage again appears or any symptom of vesical neoplasm becomes manifest.

In other instances the bleeding recurs at short intervals or may be continuous. Now, the manner and form of the hæmorrhage are so characteristic that it can easily be distinguished from that arising in other parts of the genitourinary system. When the seat of the hæmorrhage is in the urethra, the loss of a few drops of blood or a long, narrow clot, followed by perfectly clear urine, is quite characteristic, but after micturition one will be able to press out a drop or two of blood from the urethra or it may be voided spontaneously.

When a renal lesion exists, the urine will be uniformly red in color, because there has been an almost perfect blending of the two fluids, but in neoplasms of the bladder the urine is at first not mixed with the blood, or only slightly so, but toward the end of micturition it becomes more and more so, and the last part voided may consist of almost pure blood. Microscopically one may recognize whether the source of the hæmorrhage is the kidney or the bladder. In the former we have the so called shadows of the red corpuscles, while in the latter they show all the evidence of fresh blood.

The amount of bleeding depends on the type of neoplasm; if slender villi compose the growth, bleeding will be more persistent and repeated, because they are easily torn off, while in the fibrous form of papilloma this symptom will be much less marked on account of the coarser structure of the growth. Then, again, the seat of the tumor exercises an influence on the hæmorrhage, because papilloma situated at the urethral orifice is certainly more prone to bleed than when developing in the walls of the bladder, on account of the greater pressure brought to bear on the growth in the former situation during micturition.

Pain is another symptom frequently occurring in papilloma of the bladder, and it may be present at an early stage of the affection. It is dull and steady in the region of the perinæum; tenesmus is frequent, with a severe stinging sensation in the urethra and glans, which is more particularly pronounced when clots or pieces of the growth are passed. Painful erections may also trouble the patient.

If the growth has a long pedicle or is situated near the orifice of the bladder, it may occlude it and oblige the patient to resort to various attitudes in order to overcome the obstruction. Should the neoplasm develop near the ureteral orifices, hydronephrosis in one or both kidneys may develop, leading to serious secondary lesions of the organ, and death has been known to take place from uræmia.

A fairly common complication of papilloma is cystitis, which may arise spontaneously or result from instrumental interference; it is often chronic, producing a necrobiotic change in the growth, and may extend to the kidney.

Bits of the tumor passed with the urine are of essential importance for diagnosis, for they allow one to conclude with certainty that a tumor exists, but they do not always throw much light on the nature of the neoplasm, because in many cases microscopical examination cannot distinguish between papilloma and carcinoma. The reason is this, that there are to be found in the midst of the tissue spaces filled with epithelium. They are usually narrow alveoli and thickly filled with polymorphous epithelium, which at first sight

gives one the impression of carcinomatous alveoli, but close examination will show the error. In larger sections, including the entire growth, it at once becomes evident that these alveoli are simply transverse sections of the fissures existing between the villi, and this consequently accounts for the mistakes arising in the examination of particles voided in the urine, for here the tips of the villi, and rarely the base of the neoplasm, are obtained.

From the presence of the above named symptoms one can naturally diagnose a tumor of the bladder, but when hæmaturia, often of a temporary kind, exists without any other symptom, the nature of the case is more difficult to recognize. Palpation is usually negative, especially when the growth is a small, soft, villous polypus, but irrigation of the bladder may detach some villi. The sound is of little value, because these soft, velvety growths cannot be detected by it, and serious hæmorrhage and infection of the bladder may ensue from its use.

Cystoscopy is a most valuable diagnostic means, for with it one can detect a bladder neoplasm in its early stages, as well as its exact site. Now, without wishing to underestimate the value of the cystoscope, we must confess that it cannot be relied upon, in cases of papillomata, because that part of the trigonum near the urethral orifice, which is a frequent site for papilloma, is not readily accessible to the instrument. And, what is more, a good picture cannot be obtained, on account of the bleeding to which these growths give rise, even after the bladder has been repeatedly washed out and when a modern instrument with irrigating attachment is employed.

If cystoscopy fails or cannot be resorted to for any reason, suprapubic cystotomy should be done for diagnosis, and since operative treatment can be carried out at the same time, this procedure is quite justified. Dilatation of the urethra in the female and digital exploration of the bladder can be resorted to, but, as I have elsewhere pointed out, this method should be condemned unless carried out with the utmost care, on account of permanent incontinence to which it may give rise.

CHARLES GREENE CUMSTON.

ELEVATED RAILWAYS IN THE CONGESTED DISTRICTS OF THE POOR.

There is grave danger, that a plan may be adopted by the Rapid Transit Commission to run an elevated railway through the entire length of Delancey Street, down Baxter Street, and adjoining Mulberry Bend Park. The physician who practises among the poor in the congested districts of the east side, or even in tenement houses along Ninth, Sixth, Third, and Second Avenues, which are relatively wide, will know, from experience, what the noise of passing trains every minute or so means to his patients. It racks the nerves by day and robs of sleep by night. The other day I was called in consultation to see a young woman living on a fourth floor on Columbus Avenue, the height exactly corresponding to the track of the elevated railway. It was a task to make a physical examination, so constant was the noise. The poor woman assured me that, although she had lived in that flat for a number of years and become accustomed to the noise, since she had been taken ill she had hardly had one night's sound sleep. The rolling by of the trains, in her opinion, had not a little to do with the aggravation of her disease. The rooms this woman occupied were light, owing to the width of the street, and well ventilated. Her removal to a neighboring sanatorium gave her the long prayed for undisturbed sleep the very first night, without the use of any hypnotic.

The conditions which are produced by an elevated railway structure, situated as it is in Allen Street, on the east side, are of course many times worse than those described on Columbus Avenue. There the noise, owing to the narrowness of the street and the relatively low level of the elevated structure, is greatly increased. As the houses are also low, the elevated road in Allen Street darkens nearly all the flats and makes the entrance of sunlight into any of the crowded rooms of that congested district impossible. That the sanitary conditions in these houses must be terrible is evident.

The City Club, which has investigated this matter thoroughly, recently issued a circular wherein it is very pertinently pointed out that, both from a sanitary and from a social and moral point of view, such conditions as exist in Allen Street

should not be repeated in any other portion of the congested east side. The circular referred to says that the construction of an elevated road, such as is proposed, will be little short of criminal, and unless the influential members of the community make manifest to the Rapid Transit Commission in the strongest possible way their opposition to this plan, there is grave danger of its being adopted. I do not believe that any members of the community can be more influential in this matter than the physicians. We should make our influence felt in this matter by the strongest possible protest. Resolutions should be passed by the Academy of Medicine and other medical societies condemning any plan to run elevated railways throughout Delancey Street, Baxter Street, or any other portion of the congested eastern districts. The Committee on the Prevention of Tuberculosis has already passed resolutions opposing the above mentioned plan of a new elevated railway.

In our combat against diseases due to the lack of light and air, and the numerous nervous affections caused by our fearful city noises, we should begin by protesting against any measure which will propagate such diseases. The physician of the poor cannot send all his patients away to sanatoria; there are not enough of such institutions; many patients, and even consumptives, must be treated at home. This treatment at home is possible in a fairly good tenement house; it is utterly impossible in homes facing dark and noisy streets.

Besides the above recommended resolutions on the part of medical societies, I am convinced that individual protests on the part of medical members of this community, addressed to Mr. Alexander E. Orr, president of the Rapid Transit Commission; the Honorable George B. McClellan, mayor of the city of New York; the Honorable Edward M. Grout, comptroller, or any other member of the Rapid Transit Commission, will also greatly help to make the adoption of the above mentioned elevated railway plan impossible. S. A. KNOPP.

A WORTHY UNDERTAKING BY THE ROCKEFELLER INSTITUTE.

The *Journal of Experimental Medicine*, which for several years has been one of the ablest exponents

of scientific medicine, has recently come under the editorial management of Dr. Simon Flexner and Dr. Eugene L. Opie, and is henceforth to be published under the auspices of the Rockefeller Institute for Medical Research. The institute could not have undertaken a more praiseworthy work.

A PROPOSED "REFORM" OF THE ROGUES' GALLERY.

Apropos of the hardship to innocent persons arising from their photographs being retained in the rogues' gallery, the *New York Times* proposes, with apparent seriousness, the remedy of procuring the likenesses and Bertillon measurements of the public in general. The collection thus formed, it says, would "serve many and important services," whatever that may mean, and it adds that the present appreciation of "vital statistics" is so high that it ought not to be impossible to induce people indiscriminately to submit to the camera and the measurements. We fancy we can see the populace thronging police headquarters for the purpose!

SYPHILITIC MENINGOENCEPHALITIS.

In a case reported by P. M. Sniker, of St. Petersburg (*Archiv. für Dermatologie und Syphilis*, lxx, 3; *Berliner klinische Wochenschrift*, January 23rd), it is noteworthy that the syphilis, which was of seven years' standing, had resisted 200 mercurial inunctions, 250 injections of mercury, and 200 bottles (size not given) of potassium iodide. The lesions affected chiefly the meninges and cortex of the right central convolutions, and the pronounced symptoms were Jacksonian epilepsy and total loss of the stereognostic sense.

NO MORE ELEVATED RAILWAYS.

Not only do we heartily join Dr. Knopf, whose "signed editorial" appears in this issue, in calling upon the physicians of New York to oppose the building of an elevated railway in Delancey Street, but, seconding the efforts of Dr. Girdner, we protest in the name of the sick and the overwrought against the establishment of any more such structures in New York. Let us henceforth build our urban railways under ground, and cease to add to the sleep-destroying agencies of the metropolis.

The Union of Old German University Students.—The Vereinigung alter deutscher Studenten in Amerika will hold its anniversary Commers on Saturday evening, March 25th, in Arion Hall, New York, under the presidency of Dr. Carl Beck.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 20th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, March 21st.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, March 22nd.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, March 23rd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; New York Celtic Medical Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, March 24th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, March 25th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 11, 1905:

	March 11.		March 4.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	349	10	252	6
Diphtheria and croup.....	296	26	276	30
Scarlet fever.....	270	19	248	22
Smallpox	1	3	3	..
Chickenpox	159	..	98	..
Tuberculosis	480	183	390	188
Typhoid fever.....	30	9	42	10
Cerebrospinal meningitis.....	..	76	..	60
	1,585	323	1,309	316

The **Medicolegal Society** of New York held a joint session with the **Physiological Society** at the Waldorf-Astoria on March 15th.

Cerebrospinal Meningitis.—There were 58 deaths from cerebrospinal meningitis in New York city for the week ending March 11th, an increase of nine over the previous week. The disease is also prevalent in many parts of Connecticut.

Orthopaedic Hospital.—Two concerts for the benefit of the New York Orthopaedic Hospital were given in Carnegie Hall, March 13th and 14th. Those appearing included Ysaye and Kreisler, violinists; the New York Symphony Orchestra, and Walter Damrosch. Over \$10,000 is said to have been raised.

Unlicensed Practitioner Imprisoned.—James M. Solomon, who claims a home in Brookline, Mass., was found guilty on March 13th of practising medicine in New York without a license and ordered committed to the toms for thirty days and fined \$500, or to serve one day additional for each dollar not paid.

A Conference on Hospital Needs and Finances will be held in the United Charities Building on March 23rd, and the New York hospitals and charitable organizations having daily contact with illness and injury will have representatives present. The object of the meeting is to devise some means for the prevention of the deficit in the income of the private hospitals, which causes a curtailment of many lines of hospital activity. After a discussion of the matter by hospital directors, superintendents, medical advisers, and supporters, it is the intention to secure the appointment of a committee, composed of representative persons, which shall frame a practical scheme of improvement and make arrangements for carrying their ideas out.

New York State Medical Association, New York County.—A stated meeting of this body will be held on Monday, March 20th, at 8.30 p. m., with the following programme: Executive session; scientific session: Presentation of clinical cases or reports, pathological specimens, new instruments, etc.; papers: A Plea for Local Anæsthesia in the Radical Cure of Inguinal Hernia, a study based on 300 cases, by Dr. John A. Bodine; discussion opened by Dr. Harvey Cushing, of Baltimore, Md., followed by Dr. W. L. Rodman, of Philadelphia, Pa., Dr. George E. Brewer, Dr. R. H. M. Dawbarn, Dr. Robert T. Morris, and Dr. W. B. Coley; The Administrative Control of Tuberculosis, by Dr. Hermann M. Biggs; discussion by Dr. John Winters Brannan, Dr. Egbert Le Fevre, Dr. Thomas Darlington, and others. William Ridgely Stone, M. D., secretary.

The Society of Medical Jurisprudence held its twenty-third annual dinner on March 11th at the Hotel Astor, Manhattan, and was attended by about 150 members of the medical and legal professions. Professor Carl Beck acted as toastmaster. The speakers and their subjects follow: The Importance of a Thorough Medical Education, by D. B. St. John Roosa, M. D., LL. D.; Pure Food and the Law, by Justice Almet F. Jenks, LL. D., Appellate Division, Second Department; A Pulpit View of Physicians and Lawyers, by the Reverend Thomas S. Slicer, D. D.; Politics and Ethical Law, by Congressman William Sulzer; Doctors and Lawyers as Citizens, by Frank P. Foster, M. D.; The Insanity Plea Again, by John S. Wise; The Friendly Art of Lying, by C. F. Moore; Woman—the Old and the New, by Timothy Goodfriend.

Medical Inspectors' Society Organized.—A society for study, the promotion of good fellowship, and the discussion of problems in hygiene and public health was organized recently by the medical inspectors of the health department of the city of New York, under the name of the Society of Medical Inspectors of the City of New York, and medical inspectors of any of the divisions of the health department, in any of the boroughs, are eligible to membership. The organization of the society was completed by the adoption of a constitution and the election of officers at a meeting held at the Academy of Medicine on the evening of March 3, 1905. Dr. Edward M.

Thompson, the chairman of the committee on organization, presided, and in his address to the assembled inspectors referred to the fact that this was the first meeting of its kind, he believed, ever held in this city. The society purposes to hold monthly meetings at which scientific papers relating to hygiene and sanitation will be read and discussed. The higher officers of the department and other sanitarians of note will be asked to address the society at the different meetings on topics of special interest. The programme of the society also includes a number of social features, such as an annual dinner, etc. The following officers were elected for the first year: President, Dr. Augustine C. McGuire; vice-president, Dr. Otto Jahn; secretary, Dr. Edward M. Thompson; treasurer, Dr. Leopold Marcus; executive committee, Dr. Joseph Baum (chairman), Dr. Helen Knight, Dr. Samuel A. Buchenholz, Dr. Thomas M. Neasey, and Dr. DeSantos Saxe.

Academy of Medicine.—The section in ophthalmology will meet on Monday, March 20th, at 8.15 p. m. Order: Presentation of Patients; Case of Extirpation of the Lacrymal Sac; Plastic Operation for Formation of Cul de Sac for Wearing of an Artificial Eye, by Dr. D. W. Hunter; Case of Pearl Cyst of the Iris, by Dr. Robert G. Reese; Removal of a Large Endotheliocylindroma from the Orbit, with Preservation of the Vision and Motility of the Eye, by Dr. J. E. Weeks; Extraction of Lens Dislocated Into the Anterior Chamber, with Secondary Glaucoma, by Dr. W. B. Marple; Case of Annular Scleritis, Congenital Glaucoma, with Deaf Mutism, by Dr. C. W. Cutler; Presentation of New Instruments: Scissors for Cutting Secondary Membranous Cataracts, by Dr. E. L. Oatman; Cysts of the Pars Iridica Retinae, with Report of a Case, by Dr. E. L. Oatman; paper: Unilateral and Other Unusual Forms of Nystagmus, by Dr. Alexander Duane; paper: The Advantages of Transillumination, with Demonstration of the Sachs Lamp, by Dr. E. S. Thomson. Wilbur B. Marple, M. D.; chairman; Herbert W. Wootton, M. D., secretary, 35 West Forty-fifth Street.

The section in medicine will meet on Tuesday, March 21st, at 8.15 p. m. Order: Annual Election of Officers; Presentation of Cases; Clinical Reports: A Case of Acute Polyarticular Gout, by Dr. M. B. Potter; A Sterile Purulent Joint, following Acute Articular Rheumatism, by Dr. H. S. Carter; papers: The Present Clinical and Bacteriological Status of Vincent's Angina, by Dr. W. N. Berkeley; discussion by Dr. Mayer, Dr. Thacher, Dr. Simpson, Dr. Lipman, Dr. Sobel, Dr. Bell, and others; Recent Studies in the Diagnosis of Rabies, by Dr. B. W. Poor; discussion by Dr. Biggs, Dr. Dulles, Dr. Ewing, Dr. Park, Dr. Brooks, Dr. Huddleston, Dr. Wilson, Dr. Bailey, and others. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

The section in obstetrics and gynecology will meet on Thursday, March 23rd, at 8.15 p. m. Order: Presentation of Specimens: (a) Adenocarcinoma of Uterus; (b) Essential Metrorrhagia; Hysterectomy; (c) Displaced Pyonephrotic Kid-

ney; Nephrectomy, by Dr. Arnold Sturmdorf; paper: Morbid Processes in the Right Abdominal and Pelvic Regions of the Female, and Their Differentiation, by Dr. J. A. Schmitt; discussion by Dr. Brooks H. Wells, Dr. Robert T. Morris, Dr. E. H. Grandin, Dr. George E. Brewer, and others. Charles F. Adams, M. D., chairman; Arnold Sturmdorf, M. D., secretary, 51 West Seventy-fourth Street.

PHILADELPHIA.

Proposed Food Law Vetoed.—On March 9th Governor Pennypacker vetoed a bill "to prohibit the adulteration of food and providing for the enforcement thereof." In the midst of a long section of the bill the following words occur: "But the use of such added substances in such proportions or less shall be and is hereby permitted." This refers to 0.25 per cent. of sodium benzoate or added color. As no reference was made to this important provision in the title of the act the instrument was unconstitutional, and therefore vetoed.

Scientific Society Meetings for the Week Ending March 25, 1905.—Monday, March 20th, Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, March 21st, Section on Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences. Wednesday, March 22nd, Philadelphia County Medical Society. Thursday, March 23rd, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, March 24th, South Branch, Philadelphia County Medical Society; Northern Medical Association; American Society of Tropical Medicine, business meeting at 8 p. m. for members, scientific meeting at 8.30, to which all physicians are invited.

Changes in the Staff of the Philadelphia General Hospital.—The following appointments have been made at the Philadelphia General Hospital: Dr. Joseph Sailer, visiting physician; Dr. William Pickett and Dr. D. J. McCarthy, visiting neurologists; Dr. J. H. McKee, visiting pediatricist; Dr. Hilary M. Christian, Dr. E. Hollingsworth Siter, and Dr. Henry Tucker, visiting genitourinary surgeons; Dr. G. Paul La Roque, assistant surgeon; Dr. C. Y. White, Dr. John W. Hunter, and Dr. George Norris, assistant physicians; Dr. Charles C. Norris, assistant obstetrician; Dr. Samuel McClarg, assistant neurologist; Dr. Howard Childs Carpenter, assistant pediatricist; Dr. Charles A. Hatfield, Dr. T. Y. Ullom, Dr. J. W. Irwine, and Dr. J. Hamilton Small, assistant physicians, department for tuberculosis; Dr. Macy Brooks, Dr. Alexander Uhle, and Dr. Howard Dahoney, assistant genitourinary surgeons; Dr. H. R. Alburger, assistant anæsthetist; Dr. Thomas B. Holloway and Dr. Ward Brinton, registrars.

The State Veterinary Medical Association met in Philadelphia on March 8th and 9th. Dr. Clarence J. Marshall made an appeal for the support of the bill now before the Legislature to appropriate \$100,000 for purposes of a building for the

veterinary department of the University of Pennsylvania. Dr. D. H. Bergey read a paper on the inflammatory conditions of cows' udders. Dr. Leonard Pearson announced that a method of vaccinating cattle against tuberculosis had been carried out successfully by the State Live Stock Sanitary Board. Dr. Pearson advanced the theory that milk of highly vaccinated cows may contain an antitoxine which will halt tuberculosis in human beings. The following officers were elected: President, Otto G. Noack, of Reading; vice-presidents, Thomas B. Rayner, of Chestnut Hill; J. B. Irons, of Erie; H. S. Jackson, of Allegheny County; treasurer, Francis Bridge, of Philadelphia; recording secretary, B. T. Woodward, of Oxford; corresponding secretary, C. J. Marshall, of Philadelphia.

Medical Society Programmes.—The following was the programme of the Philadelphia County Medical Society at its meeting held March 8th:

Dr. Charles W. Burr, Exhibition of a Patient with an Old Fracture of the Cervical Spine; Dr. J. Madison Taylor, How Can the General Practitioner Profit by Preventive Medicine; Dr. W. G. B. Harland, The Problem of the Treatment of Tuberculosis of the Larynx; Dr. W. Wayne Babcock, The Osmic Acid Treatment of Tic Douloureux.

The following was the programme of the meeting of the Society of Normal and Pathological Physiology, held March 6th:

Observations Upon the Blood Pressure of Intracranial Conditions, by Dr. Charles H. Frazier; Discussion Upon the Clinical Data Obtained from Estimations of Blood Pressure, by Dr. Alfred Stengel; Demonstration of Apparatus for Determining Blood Pressure in Man, by Dr. W. B. Stanton; The Use of the Sphygmomanometer in Therapeutics, by Dr. H. C. Wood, Jr.; Some Experimental Observations Upon the Lower Animals to Determine the Accuracy of Stanton's Apparatus in Recording the Maximum and Minimum Blood Pressure, by Dr. D. M. Hoyt.

At a meeting of the Northern Medical Association, held March 10th, Dr. Samuel Wolfe read a paper on Abdominal Pus Collections. The discussion was opened by Dr. Wilmer Krusen.

The Health of the City.—The following cases of transmissible diseases were reported to the bureau of health for the week ending March 4, 1905:

	Cases.	Deaths.
Typhoid fever.....	92	11
Scarlet fever.....	46	1
Cholera.....	67	0
Diphtheria.....	48	7
Cerebrospinal meningitis.....	3	1
Measles.....	18	0
Whooping cough.....	11	2
Tuberculosis of the lungs.....	17	12
Pneumonia.....	74	72
Erysipelas.....	12	6
Puerperal fever.....	1	1

The total deaths for the week numbered 559, in an estimated population of 1,438,318, corresponding to an annual death rate of 20.21 per 1,000 population. The total infant mortality was 112; under one year, 97; between one and two years, 15. There were 38 still births; 19 males and 19 females. The following deaths were reported from other transmissible diseases: Malarial fever, 1; tuberculosis, other than tuberculosis of the lungs, 8; tetanus, 1; dysentery, 2; diarrhoea and enteritis under two years, 16. The weather was mild, with a rain precipitation of 0.39 inch.

Tuberculosis.—The Philadelphia Board of Health has issued the following circular letter to the physicians of that city:

MY DEAR DOCTOR:

A number of communications received from physicians in the city relative to the reporting of tuberculosis lead me to suspect that there is more or less misunderstanding on the subject, and I take this occasion to inform you of the board's attitude towards cases of tuberculosis that are reported.

Cases of tuberculosis are not regarded in the same light as are those of the acute transmissible diseases. They are not, therefore, subjected to the same official supervision. Nevertheless, for the protection of the public health, it is essential that cases of tuberculosis be kept under sanitary supervision. For the information of the board upon this matter you are requested to fill out the enclosed blank and forward it to this office. If it is not entirely convenient for you to fill out this blank, or if for other reasons you prefer to have it done by one of our representatives, kindly notify me and I will detail a man for the purpose. If I do not get a reply to this communication I will take it that you prefer to have us gather the data.

The names and addresses of cases of tuberculosis reported to this office are matters of official record, and will under no circumstances, be made public.

Whenever the bureau desires special information concerning particular cases, the request is made to the attending physician and not to the patient, except in the case of destitute persons who may not be under a physician's care.

The board carefully refrains from doing anything to alarm patients whose names have been reported.

The board recommends that all rooms occupied by tuberculous patients be periodically disinfected during the course of the disease and again after the rooms and house have been vacated. The disinfection is not done on the board's initiative, but only after the attending physician has been consulted and the consent of the patient or the relatives is given. In notoriously unsanitary premises, and in the case of persons who are unwilling or unable to take the necessary precautions, the board reserves the right to subject these premises and persons to such sanitary regulations as may be deemed appropriate.

From the foregoing it is obvious that tuberculous cases reported to the board are subjected to neither hardships nor official supervision, other than that necessary to protect the public health, and that there is, therefore, no good reason for failure to regularly report them.

Very truly yours,

A. C. ABBOTT, M. D.,
Chief of bureau.

Name of patient.....	Ward.....
Residence of patient.....	Color.....
Age.....	Children.....
Single.....	Occupation.....
Site of disease.....	Working.....
Disability.....	
Confined to house.....	
Number of persons living in the house.....	
Other cases in the house.....	
Cubic air space of sickroom.....	
Light of sickroom.....	
Ventilation of sickroom.....	
Heating of sickroom.....	
Number of persons sleeping in sickroom.....	
Cleanliness of sickroom.....	
Disinfection of sickroom.....	
What precautions are taken against the spread of the disease?	
.....	
Sanitary condition of the house.....	
.....	
Previous cases of tuberculosis in the house. Number and dates	
.....	
Are home accommodations adequate for	
(1) Protection against diffusion?.....	
(2) Proper care of patient?.....	
Is it desirable to remove patient to the tuberculosis pavilions	
of the Philadelphia Hospital?.....	
.....	
Address.....	

GENERAL.

The Children's Free Hospital, of Youngstown, Ohio, has recently received gifts to the extent of \$1,500.

Proposed Insane Asylum for New Hampshire.

A bill is before the New Hampshire legislature for the appropriation of \$200,000 for a new insane hospital at Concord.

Jersey City Hospital.—Dr. Charles A. Limeburner has resigned from the medical staff of the Jersey City Hospital. Owing to recent withdrawals the institution is left with but three attending physicians.

Grand Medical Examiner of the A. O. U. W.—Dr. A. H. Briggs, of Buffalo, has been reappointed grand medical examiner of the A. O. U. W., making the twenty-fifth consecutive term of the physician in this office. The appointment was made in Syracuse on March 9th.

Memphis and Shelby County, Tenn., Medical Society.—The annual election of officers of the Memphis and Shelby County Medical Society was held on March 8th with the following result: Dr. J. L. Andrews was elected president for the current year, Dr. J. L. Barton was chosen vice-president, and Dr. Cummings Harris, secretary.

Austin Flint Medical Society of Pittsburgh.—The thirteenth annual banquet of the Austin Flint Medical Society was held on February 28th at the Colonial Hotel, Pittsburgh. The officers who were recently elected are: President, Dr. Walden A. Clark; vice-president, Dr. Frank Kenworthy; secretary treasurer, Dr. Robert E. Davidson; board of directors, Dr. S. H. McKibbey, Dr. A. L. Lewin, and Dr. Kenworthy. Dr. J. C. Dunn acted as toastmaster.

Frederick City, Md., Hospital.—A large addition to the Frederick City Hospital, donated by Mrs. Margaret Scholl Hood, and to be known as the Hood wing, was formally opened on March 8th. Governor Warfield was present and made an address. The wing, which practically doubles the capacity of the hospital, cost about \$10,000. It contains numerous private rooms, a large sun parlor, etc. All of the rooms have been furnished by friends of the hospital.

Medical Harmony in Montreal, Canada.—It is alleged that in the past there has been some little friction between the English and French speaking physicians of the Canadian metropolis. It appears, however, that all differences have been harmonized, and at a banquet given at the Windsor Hotel on February 21st, the members of the Société medicale de Montréal and the Montreal Medico-Chirurgical Society, the most prominent members of each organization spoke hopefully of perfect accord in the future.

Graduate Nurses from Mercy Sanitarium, Denver.—The following twelve nurses graduated recently at the nurses' training school of the Mercy Sanitarium: Adelaide James, of Kansas City, Kan.; Elizabeth Gray, of Coldwater, Mich.; Carolyne Croutwick, of Giltner, Neb.; Anna Kelliher, of Kansas City, Kan.; May Firedaugh, of Durango, Colo.; Pearl Dunlap, of Telluride, Colo.; Mary Fahey, of West Court, Ireland; Cecile Young, of New Orleans, La.; and four sisters, Sister Mary John, Mary Stanislaus, Mary Anthony, Mary de Sales.

Herkimer County, N. Y., Medical Society.—The Herkimer County Medical Society held its annual meeting and banquet March 7th at the State army in Mohawk. The following officers were elected for the ensuing year: President, Dr. U. G. Williams, of Newport; first vice-president, Dr. A. C. Douglas, of Ilion; second vice-president, Dr. Ellis, of Little Falls; third vice-president, Dr. Brainerd, of Little Falls; secretary, Dr. A. Walter Suiter, of Herkimer; treasurer, Dr. George Graves, of Herkimer.

Wyoming State Board of Medical Examiners.—The newly appointed State board of medical examiners has just held its first meeting at Cheyenne, electing Dr. E. P. Rohrbaugh, of Casper, as president; Dr. Oliver Chamber, of Rock Springs, vice-president; Dr. S. B. Miller, of Laramie, secretary. The board decided to rigidly enforce the law passed by the last legislature, which, in effect, prohibits the practice of osteopathy and Christian Science in Wyoming. A large number of osteopaths and science healers, now operating in the State, will be compelled to leave or submit to prosecution under the law.

Graduate Nurses of Grace Hospital, Detroit.—The following nurses have graduated from this institution: Jessie C. Smith, of Dowagiac; Mary E. Schaft, of Oakland; Helen R. Bock, of Detroit; Mary Proudfitt Langley, of Saginaw; Mary Cook, of St. Thomas, Ont.; Edith M. Naylor, of Essex, Ont.; Gertrude Ada Peel, of Toronto; Anna Maria Schill, of Saline; M. Alba Ransom, of Blenheim, Ont.; Anna McCormick, of Windsor; Helen Darling Humphreys, of Sidney, O.; Edith Winnifred Lawson, of Stratford, Ont.; Mildred M. Palmer, of Cleveland; Rachel Joliffe Mulheron, of Detroit; Arthur B. Henderson, of Detroit; James Earl Hamilton, of Amherstburg, Ont.

Chicago Neurological Society.—A meeting of this society was held at the Sherman House, Thursday, March 16th, at 6.30 p. m. Dr. Sydney Kuh presented a case for diagnosis; Dr. L. H. Mettler presented a case of syphilitic spastic paraplegia (Erb's type) and a case of the less common type of tabes dorsalis; Dr. Alfred C. Croftan related some studies of epilepsy of gastrointestinal origin; Dr. Harold N. Moyer showed a case of Raynaud's disease with new suggestions as to treatment; Dr. Peter Bassoe described his studies upon cerebral softening, including histories and specimens. L. Harrison Mettler, M. D., secretary and treasurer.

Mortality of Michigan During February, 1905.—The total number of deaths returned to the department of State for the month of February was 3,218, corresponding to a death rate of 16.4 per 1,000 population. This is higher than the rate for the preceding month, 14.2 per 1,000, but slightly lower than the death rate for February, 1904, which was 17.1 per 1,000. By ages there were 629 deaths of infants under one year of age, 165 deaths of children aged one to four years, and 1,089 deaths of elderly persons over 65 years. There is increased mortality at the extremes of life as compared with the preceding month. Im-

portant causes of death are as follows: Tuberculosis of lungs, 191; other forms of tuberculosis, 35; typhoid fever, 46; diphtheria and croup, 27; scarlet fever, 10; measles, 7; whooping cough, 4; pneumonia, 442; diarrhoeal diseases, under two years, 61; meningitis, 59; influenza, 184; cancer, 106; accidents and violence, 158. There was a slight increase in the mortality from typhoid fever and considerable increase in that from pneumonia, meningitis, and influenza. Diphtheria and croup caused fewer deaths than usual. The largest number of deaths from smallpox of any month since registration began under the present law occurred—namely, 11, distributed as follows: One in Standish township, Arenac county; two in Blackman township, one in summit township, and five in the city of Jackson, Jackson county; two in Perry village, Shiawassee county.

Statement of Mortality in Chicago for the Week Ending March 11, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on Census Bureau's figures of estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Mar. 11, 1905.	Mar. 4, 1905.	Mar. 13, 1904.
Total deaths, all causes.....	627	627	549
Annual death rate per 1,000.....	16.41	16.41	14.84
By sexes—			
Males.....	364	369	331
Females.....	263	258	218
By ages—			
Under 1 year.....	135	129	99
Between 1 and 5 years.....	70	60	41
Over 60 years.....	112	145	128
Important causes of death.....			
Acute intestinal diseases.....	28	24	20
Apoplexy.....	13	16	10
Bright's disease.....	38	33	38
Bronchitis.....	30	35	21
Consumption.....	82	73	86
Cancer.....	19	25	24
Convulsions.....	19	16	15
Diphtheria.....	2	9	6
Heart diseases.....	45	43	32
Influenza.....	8	11	3
Measles.....	10	1	1
Nervous diseases.....	22	28	14
Pneumonia.....	138	117	127
Scarlet fever.....	1	3	4
Smallpox.....	8	3	0
Suicide.....	8	10	5
Typhoid fever.....	8	3	9
Violence (other than suicide).....	25	26	20
Whooping cough.....	6	7	0
All other causes.....	117	144	113

More than one fifth of all the deaths reported during the week were attributed to pneumonia. The total 138 is twenty-one more than the previous week's and is the greatest number for any week of the current pneumonia season. As compared with New York the ratios of deaths from consumption and deaths from pneumonia to deaths from all causes, which, up to two weeks ago, were in favor of Chicago as to pneumonia, are now exactly the same. At the close of office hours on March 11th the figures for each city were as follows—the total period covered being between October 1, 1904, and March 11, 1905:

	Chicago.	Pneumonia
Total deaths.....	2,072	
Consumption.....	1,351	
Per cent. of total.....	11.5	17.3
	New York.	Pneumonia
Total deaths.....	5,533	
Consumption.....	3,673	
Per cent. of total.....	11.5	17.3

Up to February 25th, the consumption ratio was the same for each city—namely, 11.4 per cent.; but the pneumonia ratio was 17.4 per cent. for New York and 16.9 per cent. for Chicago.

Pith of Current Literature.

SEMAINE MEDICALE.

February 1, 1905.

1. Musical Aphasia, By G. MARINESCO.
2. Woody Phlegmon, By F. LEJARS.

1. Musical Aphasia.—Marinesco presents what little literature there is on this subject under the heading "des amusies." The recognition of this condition is comparatively recent. It exists in two forms, a motor aphasia for music similar to motor aphasia for words and an incapacity for instrumental music. Musical blindness, or alexia, is characterized by the loss of ability to read music, while the vision in general and the ability to read letters remains unimpaired. The exact seat of the different forms of "amusie" is almost wholly unknown.

2. Woody Phlegmon.—Lejars argues in favor of the existence of a phlegmon of this character with the characteristics described by Reclus in 1892 in opposition to the conclusion reached by Schmincke, who found by histological examination post mortem that a tumor which he had diagnosed as woody phlegmon, Holzphlegmon, was in reality a cancer.

February 8, 1905.

Surgical Intervention in the Face of Modern Ideas of Physiology and General Pathology, By A. CHASSIN.

Surgical Intervention.—Chassin protests against the frequency of operative procedures directed against the gall bladder, the appendix, and other parts of the intestinal tract on the ground that even though the local healing may be perfect and though the recovery be accompanied by a noticeable amelioration of the general condition, nevertheless certain physiological processes are definitely and permanently interfered with. Some of his statements are hardly convincing, one of which is that he has seen arteriosclerosis with renal trouble develop eighteen months after the removal of hæmorrhoids from a man 56 years of age without any other cause.

PRESSE MEDICALE.

February 15, 1905.

1. Treatment of Tuberculosis by Inoculations, By A. E. WRIGHT.
2. Action of Anæsthetics on the Blood, By P. EMILE WEIL.

1. Treatment of Tuberculosis by Inoculation.—Wright's paper is devoted to a discussion of the manner in which Koch's tuberculin protects against tuberculosis. The introduction of antiseptic substances into the organism has signally failed to accomplish the desired result, and a serviceable inoculation must be of a substance which gives rise to the formation of protective substances, or to bacteriotopical elements, in this case to tuberculo-topical elements. A protective substance is defined as one which enters into destructive chemical combination with bacteria or any foreign elements introduced into the organism through the veins or subcutaneously.

2. Action of Anæsthetics on the Blood.—

Weil's article is a brief summary of the effects noted by a large number of writers, mainly American surgeons, on the red and white corpuscles of the blood. Very little is known regarding the like effects of local anæsthetics, but one observer found a temporary diminution of the leucocytes for about two hours after obtaining lumbar anaesthesia with cocaine, not followed by any operation.

ZENTRALBLATT FUER INNERE MEDIZIN.

January 14, 1905.

1. Observations on the Mixed Saliva of Healthy and Diseased Persons, By R. FLECKSEDER.

1. Examinations of Saliva.—Fleckseder notes that the normal reaction of the saliva is alkaline, but is found to be acid in cases of diabetes, in neoplasms of the stomach and other organs, in leucæmia and pernicious anæmia, in jaundice, and less often in chlorosis. Ammonia is always present in normal saliva in small quantity. Rhodan and the chlorides are increased or diminished according to the disease, while albumin is present in a percentage of from seven to nine hundredths. The author was never able to demonstrate the presence of urea, uric acid, or biliary coloring matter, although urea was found in the saliva induced by pilocarpine and in uræmic subjects. In two severe cases of diabetes, sugar was always present, but was absent in eleven other cases of glycosuria.

Oligosialia (diminished saliva) is rarely idiopathic, but is commonly seen in severe constitutional diseases, diabetes mellitus and insipidus, profuse diarrhoeas and sweats, incessant vomiting, dropsy, cachexia, and anæmia accompanying carcinoma of the stomach and other malignant neoplasms, uræmia, pernicious anæmia, cirrhosis of the liver, and fever. It is usually then tenacious, cloudy, acid, and of a peculiar sweetish odor. The disturbances of oligosialia are often severe. The condition sometimes appears after ptyalism.

Ptyalism is marked by a clear, thin, alkaline saliva, with a decrease of rhodan. It is caused by stomatitis, pregnancy, the smell of favorite dishes, etc. It is also seen in cases of ulcer of the stomach, painful gastric affections, and nausea. Intermittent flow of saliva is observed in cases of neurasthenia, in the gastric crises of locomotor ataxia and in trigeminal neuralgia.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 4, 1905.

1. The Fate of Embolic, Displaced Placental Cells, By G. SCHMORL.
2. Perception of the Fœtal Heart Sounds in the Middle of Pregnancy, By O. VON HERFF.

1. Embolic Placental Cells.—Schmorl has made investigations into the question as to whether displaced cells of a normal placenta have the power to evoke progressive changes, such as chorioepithelioma. He examined the lungs of 150 women who died in different stages of pregnancy. In only one case toward the end of pregnancy did he find any pulmonary changes. In two cases in the fifth month of pregnancy he saw similar processes. All the cases were those of hydatid moles, so the author concludes that the cells of the normal placenta do

not give rise to such lesions. In one such instance, enormous masses of chorioepithelioma were found in the lungs.

ZENTRALBLATT FUER CHIRURGIE.

January 21, 1905.

1. The Technics of Gastrostomy and Jejunostomy. A New Operation, By J. ARCE.
2. Hedonal-Chloroform Narcosis, By W. MINTZ.

1. **Gastrostomy and Jejunostomy.**—Arce, moved by the thought that most patients subjected to these operations are very much emaciated and marantic, strove to devise a simple yet efficient operation. Under local anæsthesia, he unites the gastric mucosa to the peritonæum instead of to the skin. He first makes a vertical transmuscular incision which never reaches to the umbilicus, and then seeks either the cardia or the lesser curvature for a gastrostomy, or a suitable place in the jejunum about twenty cm. from the angle between the duodenum and the jejunum for a jejunostomy. These selected areas are united to the peritonæum. The rest of the peritoneal opening is then dosed with a continuous catgut suture and the skin is sutured. The opening of the stomach or intestine is postponed until adhesions have formed. The patient is then fed frequently in small quantities through a tube introduced into the wound. The results in the author's cases have been very satisfactory, fluids injected having no tendency to return through the fistula.

2. **Hedonal-Chloroform Narcosis.**—Mintz reports unfavorably on this combination for anæsthesia, basing his conclusions on 175 cases. In seventy-five instances, the hedonal failed in its anæsthetic effect. Another disadvantage is that the anæsthetist cannot be certain of the establishment of narcosis on account of the absence of some of the characteristic signs. Once a severe syncope was noticed and thirteen times decided weakness of the pulse was seen. The only advantage observed by Mintz was the absence of mental disturbance on the part of the patient on account of the preliminary anæsthesia induced by the hedonal.

January 28, 1905.

1. Anastomosis Between the Stomach and Œsophagus and Resection of the Thoracic Portion of the Œsophagus, By SAUERBRUCH.

1. **Anastomosis Between the Œsophagus and Stomach.**—Sauerbruch has succeeded, in dogs, in anastomosing the stomach and œsophagus and in resecting the thoracic portion of the œsophagus. He operates in the pneumatic chamber of his invention, and of eleven dogs operated on but three died. He was long unsuccessful, but finally succeeded by observing the most scrupulous asepsis, by doing away with sutures and using instead the Murphy button and by employing Lugol's solution to bring about adhesions. The operation seems simple and efficient, the œsophagus being reached through the fifth intercostal space. The resection of the œsophagus was achieved by intrapleural displacement of the stomach. For resection of the cardia, Sauerbruch performs thoracotomy first, then circular loosening of the diaphragm from the œsophagus, with mobilization of its lower part and isolation

of the vagi nerves. The œsophagus is then inverted into the stomach and held by silk sutures. Two weeks later gastrotomy is done and the inverted portion of the œsophagus excised. The author regards this as an ideal method for small tumors of the cardiac end of the stomach. He has convinced himself by experiments on the cadaver that the operation is possible on man.

FORTSCHRITTE DER MEDIZIN.

January 10, 1905.

1. Is Typhoid an Infectious Fever? By MEYER.
2. Subcutaneous Nourishment After Surgical Operations, By FRIEDRICH.
3. Renal Tuberculosis and the Results of Its Operative Treatment, By KRÖNLEIN.
4. Dietetic Treatment of Chronic Diffuse Intestinal Catarrh, By ROSENHEIM.

2. **Subcutaneous Nourishment After Surgical Operations.**—Friedrich suggests the direct introduction of nutriment into the tissues, especially after operations upon the abdominal organs in cases in which the digestive organs are entirely or partially unable to perform their functions. He has been experimenting in this direction for years and has found that heat units can be satisfactorily introduced by means of a two per cent. sodium chloride solution containing 30 to 35 parts per mille of chemically pure grape sugar. This solution should be boiled ten minutes and when cooled to the temperature of the body one to two litres may be injected daily under aseptic precautions. For the further production of heat 20 to 100 grammes of sterilized oil may also be injected. The production of a suitable albumenoid was extremely difficult, but he finally succeeded in producing a pepsin-fibrin-peptone which would not coagulate and which could be sterilized from ten to thirty minutes without disintegration. This was injected in twenty gramme doses, the equivalent of one hundred heat units, without discomfort, and was readily assimilated. Reduced to a formula Friedrich's method was as follows: in the morning 1,000 grammes of water containing 2 grammes of sodium chloride, 35 grammes of grape sugar and 15 grammes of peptone; in the afternoon the same quantity of water, sodium chloride, and sugar, and 5 to 10 grammes of peptone. In the interval between these two injections a single injection of 20 to 100 grammes of olive oil was injected. By this method the necessary quantity of proteids is supplied to the body so that in such conditions as peritonitis and perforation of the stomach and intestine sufficient nutriment may be introduced for as long a period as ten to fourteen days if necessary.

January 20, 1905.

1. Tuberculosis of the Kidney and Its Surgical Treatment, By KRÖNLEIN.
2. The Dietetic Treatment of Chronic, Diffuse, Intestinal Catarrh, By ROSENHEIM.

1. **Tuberculosis of the Kidney.**—Krönlein reports 51 cases of tuberculosis of the kidney, in 39 of which an operation was performed. In 92 per cent. of the cases only one of the kidneys was the seat of disease. The right and the left kid-

About one third of all the cases of surgical diseases of the kidney are tuberculous. Women were the subjects of the disease in 74 per cent. of the cases. This preponderance is due to the susceptibility of pregnant and puerperal women to the various forms of cystitis and pyelitis, to dislocation of the kidney, to twisting of the ureter, and to the consequent retention of the urine in the pelvis of the kidney. Nephrectomy was indicated in the majority of the cases. The specimens which were removed were divisible into two groups: 1. Those in which there had been tuberculous abscess with cavities containing pus and cheesy matter and with very little intact renal parenchyma remaining. 2. Those in which the kidney was still firm, in which the abscesses were small and located as a rule at the border between the cortex and the calyces. Krönlein agrees with the opinion of Steinthal and Baumgarten that renal tuberculosis is of hematogenous origin. In none of his cases could the continuity of the tuberculous process be traced from the genital organs by way of the bladder and ureters to the kidneys. With reference to prognosis he distinguishes: 1. The solitary tuberculosis in a kidney. 2. The combined kidney tuberculosis. In 12 of the 34 cases in which nephrectomy was performed no tuberculosis could be demonstrated in other organs. In the remaining 22 cases there was more or less evidence of similar disease in the lungs, urinary bladder, bones, or joints. The presence of tuberculosis in other organs does not contraindicate the removal of a tuberculous kidney if the remaining kidney is not diseased. In removing the kidney the loin incision was always employed. Of the 34 operations 24 were not fatal. Of 8 cases in which autopsy was performed, the remaining kidney was apparently sound in 6; in the two others the remaining kidney became tuberculous, the patients dying with uræmic symptoms. None of the operations resulted fatally immediately by reason of defective function in the remaining kidney. The combined variety of tuberculosis was found to give a less favorable prognosis than the solitary. Nephrectomy can hardly be considered a serious operation, in itself, its immediate mortality being only 5 to 6 per cent. As to the permanency of the results which follow nephrectomy Krönlein recalls several patients who continue well, though more than ten years have elapsed since the operation.

4. Dietetic Treatment of Intestinal Catarrh.

—Rosenheim observes that there would be difficulty in recommending a suitable routine diet for all forms of gastrointestinal disease. But it can safely be said that the food should be unirritating and assimilable. It has been wrongly assumed that milk is universally suitable for such troubles and the author has found that in the majority of cases it is not suitable, at least at the beginning of the disease. A milk diet may be considered after the small intestine has been brought to a quiet condition by several weeks of treatment with some other form of diet. On the other hand, the milk diet is never contraindicated for catarrh of the large intestine. The diet which is

recommended as suitable to bring about a quiet condition of the small intestine should contain 120 grammes of albumen, 200 to 250 of carbohydrates, and 40 to 50 of fats. It may be derived from meat, fish, eggs, sugar, white bread or zwieback, sago, macaroni, bouillon, thin soups, butter, tea, and red wine. Meat is suitable for the majority of cases of acute catarrh, and usually causes very little trouble. In some cases in which the small intestine is the seat of chronic inflammation it cannot be taken. When the stomach is in a condition of achylia, the undigested meat being found in the stools, or when there is an increased decomposition of albuminoid material on account of the intolerance of meat or fish by the diseased large intestine such food should, of course, not be administered. If the symptoms of disease of the stomach and large intestine predominate and the symptoms referable to the small intestine are correspondingly less pronounced the use of milk will be proper to supply the necessary albuminoids. If after a few weeks of milk diet the stools become normal and the general symptoms improve, small quantities of vegetables may be given every second or third day, including potatoes, carrots, and spinach, also tea, cocoa, and cereals. After four to six weeks meat, milk, and fruits may be added.

January 20, 1905.

1. The Spontaneous Disappearance of Opacities in the Crystalline Lens and Recurrent Clearness of the Same, By GREEFF.
2. The Permeability of the Human Body to the Röntgen Rays, By PERTHES.

2. **The Permeability of the Human Body to the Röntgen Rays.**—Perthes states that he has investigated experimentally the important question whether the Röntgen rays which have penetrated the skin will produce pathological and therapeutical results in the interior of the body similar to those which are produced by those which impinge upon the skin. He has reached the following conclusions: 1. The permeability of the soft parts of the human body is very similar to that of water, with the exception of the lungs and the fatty tissue which are specifically lighter than water. The lungs and fatty tissue are more readily permeable than water, while the other soft parts are slightly less permeable than water. 2. When the interior of the body is irradiated the intensity of the rays drops abruptly as they pass from the surface of the interior. Moderately soft tubes being used the intensity of the rays one centimetre below the surface is 50 to 60 per cent. of the intensity at the surface, at two centimetres it is 35 to 45 per cent., at three centimetres it is only 20 to 30 per cent. 3. The diminution in intensity takes place more slowly when hard tubes are used, but even with such tubes the intensity is less than 40 per cent. at four centimetres depth, and less than 25 per cent. at five centimetres. 4. The diminution in intensity occurs much more slowly if a layer of aluminum one millimetre in thickness be placed upon the surface of the body.

BERLINER KLINISCHE WOCHENSCHRIFT

February 6, 1905.

1. Syphilis of the Liver in the Diagnosis of Abdominal Tumors, By KOENIG.
2. The Origin of Immunity Against Typhoid Fever, By JUERGENS.
3. Experiments on the Gastric Secretion of Herbivora, By A. BICKEL.
4. A Case of Vegetating Pyodermitis, By R. LEDERMANN.
5. A New Method of Hæmostasis, By B. MUELLER.
6. Sprains of the Ankle (*Concluded*), By PELS-LEUSDEN.
7. The Results of Experiments of Inoculating Animals with Syphilis, By E. HOFFMANN.

1. Hepatic Syphilis and Abdominal Tumors.

—Koenig reports several cases of patients who, for a longer or shorter period, complained of pain in the region of the liver, anorexia, and loss of weight, in whom no functional hepatic disturbance could be demonstrated. Tumors, sometimes movable, sometimes adherent to the liver, were present, and gave the indication for operation. Diagnostically, Koenig points out, syphilis affects first the lobes of the liver, giving rise later to a diffuse hepatitis. The interstitial as well as the gummatous form of syphilis can give rise to tumor formation. Koenig says every case must be individually judged as to whether an operation is to be performed or not.

2. Typhoid Immunity.—Juergens narrates the case of a man who suffered from a severe attack of typhoid fever two months after recovery from typhoid. During his first attack agglutinins and bactericidal elements were found in the blood. The recurrence of the disease cannot, therefore, be ascribed to a lack of immunizing material since it took place at a time when the formation of immunizing substances was at its height. Immunity does not, therefore, depend exclusively upon changes in the serum. Epidemiological and individual factors must also enter into consideration of what constitutes immunity.

5. A New Method of Hæmostasis.—Mueller has prepared dressings impregnated with suprenin which can be conveniently used for stopping hæmorrhage. The dressings can be used for tamponade as well as for superficial areas.

6. Sprains of the Ankle.—Pels-Leusden says that an examination of about 6,000 Röntgen plates convinces him that a genuine sprain of the ankle, as it is generally understood, does not exist. In every case there is a fracture of one or both condyles or of the articular surface of the tibia.

7. Syphilis Inoculation.—Hoffmann shows that the inoculation of chimpanzees with human syphilis has actually been accomplished and that these animals can infect others. He expresses the hope that as a result of these experiments, a serum therapy for the disease may be evolved.

RIFORMA MEDICA

February 4, 1905.

1. Orchipin, a Preparation of Fresh Testicles in an Oily Vehicle, By M. SCIALLEO.
2. Serum Diagnosis in One Hundred Patients Presenting the Clinical Features of Typhoid Fever, By D. FALCIONI.
3. Decapsulation of the Kidneys According to Edebohl's

Method, in the Treatment of Chronic Interstitial Nephritis, By EUGENIO ARCOLEO.

4. The Pathogenesis of Sensory Dissociation of Central Origin (*Concluded*), By UGO BENENATI.

1. Orchipin.—Sciallero describes a new testicular preparation named orchipin, as an extract of the fresh testicles of the bull and the ram, made by dissolving the testicular substance properly prepared in olive oil. The testes are taken only from animals that have passed an examination by veterinary surgeons stationed at the slaughter house. The preparation occurs as a clear oily fluid which is neither alkaline nor acid in reaction, and does not contain any precipitable albumins. It is very rich in phosphorus and in lecithin. It can be given in large doses without producing any toxic effects.

2. Serum Diagnosis in Typhoid.—Falcioni found that the reaction was positive in 87 per cent. of a series of 100 cases in which the clinical diagnosis was typhoid fever. He concludes that the bacillus of Eberth is not the only, but certainly the principal germ causing typhoid infection. In five cases of paratyphoid he obtained reactions with the paratyphoid B. cultures, but not with typhoid bacillus cultures. In these five patients the disease presented the classical picture of typhoid fever, and only in two of them the malady was mild in character. This point is emphasized because some authors say that paratyphoid infection is usually mild in character—an observation which is not confirmed by the present author. He did not obtain a reaction in any case with paratyphoid A. bacillus, and corroborates the observations of other authors to the effect that infection with bacillus paratyphoid A. is very rare. Only in one patient could he obtain a reaction with paratyphoid A., but this was in the case of mixed infection. An interesting feature was the finding of a sharp reaction with cultures of bacterium coli in four patients suffering apparently from typhoid fever. The author thinks that in these cases the bacterium coli was responsible for the infection, inasmuch as in none of these four cases a reaction with typhoid bacilli could be obtained. In four other cases the reaction was absolutely negative. The author urges the necessity of repeating the reaction in doubtful cases, not only with culture of the typhoid bacillus, but also with the paratyphoid, A and B, and with the bacterium coli.

3. Renal Decapsulation.—Arcoleo, of Palermo, used Edebohl's method of decapsulation for a case of chronic nephritis with predominantly interstitial lesions. The chart of urinary analyses showed practically no improvement after the operation, but the patient improved somewhat in his general condition. The operation was performed only on one side, although both kidneys were diseased, as appeared from the separation of the urine by means of Downes's apparatus. The case therefore cannot be counted as evidence of the failure or success of the method in question. The author is fully conversant with the literature of the subject, and gives a clear exposition of the technics and rationale of the operation.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

January 28, 1905.

1. The Diagnostic Value of Certain Leucocytic Formulæ in the Cerebrospinal Fluid, By C. P. GOGGIA.
2. Contribution to the Study of Auscultation Over the Mouth in Relation to Cardiopulmonary Respiration, By GIULIO BINETTI.
3. On the Diagnosis of Tumors of the Upper Pelvis, By RAFFAELLO CECCO.
4. Ligature of the Carotid Artery, By GAETANO AMENTA.
5. Contribution to the Treatment of "Infectious Fever," By CRESCENZO CONCA.
6. Arrhenal in Pædiatrics, By GIUSEPPE DALLA VECCHIA.

1. Value of Cytodiagnosis in the Cerebrospinal Fluid.—Goggia studied two cases of meningitis of diplococcic origin with reference to the value of cytodiagnosis. Two facts were noted in this investigation, which he thinks are of value: First, the constant predominance of small mononuclear elements in the cerebrospinal fluid of one patient, who died, and in whom the diagnosis was confirmed on autopsy. Second, the constant predominance of polynuclear elements even after the convalescence had set in in the second patient, who recovered. He thinks that the leucocytic formulæ which have been advanced by the French school are not sufficient, *per se*, to give us a definite diagnostic element, or to help us in the prognosis.

3. The Diagnosis of Pelvic Tumors.—Cecco considers the methods of diagnosing deeply situated tumors in the upper part of the pelvis, i. e., in the iliac region, and describes the following method which he worked out himself: The operator stands at the side of the patient, who is placed on an examining table. He presses one hand deeply into the abdominal cavity of the patient on the side on which the tumor is suspected, and with the other hand first flexes the patient's thigh, and then suddenly extends the limb, striking the table with the heel of the patient. At this moment, a distinct impact is felt by the abdominal wall if there is a retroperitoneal tumor present. The author convinced himself experimentally in the cadaver of the correctness of this method of examination. He believes that by more careful examinations of such tumors abdominal incisions could often be avoided and lumbar incisions or extraperitoneal cuts could be substituted, with a corresponding lowering of the mortality.

4. Ligature of the External Carotid.—Amenta ligated the external carotid in order to arrest hæmorrhage from a wound inflicted by an assassin in the parotid region, the injury penetrating into the pharynx. The patient was a robust man, but the loss of blood was very great. An incision was made with its centre at the anterior margin of the sternocleidomastoid, eight cm. in length, and the external carotid carefully isolated and ligated with No. 2 silk between the origins of the lingual and the external maxillary. The wound was drained with gauze for a day, but healed by primary union and the patient made an uneventful recovery.

ROUSSKY VRATCH.

January 15, 1905.

1. Conservative Myomectomy in Pregnancy, By S. D. MIKHNOFF.
2. On the Treatment of Suppurative Inflammation of the Leptomeninges, By V. A. OPPEL.
3. On the Connection Between Diarrhoeas of Bacterial Origin and Achylia Gastrica, By Z. F. ORLOFFSKI.
4. On the Influence of Dyes of the Aromatic Series on Digestion, By A. I. VINOGRADOFF.
5. On the Rupture of the Walls of the Vagina During Coitus, By I. S. BALLIN.

1. Treatment of Myomas in Pregnancy.—Mikhnoff concludes his analysis of this subject as follows: No operative interference is indicated in a case of uterine myomas in a pregnant woman when the growths do not produce any disturbances and occupy such a position that they do not interfere with the passage of the fœtus. If the growth occupies such a position that it can be removed without opening the cavity of the uterus, conservative myomectomy should be performed, and if necessary, this operation can be performed during the first months of pregnancy. If it is necessary to open the womb, the operation should be performed when the fœtus is eight months old, and then only when the indications are most urgent. Artificial labor should never be induced as a means of treating myomas of the uterus.

4. Action of Artificial Dyes on Digestion.—Vinoogradoff finds that the artificial dyes of the aromatic series which are often incorporated in food products, not only act as general poisons in the system, but also seriously affect digestion, their chief effect being a lowering of the digestive power of pepsin. Their exact mode of action and their influence on metabolism are still open questions.

5. Rupture of Vagina in Coitus.—Ballin reports the case of a woman who suffered extensive lacerations of the vaginal walls during her first coitus. She was 25 years old, and the sexual act seemed to have been perfectly normal, according to her account, except that she had held her knees bent upon her abdomen, pressing them into this position with her hands. Very profuse hæmorrhage occurred after the act. The external genitals were uninjured, but two tears passed through the hymen down to the base of this membrane. The vagina was filled with bloodclots, and the posterior vault showed a transverse laceration, which included a part of the left fornix. The small virgin cervix was completely torn away from the posterior wall, and was drawn forward. The author attributes the vaginal rupture in these cases to a congenital rigidity of the vaginal walls, and not to anything unusual in the sexual act.

January 22, 1905.

1. The Fear of Another Person's Eye, By V. M. BEKHTERIEFF.
2. Study of Malaria in Soth (a Town on the Coast of the Black Sea), By N. K. SCHULTZ.
3. Echinococcus Cysts of the Pelvis in Women. Their Diagnosis and Treatment, By B. N. ORLOFF.

4. Changes in the Morphology of the Blood Due to Chloroform Anæsthesia. By P. I. FIODOROFF.

1. **The Fear of a Stare.**—Bekhterief contributes an interesting study to the question as to the nature and significance of a state of mind in which a person fears a prolonged stare directed upon him by another. Recently Hartenberg described what he styles *la phobie du regard*, one of the varieties of which is the fear of another person's stare, which develops in persons who are naturally timid. Bekhterief claims priority in this matter, as he described a case of this kind in 1899. This was the case of a theological student given to masturbation who could not bear the look of another person, and therefore wore dark spectacles. In 1900 Bekhterief described three other cases of this kind. He found that, as a rule, these patients complain of a feeling of shame when some one looks steadily at them, and they imagine that when a person looks them in the eye their own eyes, or facial expression, betray the fact that they are given to onanism, that they are impotent, or have some other secret trouble from which they are suffering. The author classes these cases with the group of psychoses characterized by compulsory hallucinations and delusions. Very often the fear of meeting some one else's eye is associated with other compulsory acts, such as the compulsory smile which the author has described, or with the fear of blushing, etc. In other cases the fear of looking one in the eye is present in a pure or uncomplicated state. The treatment consists of the use of various methods of calming the excited nervous system, such as bromides, baths, and douches, together with an appropriate course of hypnotic suggestion.

3. **Echinococcus Cysts in the Female Pelvis.**—Orloff says that it is very difficult to diagnose the presence of echinococcus cysts in the pelvis in women. Of the three cases which he reports only one was properly diagnosed before operation. In the diagnosis in this case the principal reliance was placed on the history of the patient's illness. She stated that at first she noticed the appearance of a single tumor in the abdomen; then this tumor disappeared, and a whole series of similar growths developed in rapid succession. This meant that the first cyst had burst and that daughter cysts had developed. Primary echinococcus of the broad ligament is easily mistaken for cystic ovary, and the diagnosis in such cases is almost impossible. A useful method of diagnosis is the puncture of these cysts, followed by an examination of the fluid for the hooklets. The bruit which is said to be audible over such cysts is not a trustworthy sign, at least the author has never been able to hear it. If we can make out from the history that the patient has been in contact with dogs, and if we can exclude other diseased conditions of the pelvis, the diagnosis becomes somewhat more easy. The treatment must, of course, be operative, and with modern asepsis such makeshifts as puncture or the injection of antiseptics into the cyst, are not to be countenanced. Removal through the va-

gina has been recommended by several authors, but the best method is removal through an abdominal incision, as we then are sure to be able to deal with the case, no matter how complicated it may be. Possibly at the last minute the cyst may prove of ovarian origin. Another advantage of laparotomy is that we are more certain to remove all the cysts.

4. **The Blood in Chloroform Anæsthesia.**—Fiodoroff studied the morphology of the blood in forty-eight persons who had been placed under chloroform anæsthesia. He examined usually three specimens of blood—before, during, and after the narcosis. He found that an absolute leucocytosis appeared during chloroform anæsthesia, but he was unable to confirm the observation made by others in animals, to the effect that the leucocytosis of chloroform anæsthesia lasts for several days after the animal returns to consciousness. The leucocytosis which he observed took place at the expense of all varieties of white cells, but not equally so for all types. The young forms were most markedly increased. An increase in the young types of white cells was noted in 75 per cent. of all cases studied, and in some cases this increase amounted to one hundred per cent. of the original number of these cells. The mature white cells did not increase so markedly, and a leucocytosis of these was found in but fifty per cent. of the cases, although sometimes they were enormously increased. As regards the polynuclear or senile (over matured) cells, their increase was but insignificant as compared to the increase of the other types. The author offers an interesting theory deduced from his observations. He thinks that the leucocytosis seen in chloroformed subjects is an evidence of the defence of the organism against a poison which is invading it. This is the reason for the increase in the number of young cells which he has observed. If this theory holds good, then the lymphocytes have a protective action of their own and are not merely transition forms preliminary to the formation of polynuclear cells. This would be in correspondence with Ehrlich's theory that a polynuclear cell can be formed from specific tissue-elements without passing through the preliminary stage of a lymphocyte.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 11, 1905.

1. The Use of Food Preservatives, By VICTOR C. VAUGHAN.
2. The Effect of Gonorrhœa on the Female Generative Organs, By JOSEPH TABOR JOHNSON.
3. Purulent Conjunctivitis and Blindness, By EDWARD JACKSON.
4. Birth Rate and Decrease in Population as Affected by Syphilis and Gonorrhœa, By HENRY D. HOLTON.
5. Suggestions Concerning the Administrative Control of Venereal Diseases, By GEORGE M. KOBER.
6. A Study of Metabolism in a Case Conjoining Myxœdema and Diabetes Mellitus, By AUGUSTUS ADRIAN STRASSER.
7. The Surgical Aspects of Major Neuralgia of the Trigeminal Nerve. A Report of Twenty Cases of Operation on the Gasserian Ganglion, with Anatom-

ical and Physiological Notes on the Consequences of Its Removal (*To be continued*),

By HARVEY CUSHING.

8. Points in the Technics of Aseptic Operating,
By HENRY T. BYFORD.

9. Obstruction in the Retinal Arteries,
By ALLEN GREENWOOD.

10. A Case of Brain Tumor with Progressive Blindness,
By W. C. KENDIG and D. I. WOLFSTEIN.

11. A Case of a Very Large Tumor of the Frontal Lobe. Operation; Death,
By PHILIP KING BROWN and W. W. KEEN.

12. Immunity. Chapter VII. Acquired Immunity. Chapter VIII. Toxines and Antitoxines. (*To be continued*).

1. **Food Preservatives.**—Vaughan asserts that at the present time too little is known regarding the various substances which are used as food preservatives. Before a substance is legally sanctioned for use as a food preservative it should be proved to possess the following characteristics: (1) It must be a real preservative, keeping the food in a wholesome condition and not merely retaining the appearance of freshness while bacterial changes continue. (2) In the largest quantities used, it must not materially impair any of the digestive processes. (3) It must not be a cell poison, or if a cell poison in any amount, it must be added to foods only by persons qualified by special training and officially authorized, and foods containing these substances must be plainly labeled and the kind and amount of the preservative used must be made known not only to the buyer, but to each consumer.

2. **Gonorrhœa in the Female.**—Johnson quotes numerous authorities in order to show that gonorrhœa in the female is a prolific source of disease, sterility, and death. What the actual mortality of gonorrhœa is it is not possible to say. It has been estimated that forty to fifty thousand prostitutes die annually, and that thirty per cent. of the mortality is due to the direct effects of gonorrhœa. The author believes that it is probable that fully one hundred thousand women die of this disease, or of its sequelæ, each year.

3. **Purulent Conjunctivitis.**—Jackson calls attention to the fact that, in the newly born as well as in the adult, purulent conjunctivitis is not always of gonorrhœal origin. However, most of the cases followed by blindness are of specific origin. Prophylaxis is easy and effective. The Crêdè method is, as is well known, exceedingly efficient. As to legislation to prevent blindness from purulent conjunctivitis, two points seem worthy of attention: First. Social conditions that favor or oppose the spread of gonorrhœa are more important than any measures aimed directly at purulent conjunctivitis. Second. Gonorrhœa is a malignant contagious disease, and should be publicly recognized and dealt with as such in all its clinical manifestations.

6. **A Study in Metabolism.**—See this *Journal*, Vol. LXXX, page 331.

10 and 11. **Brain Tumors.**—See this *Journal*, Vol. LXXX, page 233.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 9, 1905.

1. A Clinical Report of 75 Cases of Arthritis Deformans (Chronic, Non-Tuberculous Arthritis),

By F. L. RICHARDSON.

2. The Complementary Relations of Glycuronic and Ethereal Sulphuric Acids and Their Pairings in Autointoxication, Typhoid Fever, and Cancer,

By A. E. AUSTIN and E. W. BARRON.

3. Dangers from the X Ray Atmosphere to the Operator. Their Prevention,

By H. W. VAN ALLEN.

1. **Arthritis Deformans.**—Richardson asserts that none of the classifications of chronic non-tuberculous arthritis so far advanced are wholly satisfactory. He therefore uses the term arthritis deformans in the sense in which Virchow used it, as it then does not assume either clinical or pathological distinctions. For the purposes of the paper the seventy-five cases studied are divided into two general groups. The first group comprises, in a general way, the joint diseases of the young. They usually start acutely, subside and not infrequently recur. The second group comprises the joint affections of the physiologically old and really old. In this class of cases the deformity is usually marked, and there are considerable changes in the bones or cartilages of the affected joints. The author concludes that the analogy, which Bradford has suggested, between arthritis deformans and arteriosclerosis appears to be a very close one. In arteriosclerosis the causes to which the disease has been ascribed are innumerable and the manifestations may be widely varied. The condition may be widely distributed, or narrowly circumscribed; there may be ulceration, calcification, or even formation of true bone. Because of these numerous manifestations it seems to the author that it cannot be said that we are dealing with many diseases. He has come to this conclusion, not only from clinical cases, but also from the study of many pathological specimens from cases of arthritis deformans. Why in one case there is new formation of bone and in another absorption is at present as much unknown as are the varied conditions that give rise to the disease. That the disease often is the result of some general alteration in the body metabolism seems possible.

2. **Glycuronic and Ethereal Sulphuric Acid.**—Austin and Barron, from a series of experiments, conclude: That aromatic bodies unite both with ethereal sulphuric acid and glycuronic acid, which apparently have a complementary relation to each other, but that the former is always first saturated before union commences with the second. The glycuronic acid apparently varies very decidedly in amount, due to causes of which we have at present no exact knowledge, but it is not necessarily associated with the increase of the pairing body, nor with the diminution of oxidation. Furthermore, there is always present an excess of sulphuric acid beyond the demands of the pairing body.

3. **Dangers of the X Ray to the Operator.**—Allen enumerates some of the well known dan-

gers to which x ray operators are exposed and describes the devices he has adopted in order to avoid them. Seven selected cases are reported of patients who were rayed in the genital region. These cases were studied in an effort to determine the influence of the Röntgen rays on the genital functions. The data reported do not warrant positive conclusions. It would seem, however, that prolonged exposure to the x ray causes the disappearance of spermatozoa from the seminal fluid, but that the sterility so produced is not permanent.

AMERICAN MEDICINE.

March 11, 1905.

1. The Medical Treatment of Gastric Ulcer,
By FREDERICK P. HENRY.
2. Advances in the Physiology and Pathology of the Pancreas, and Their Application to the Diagnosis of Pancreatic Diseases,
By JOHN C. HEMMETER.
3. A Consideration of Fibroid Tumors of the Uterus, Based Upon a Study of a Series of 210 Cases Treated Surgically,
By J. CLARENCE WEBSTER.
4. Tuberculosis of the Gastrointestinal Tract: Report of a Case of Perforation and Partial Stenosis of the Bowels,
By J. A. LIGHTY.
5. Iodine in the Treatment of Postoperative Sepsis,
By JAMES HAWLEY BURTENSHAW.
6. The Ætiology and Treatment of Acute and Chronic Rheumatism,
By G. MORTON ILLMAN.

1. **Gastric Ulcer.**—Henry advocates the medicinal treatment of gastric ulcer. He asserts that the claim made by Leube that from seventy-five to ninety-six per cent. of all cases of gastric ulcer are curable by medical means is well founded. The important point to bear in mind in treating gastric ulcer, as well as any other disease, is to follow a definite system. The author reviews the teachings of Ewald and Leube regarding the management of gastric ulcer, and describes his own routine. Briefly this is: (1) For the first few days to one week, rectal feeding. (2) For the next two or three weeks, diluted milk if it is well borne. (3) Raw or soft boiled eggs, mutton and chicken broths follow the milk diet for some weeks more, at the end of which time a solid diet is gradually resumed. (4) The most useful drugs are: subnitrate of bismuth, in half drachm doses, nitrate of silver, morphine, and cocaine hydrochloride. The use of Carlsbad salts is probably of benefit. An aluminate of iron may be often given with advantage.

2. **The Pancreas.**—Hemmeter's paper is too detailed and covers too many questions to allow of its being condensed. The article consists of fourteen sections devoted to the following subjects: (1) Historical review. (2) The anatomy and physiology of the pancreas. (3) Development and pathology of the islands of Langerhans. (4) Acute and chronic pancreatitis. (5) Chronic indurative pancreatitis. (6) Adrenalin glycosuria and certain relations between the adrenal glands and carbohydrate metabolism. (7) Pancreatic diseases simulating cholelithiasis. (8) Relations of the pancreas to diabetes and glycosuria. (9) Histological examinations of the pancreas in diabetes mellitus. (10) "Symposium" on pancreas and pancreatic disease. (11)

Fat necrosis. (12) Prospect of diagnosticating pancreatic insufficiency from defective proteolysis, amyolysis, and adipolysis. (13) Defective amyolysis and its significance. (14) Non-digestion of nuclei in meat fibre a criterion of pancreatic insufficiency.

3. **Fibroid Tumors.**—See this *Journal*, Vol. LXXXI, page 512.

5. **Iodine in Sepsis.**—Burtenshaw reviews the method advocated by Pryor for combating sepsis of uterine origin. Within the past year the author has treated three cases of postoperative sepsis by means of iodine or one of its preparations. His results were most unsatisfactory. Yet he believes in the principle of the method. "I must confess that my own experience with iodine in these cases has been distinctly disappointing; yet I am convinced that further development of treatment along the lines indicated will, in the near future, yield brilliant results."

6. **Rheumatism.**—Illman believes that rheumatism is closely associated with an abnormal condition of the gastrointestinal tract. He therefore holds that the treatment of the condition should not be reduced purely and simply to the administration of salicylates.

MEDICAL RECORD.

March 11, 1905.

1. The Treatment of Epidemic Cerebrospinal Meningitis by Diphtheria Antitoxine, By EDWARD WAITZFELDER.
2. Chronic Myositis Rheumatica and Its Treatment by Massage, By GUSTAF NORSTRÖM.
3. Radical Operation for the Removal of a Bullet Weighing 70 Grains, Embedded in the Internal Wall of the Middle Ear, with Decided Improvement in the Subjective Symptoms, By M. D. LEDERMAN.
4. Aortic Regurgitation with Chronic Miliary Tuberculosis in a Man Twenty-two Years Old, By MEDWIN LEALE.
5. A Case of Cicatricial Stricture of the Esophagus, By A. B. ATHERTON.

1. **Epidemic Cerebrospinal Meningitis.**—Waitzfelder has treated seventeen cases of cerebrospinal meningitis with repeated injections of from 6,000 to 10,000 units of diphtheria antitoxine. The results are most encouraging. If it fulfills present hopes to Wolff, of the Hartford, Conn., board of health, will be due the credit for discovering this mode of treatment. Part of the author's cases are still under treatment. To summarize: There have been seventeen patients under observation, of whom 5 have recovered completely; 3 have died, of whom 2 were adults; 9 patients are still under treatment. Of these, 5 show marked improvement as to indicate probable recovery (4 being convalescent). Of the remaining 4 cases, all are in a serious condition, and prognosis is impossible at the present time.

2. **Myositis.**—Norström asserts that chronic myositis is of much more frequent occurrence than is generally supposed. He reports a large number of cases, treated by him by massage, and which eventually recovered. The reason the condition is considered rare is because it is so frequently mistaken for other affections.

5. **Stricture of the Œsophagus.**—Atherton reports the following case: Man, 26 years old, swallowed some lye. Stricture of the œsophagus followed recovery from the acute poisoning. November, 1903, operation for the stricture. This was followed by gradual dilatation, until a No. 22 bougie, French scale, could be easily passed. It was noted, however, that if the bougie was left out of the œsophagus even for a few hours the stricture would contract considerably. Therefore, the man is obliged to wear the bougie almost constantly. He removes it for meals and his condition is said to be tolerable, though scarcely comfortable.

MEDICAL NEWS.

March 11, 1905.

1. Uric Acid—Its Influence in Gout,
By CHARLES C. RANSOM.
2. Objective and Subjective Symptoms in Kidney Disease,
By C. L. GIBSON.
3. Laboratory Findings in Surgical Diseases of the Kidney,
By FREDERIC E. SONDERN.
4. The X Ray in Kidney Disease,
By LEWIS GREGORY COLE.
5. The Cystoscope and Ureter Catheter in the Diagnosis of Surgical Disease of the Kidney and Ureter,
By F. TILDEN BROWN.
6. Exploratory Operations Relating to the Kidney,
By HOWARD LILIENTHAL.

1. **Uric Acid.**—Ransom traces the origin of the uric acid delusion from the days of Garrod and Haig. To the question: Is uric acid ever retained in the blood in excess? he answers yes. To the question: Is uric acid toxic when retained in the blood? he answers no. The author, of course, does not mean uric acid in an uncombined state. To date there is no scientific evidence that uric acid is the cause of gout, or, in fact, of any other disease. The cause of gout is still a mystery.

2. **Surgical Diseases of the Kidney.**—Gibson asserts that notwithstanding the great progress that has recently been made in laboratory methods and in the invention of numerous mechanical devices for aiding diagnosis the chief reliance in reaching a correct conclusion must still rest on a correct interpretation of the objective and subjective symptoms. It is therefore of the utmost importance that these symptoms should be well understood. The author appraises each of the most characteristic signs and symptoms of surgical kidney, and concludes his paper with a table giving the chief diagnostic factors of nine of the most important surgical diseases of the kidney.

3. **Laboratory Findings.**—Sondern asserts that the best results in diagnosis will not be attained until the laboratory worker becomes as closely associated with the clinician as the internist should be with the surgeon. The author points out at length the progress which has been made in laboratory diagnosis, and holds that the best methods are too time consuming and elaborate to allow of their adoption by the clinician.

4. **The X Ray in Kidney Disease.**—Cole holds that a positive diagnosis of kidney stone by means of the x ray should be regarded as practically absolute. A reliable negative diagnosis can only be reached when "the ray of selective absorption" has been utilized. This ray is a discovery of the author, and he will soon publish the chief facts relating to it.

5. **The Cystoscope.**—Brown defines the value of simple cystoscopy and cystoscopy with catheterization of the ureters in suspected kidney disease. Half a dozen cases are recorded in order to illustrate the results that may at times be achieved by an intelligent use of the cystoscope.

6. **Exploratory Operations.**—Lilienthal holds that when all other methods have failed in shedding light on a case of suspected kidney disease then it is the time for an exploratory operation. He sums up his advice thus: A. Exploratory operation is probably the surest method of diagnosis in suspected surgical disease of the kidney. B. The indications for its performance are: (1) In hæmorrhage from one or both kidneys when other measures have failed to check the bleeding and the danger signals appear. (2) In palpable tumor with symptoms pointing to renal disease. Sometimes even to establish whether the tumor is in the kidney, gall bladder, or some other organ. (3) Without palpable tumor when there is reason to suspect surgical renal disease and when medical, hygienic, and local treatment fail to give relief. C. Exploratory incision may be necessary to demonstrate the condition of solitary kidney.

LANCET.

February 25, 1905.

1. Peritonitis, a Bacteriological Study. (*Erasmus Wilson Lecture*).
By L. S. DUDGEON and P. W. B. SARGENT.
2. Shifting Dulness, and Its Importance in Connection with Surgical Diseases,
By R. J. GODLEE.
3. A Peculiar Form of Chronic Hyperplasia of the Mucous Membranes of the Upper Respiratory Tract,
By SIR F. SEMON.
4. Pneumonia with Infective Endocarditis and Meningitis,
By D. M. LIVINGSTONE and A. JUBB.
5. A Case of Acute Septicæmia Treated with Antistreptococcic Serum: Recovery,
By G. H. CRESSEY.
6. Mental Symptoms Associated with Heart Disease,
By H. KERR.
7. Properitoneal or Abdominal Hydrocele,
By J. LEWTAS.
8. Total Enucleation of the Prostate in Advanced Old Age,
By P. J. FREYER.
9. Electrolysis: an Improved Method of Operating on Superfluous Hairs,
By B. SQUIRE.
10. Laceration of the Abdominal Wall, the Result of Bear Bite, Simulating an Abdominal Tumor,
By V. S. UMACHIGI.

1. **Bacteriology of Peritonitis.**—Dudgeon and Sargent, in the Erasmus Wilson lectures, give the results of their researches into the bacteriology of peritonitis, based upon the systematic examination of the peritonæum in 270 cases operated in at St. Thomas's Hospital. The first result of their studies

has been to cast very considerable doubt upon the existence of "chemical" peritonitis. In every case of intraperitoneal hæmorrhage, a white staphylococcus was obtained from the blood clot. Slight as are the pathogenic properties of the staphylococcus albus, the authors are of opinion that the febrile disturbances so frequently found after effusion of blood into the peritoneal cavity are due to the presence of this organism and not to any hypothetical toxic substance produced by the coagulation of the blood. In nine cases of perforated gastric ulcer they have isolated a streptodiplococcus in from the edge of the ulcer in every case; from the peritoneal exudate in four instances out of seven. The organism occurs as a diplococcus, is non-motile, and has no capsule. It stains well with the ordinary dyes, but does not retain Gram's stain. It grows well on all the ordinary media: on agar the colonies are small, opaque, and isolated, like those of streptococcus. The organism is not pathogenic to guinea pigs or mice. The rôle of the typhoid bacillus in peritonitis is very doubtful: in most cases it is the colon bacillus which is the active cause of trouble.

2. Shifting Dulness.—Godlee states that dulness in the back which shifts on placing the patient on his face or upon the opposite side, usually means that the pleura is healthy and that the cause of the dulness is subdiaphragmatic. The dulness resulting from a localized empyema if there is no gas in the cavity, does not shift at all. The dulness from a pleural effusion shifts very little, if at all. The presence of pleural effusions limits or prevents the shifting of the dulness caused by solids or fluids below the diaphragm. A dulness which disappears under an anæsthetic must not be neglected, but it must be suspected that adhesions do not extend so far as they might before the administration be supposed to do. In a suspected empyema where the dulness disappears under the anæsthetic, the case will probably prove to be one of pneumothorax. In cases of intestinal obstruction with much distention it is impossible to say whether or not there is free fluid in the peritoneal cavity because the flanks may be dull when the patient is lying on the back, but resonant in the upper flank when he is lying on his side.

3. Hyperplasia of the Mucous Membranes.—Semon reports a case with a history of long standing throat trouble, in which on examination an almost lardaceous condition of the uvula was seen. The uvula and adjacent parts of the soft palate were infiltrated, yet quite smooth to sight and touch, and were of a peculiar yellowish color, resembling that of a lardaceous kidney. In the larynx there was a similar condition of the mucous membrane over the right arytenoid cartilage. The voice was normal and there was no pain. All forms of treatment were of no avail. This is the third case of the kind that has come under the writer's observation. In both the others there had been a return to perfectly normal conditions without obvious cause. He has collected seven cases from the literature. There seems to be no specific microorganism, and tuberculosis, syphilis, and rhinoscleroma can be eliminated in all. It is assumed that the pathology of the new affection is one of progressive, mostly interstitial, hyper-

plasia, but the disappearance of the condition in the author's cases speaks against such a view.

4. Pneumonic Endocarditis and Meningitis.

—Livingstone and Jubb report a case of pneumonia, occurring in a man, aged forty years, which was complicated by endocarditis and meningitis, both of which were diagnosed during life. The crisis took place on the ninth day, and the patient was apparently convalescent for three days thereafter. On the eighteenth day, after irregular temperature, sweats, and præcordial pain, the diagnosis of endocarditis was made. On the twenty-fifth day, after some days of severe headache, he had two convulsive seizures, and died two days later. At the autopsy there was found only moderate resolution of the affected lung, with mitral valvular vegetations, and a diffuse purulent meningitis.

5. Antistreptococcic Serum in Septicæmia.

—Cressey reports a case of acute septicæmia occurring in a girl, aged fifteen years, following a cut of the foot. The wound became infected and although vigorous local treatment with extensive incisions was carried out, general septicæmia developed. Eighteen days after the accident antistreptococcic serum was first used: it was continued in doses of ten c.c. daily until in all 235 c.c. had been used. An empyema developed, and the patient was not convalescent until forty-five days after the injury.

8. Prostatic Enucleation.—Freyer calls attention to the great success of total enucleation of the prostate in advanced old age. Of 134 patients 8 were octogenarians. Seven are alive and in excellent health and all able to retain and pass urine normally. The remaining patient, after recovering from the operation, died suddenly of heart disease. The author gives the details of the eight cases, with illustrations of the prostatic glands removed.

9. Enelectrolysis.—Squire gives this name to his improved method of operating on superfluous hairs. He pulls out the hair first with tweezers, and then passes the electric needle into the hole left by the extraction of the hair. The operation becomes much more certain, and the pain and scarring are much less.

BRITISH MEDICAL JOURNAL.

February 25, 1905.

1. A Case of Multiple Disease of Joints in a Young Child.
By W. H. WHITE
2. On a Case of Acute Lymphæmia in a Child.
By E. J. McWEENEY and D. J. FARNAN.
3. A Case of Acute Lymphæmia, By E. J. McWEENEY.
4. Acute Lymphatic Leucæmia, with a Report of Five Cases,
By T. McCRAE.
5. A Case of Acute Lymphatic Leucæmia.
By W. D. DONNAN.
6. Notes on the Microscopical Examination of Bone Marrow.
By C. P. JONES.
7. Clinical Methods of Enumerating Leucocytes,
By E. TURTON.

1. Multiple Joint Disease.—White's article is based on the case of a boy aged five years, complaining of swelling of many joints and enlarged lymphatic glands. He considers in turn the va-

rious conditions which might be affecting the child, excluding each, and giving the reasons therefor. Among such conditions are: (1) osteoarthritis, where the x rays should show evidences of bony enlargement; (2) rheumatic fever or the rheumatic state, where there should be endocarditis, subcutaneous nodules, or a history of erythema, amygdalitis, chorea, or of a rheumatic tendency in the family; (3) syphilis, with a history of congenital syphilis, bony outgrowths or fibrous adhesions about the joints; (4) acute or subacute pyæmia; (5) gonorrhœal arthritis; or (6) tuberculosis. The case here reported conforms to a type of joint disease first described by Still, and characterized by chronic progressive enlargement of joints associated with a general enlargement of the glands and spleen. The onset is insidious and occurs before the second dentition. The joints are thickened, smooth, and fusiform, with none of the angular irregularity of osteoarthritis. Pain is absent and there is marked limitation of movement—chiefly of extension. The affection is symmetrical and the muscles which move the joints show early chronic wasting. The glandular enlargement is general, but affects primarily and chiefly those related to the joint involved. The glands are separate, not tender, and do not break down. The disease is, in some obscure way, of nervous origin.

2, 3, 4, and 5. Acute Lymphatic Leucæmia.—McWeeney and Farnan report a case of acute lymphæmia occurring in a girl aged three years, and which proved fatal after a duration of three weeks. The case agrees with the clinical pictures of acute leucæmia in its sudden onset, rapid course, moderate enlargement of lymph glands, enlargement of spleen, hæmorrhages in skin and mucous membranes, and oral fætor. In the blood there was an enormous preponderance of hyaline mononuclear leucocytes, the larger variety predominating; the polynuclear neutrophils and all forms of granule cells were very rare, also both varieties of nucleated red corpuscles. McWeeney reports a similar case occurring in a youth, aged nine years, and lasting nine weeks. Spleen and glands were moderately enlarged, and the course of the disease was characterized by fever, hæmorrhages, and increased uric acid excretion. The large hyaline mononuclear cell with basophile protoplasm predominated in the blood, forming 95 per cent. of the leucocytes. The myeloid element in the bone marrow was completely suppressed, with a consequent total absence of granule cells from the blood. Exceptional points were the severe anæmia (820,000); the large proportion of leucocytes to red cells (one to eight at first, and at the end one to one); the absolute number of lymphocytes (over 700,000); and the great enlargement of the thymus. The lymphoid tissues throughout the body were abnormally active and flooded the blood with lymphocytes. This activity was accompanied by a rejuvenescence of lymphoid tissue in places where it only exists in traces in adult life—*e. g.*, the bone marrow, liver, and kidneys. The behavior of the lymphoid tissue strongly resembles that of malignant new growths, the proliferating cells show-

ing a tendency to spread in all directions round their focus of origin. These proliferating cells were of a distinctly embryonic type, resembling the so called "mother" cells, rather than differentiated leucocytes. McCrae reports the cases of acute lymphatic leucæmia coming under observation at the Johns Hopkins Hospital since its opening—five in number. All the cases occurred in males, from three to twenty-one years of age. In three the onset was abrupt. The general symptoms were fever, weakness, hæmorrhages, and a rapidly progressive downward course. Pallor was a striking feature in all the cases. The average duration was six weeks: it varied from twelve days to eight weeks. Treatment had no influence. In every case the lymphocytes were over 90 per cent. of the total leucocytes. In three the prevailing cell was the small lymphocyte. As a rule, the rapid cases with hæmorrhage show a predominating lymphocyte of the large type. In conclusion the writer emphasizes the following points: 1. That in the majority of cases of acute leucæmia there is a rapid destruction of the red cells with the blood features of a severe primary anæmia. 2. That the essential changes in acute leucæmia are in the bone marrow. 3. That certain cases seem to justify the term of "leucanæmia" suggested by Leube. 4. That more attention should be paid to the changes in the red cells and the probable similarity to pernicious anæmia definitely decided. 5. That the clinical features of acute leucæmia suggest its being an acute infection, and perhaps a distinct disease from chronic leucæmia. Donnan reports a case of acute leucæmia in a boy, aged twelve years. There was no palpable lymphatic enlargement, but the spleen was moderately enlarged. A violent attack of nose bleed set in about two weeks after patient had come under observation, and the patient died five days later. The size of the spleen was rapidly reduced by the nasal hæmorrhage. The patient did not appear to die from loss of blood, but rather from an acute septicæmia, with high temperature and a steadily increasing pulse. The epistaxis could always be controlled by plugging. The white cells were almost exclusively large lymphocytes.

6. Examination of Bone Marrow.—Jones describes the method of obtaining bone marrow, and of preparing and staining specimens for microscopical examination. The marrow is emulsified with a ten per cent. solution of neutral glycerin, and from this smears are made and stained with Jenner's blood stain. Marrow contains connective tissue, fat, blood vessels, lymphatics, nerves, and particular cell elements, characterized by a peculiar transitional nature and a tendency to produce atypical forms. The red cells comprise the non-nucleated red cells of the blood and the nucleated red cells of the marrow. The leucocytes are classed in two divisions, the granular and non-granular. The granular group comprises giant or mother cells, and lymphoid or primitive cells. The non-granular group comprises coarse oxyphile cells, fine oxyphile or neutrophile cells, amphiphile cells, coarse basophile cells, fine basophile cells, and polymorphonuclear leucocytes.

Letters to the Editor.

STERILITY AND THE X RAY.

PHILADELPHIA, February 18, 1905.

To the Editor,

Sir: I fear your editorial Sterility and the X Ray is possibly too severe and alarmist in its nature. If the x ray had been proved to produce sterility, that would in no way endanger patients placed under it for examination. Such changes could occur only as the result of repeated and prolonged exposures, as in therapeutic work. In those cases, as of malignant disease of the pelvic viscera, such an action would be beneficial, if we can judge from the oophorectomies advised in cases of mammary carcinoma. But under such circumstances sterility would be certain and out of the field for consideration. Under no conditions could the necessary exposures during diagnostic examinations produce such a result.

CHARLES LESTER LEONARD.

3501 BARING STREET,
PHILADELPHIA, February 18, 1905.

To the Editor,

Sir: The enclosed reprint, which is of interest from several standpoints, is especially so upon the subject of x ray as the cause of sterility, that has lately attracted so much attention. By carefully reading, it will be noticed, pregnancy occurred while the patient was still under treatment. This was much to the surprise of the woman herself; as she expressed it, "she thought that her organs were too diseased for conception." Notwithstanding, in the summer of 1904, about a year after treatment, she had another miscarriage, and it might be stated here that the cause of these frequent miscarriages was entirely with the woman herself.

In regard to the experiments upon this subject, they must be taken for what they are worth. At the same time it must be remembered that in these instances the experiments were conducted with the idea of producing degeneration. Was time allowed for regeneration before the animal was killed? When one reviews the effect of the ray upon other specialized epithelial tissue, the hair, for instance, it would seem that these tissues should also undergo the same repair.

Much more could be said upon this subject but for the lack of time. This case, however, should be put upon record to combat experiment with clinical evidence.

WILLIAM S. NEWCOMET.

A CORRECTION.

NEW YORK, February 27, 1905.

To the Editor,

Sir: I beg respectfully to call your attention to an error in an article quoted from the *Alkaloidal Clinic* on page 391 of the current number of the *Journal*, referring to the removal of naevi. The sentence in question reads: "The amount of current employed depends upon the distance the

needle has been inserted, but usually is from $\frac{1}{2}$ ampère to 8 milliamperes." This should read, referring to the ampérage: "Usually is from $\frac{1}{2}$ to 8 milliamperes," since $\frac{1}{2}$ ampère is equal to five hundred milliamperes, which would exceed the current used in the destruction of any tissue, no matter of what nature.

FREDERICK S. KOELL.

LOCOMOTOR ATAXIA OR BURSITIS?

208 WEST ONE HUNDRED AND TWELFTH STREET,
NEW YORK, February 23, 1905.

To the Editor,

Sir: In an article which appeared in the *Journal* for February 18th, Locomotor Ataxia Successfully Treated with Ultraviolet Rays, by J. Monroe Liebermann, M. D., Case III is reported as one of locomotor ataxia, cured with the ultraviolet ray.

My excuse for writing is to prevent the recording of a supposed case of locomotor ataxia as cured by the ultraviolet ray.

This patient is known by me to have had a chronic bursitis (probably gonorrhoeal) of the bursa between the tendo Achillis and the os calcis (not behind the tendo Achillis, as the doctor states; the bursa is in front of the tendon, and there is no "synovial sac" behind the tendon).

I did advise removal of this bursa, since no other treatment was satisfactory, and if the doctor has been successful in curing this patient of his pain and bursitis with the ultraviolet ray, so much credit to him for that, but let him not place on record a case as one of locomotor ataxia cured by the ultraviolet ray when such patient has no sign of locomotor ataxia.

Surely the doctor is not able, with the "ultraviolet ray in combination with peripheral treatment with static electricity" applied in the "lumbar region," and "locally galvanism," to cure and restore to function a Charcot's joint as he reports, or regenerate organically destroyed posterior roots and dorsal columns of the cord, whereby the knee jerk would again be normal, as well as restore coordination.

I am positive this patient has no Argyll Robertson pupil or any other sign or symptom of locomotor ataxia. It was a case of bursitis plain and simple.

LOUIS FRIEDMAN.

CEREBROSPINAL MENINGITIS PROVING FATAL IN EIGHT HOURS.

121 WEST NINETY-FIFTH STREET,
NEW YORK, March 5, 1905.

To the Editor,

Sir: Unless I am greatly mistaken an epidemic of cerebrospinal meningitis is or soon will be under way in this city. I have seen an unusual amount of it in coroner cases during the past two months. It has not been recognized by the attending medical men as meningitis; why, I do not know. It might be well to relate a case in point where a diagnosis was not even attempted prior to my visit. A girl, nineteen years old, working in a bakery, was taken ill with a chill at noon. She went upstairs in a loft

and rested on some old bags. She did not go home at once, because her fellow workers could not get off. At 1 p. m. she had severe vomiting spells and chills, and following on this fever, pain in her head, and not headache, the pain sharp and deep in her brain, she said. She grew better at 4 p. m., when again she had more chills. At 6 p. m. she went to her home with a friend. She had to get off the car four times because of vomiting. Twice she went to a drug store and the clerks gave her sodium bicarbonate tablets. At seven o'clock she arrived at her home, fell exhausted on the bed, cried with pain, and vomited, after which she said she felt better. She then began to sing and talk incoherently, and at 8 o'clock the same evening she had a convulsion and died. The autopsy showed the meninges inflamed, with considerable exudate at the base. What makes this case noteworthy is the short period from the onset to death, viz., eight hours.

PHILIP F. O'HANLON.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILA- DELPHIA.

Meeting of Thursday, January 5, 1905.

(Continued from page 515.)

The President, Dr. RICHARD C. NORRIS, in the chair.

Dr. BARTON COOKE HIRST referred to his record of 189 fibroid tumors treated by some form of surgical procedure. Twenty-seven per cent. were treated by myomectomy; sixty per cent. by hysterectomy. Vaginal enucleation, oophorectomy, and ligation of the uterine arteries made up the remaining thirteen per cent. He had seen the following degenerations: Three sarcomatous, five cystic, four necrotic, two myomatous, and one carcereous. In about fifty per cent. there was some pathological conditions of the tubes and ovaries, usually in the shape of old adhesions, occasionally a hydrosalpinx, and very rarely indeed a pyosalpinx, not in two per cent. of the cases. There was an associated adenocarcinoma of the corpus in one case. Personally Dr. Hirst had found the use of electricity the most useful palliative treatment of hæmorrhage for the time being in fibroid tumors, but never had seen a tumor reduced in size or the condition benefited in any other way by this agent. The positive pole, however, of a galvanic current in the uterine cavity, with a current of 40-60 milliamperes, he had found to check hæmorrhage in suitable cases more surely than any other means he had tried. He believed there were a number of cases which might require nothing else, if the tumor was small, was not growing, showed no signs of degeneration or inflammatory complications, was not causing pressure symptoms, and exerted no deleterious influence on the general health.

Dr. CHARLES P. NOBLE was gratified to find in the literature upon fibroids in the last four years that conclusions in cases studied had agreed practically with his own. The chief point for discussion, he thought, was that of whether fibroids should be treated from the standpoint of symp-

toms or from that of the life history of these growths. Personally, he believed that in the future they would be treated from the latter, just as ovarian growths were studied rather than from the standpoint of symptomatology. He regarded Dr. Webster's paper as important and interesting because the deductions were the result of actual study of the facts in his series of cases. He thought it a remarkable fact that in 210 cases there was not a single case of adenocarcinoma of the corpus uteri. In the cases reported by Dr. McDonald, the Johns Hopkins Hospital, and himself, he said, there had been excess in occurrence of adenocarcinoma of the corpus uteri, this being so marked as to be the basis for the opinion that fibroid tumor of the uterus was a predisposing cause of adenocarcinoma of the corpus uteri. The complications in the appendages were much greater in number in Dr. Webster's cases than his own, particularly the left inflammatory complications.

In reference to total extirpation of the uterus *versus* supravaginal extirpation, out of about 700 hysterectomies, so far as Dr. Noble's knowledge went, there had been only two cases of carcinoma of the cervix following supravaginal amputation of the uterus. In one case the condition was doubtless overlooked at the time of operation, as carcinoma of the pelvis developed promptly. In the other case, in which there was supravaginal amputation for inflammatory disease, epithelioma of the cervix developed four or five years later. This factor, therefore, in his judgment, did not play a large rôle.

Dr. Noble had never considered that myomectomy could play a large rôle in the treatment of fibroids. Guided by his own statistics, he might be in favor of myomectomy, as he had had but one death, and that in a case of sloughing fibroid removed *per vaginam*, but he attributed his good results to care in the selection of patients. He had had a number of patients bear children after myomectomy. The cases should be carefully selected, and the desire of the patient should be a factor in the case.

It had not been Dr. Noble's experience that patients after hysterectomy had been especially troubled with the menopause symptoms, nor had he seen, in the considerable number of cases in which he had left an ovary, that there had been any difference in the sequel, whether the ovaries had been removed or left behind. In a large percentage of the cases, he thought, the troublesome symptoms were greatly exaggerated.

Dr. JOHN G. CLARK spoke especially upon the three following points: (1) the possibility, after a supravaginal hysterectomy, of a malignant involvement of the remaining stump; (2) the benefits of leaving the ovaries behind in cases of fibroid tumors; (3) the effect of fibroid tumors in the production of cardiac disease. Relative to the first point, he said that unquestionably a supravaginal amputation of the uterus was much easier, and he believed in the end gave a more satisfactory result, so far as concerned keeping the pelvic floor intact, than that following pan-hysterectomy. Therefore, from the mere anatomical standpoint, he considered it preferable

to leave the cervical stump. On the other hand, the objection which had been offered to the partial operation because of the dangers of a malignant degeneration in the cervical stump or the recurrence of carcinoma, which possibly might have been a coincident part of the fibroid, but been overlooked, was a strong one. In the event of carcinoma being present in an early stage in the fundus, its extension to the cervix was practically always by continuity along the line of the mucous membrane. He was sure, therefore, that the dangers of a malignant degeneration of the stump would be obviated by a thorough cauterization of the cervical canal either with the Paquelin or the electric cautery. This left only the rim of the cervix behind, but did not break the attachment of the broad ligament on either side. With this precaution, Dr. Clark believed it safe to advocate the retention of the cervical stump. Concerning the second point, for ten years he had followed the fixed policy of leaving behind the ovaries in every case of fibroid tumor where it was possible, and he had been astonished to find that this could be done in a large proportion of cases. Taking into consideration that the pathological findings bearing upon the association of ovarian disease with fibroid tumors largely consisted of various degrees of inflammatory lesions, he believed one was justified even when there were adhesions in leaving behind all or a portion of one or both ovaries; for in a considerable proportion of those inflammatory cases adhesions were not due to infection, but to traumatism produced by rubbing of the tumor against the ovary or crowding the ovary in against the pelvic wall or downward into Douglas's cul-de-sac. Therefore, he was sure that if this was relieved by the removal of the tumor, the ovary would not subsequently give rise to any serious trouble. As yet he had not made a postoperative study of these cases relative to the question of the surgical menopause, but he had had so many patients tell him that they were almost free of the distressing sequelæ of which others frequently complained that he was persuaded that this was the better policy to pursue. He stated, however, that this belief was based only upon a general observation, and not drawn from a minute analysis of his cases. Before any one could speak with certainty it would be necessary to analyze the cases at least a year subsequent to the operation. Until he saw some very definite reason, gained from such a study, to change the policy which he was now pursuing, he felt that he was distinctly serving the interests of his patients in conserving the ovaries. Relative to the third point, he was of the opinion, from the study of a large series of cases, that this complication was less frequent in this country than in Germany. The German gynecologists seemed to be greatly impressed with the frequency of the so called "myoma heart," and warned their students especially against the dangers of sudden death incident to heart disease following hysterectomy for fibroid tumors. Whether there was a distinct influence exercised by a fibroid tumor in producing heart trouble, he was unable to say, but he could not conceive of any more radical dis-

turbance being caused than that of a heart overworked in pumping blood through the resistant tumor mass. In a short experience in Prague he saw two fatal instances of pulmonary embolus, one of which was diagnosed as death from a "fibroid heart." In both cases autopsy showed that the heart was not at fault, but that an embolus had been detached from the seat of operation and had blocked up the pulmonary vessels, thus producing death. Therefore, in neither of these cases of sudden death could the action of the heart be called in question. Dr. Clark believed that a pulmonary embolus was much more likely to be a sequel of a hysterectomy for fibroid tumor than of almost any other pelvic operation, because the impaction of the tumor in the pelvis or its pressure upon the large vessels at the brim of the pelvis was very likely to weaken their walls and cause more or less dilatation. Not only might these vessels be the seat of a thrombus, but the greatly enlarged ovarian and uterine veins might also be the seat of large thrombi, from which emboli may be dislodged and carried to the lungs. Therefore Dr. Clark was inclined to think that sudden death following hysterectomy was more frequently due to a pulmonary embolus than to cardiac disease per se.

Dr. W. EASTERLY ASHTON thought that every case of fibroid must rest upon its own merits, and that in determining the line of treatment each case must be specially studied. There should be taken into consideration (1) the mortality of major operations on uterine fibroid, (2) the danger of degenerations occurring, and (3) the social condition of the patient. Considering that the true mortality of hysterectomy was probably from five to eight per cent., when a woman came to a surgeon seeking relief from a fibroid tumor, it was a serious matter whether or not to advise an operation. On the other hand, the social condition of the patient was also to be considered. Women in the lower walks of life, who were obliged to labor for their living, could not endure the symptoms produced as well as women with plenty of money. If a tumor was causing but little trouble, with no pressure symptoms, and the patient was in fairly good condition, he did not advise an operation, but the patient should be seen frequently, and if the tumor began to grow, an operation should be advised without saying that it was taking on this or that degeneration.

The operation of myomectomy, he believed, had a very limited field, and he agreed with Dr. Montgomery that it was dangerous. He had done few operations of that class, because it never appealed to him. He believed that if he were to adopt the operation he would have a large mortality, as the spaces were not well filled up and the tissues were so bruised that a bad focus for infection was left.

Comparing panhysterectomy with supravaginal operation, Dr. Ashton believed that in all cases, except where infection or malignancy existed, the supravaginal operation was the one of election. Panhysterectomy shortened the vagina, the marital relations are interfered with, and the operation had a higher mortality.

Dr. WEBSTER said that it was Dr. Noble's work

which had made him study his cases carefully, and he believed that a great many others had been started on the right lines through Dr. Noble's initiative. He thought that in this country in the last few years the profession had been carried away by the brilliancy of those who had perfected the major operations, and that attention had been concentrated on mechanical problems. In the American Gynecological Society, for instance, a very considerable amount of attention had been given to what Dr. Webster called "carpenter work." It seems to him that much more could be done in this direction, but that there was a very great deal of careful work to be done in the direction of solving just such points as had been before the society during the evening. He had been interested particularly in the differences in opinion regarding myomectomy. He had had occasion to study German statistics of hysterectomy, both for fibroids and for carcinoma, and he was confident that the mortality reported was very considerably higher than it was in the hands of operators in this country, and the same was true of the mortality of myomectomy in Germany. He agreed to the remarks made concerning the risks of performing myomectomy under certain conditions, and said that in his paper he had tried to point out the limitations which had guided him. He excluded infective conditions of the mucosa of the uterus. He did not think one should fear the danger of closing the myomectomy incision with continuous catgut. He had never used any other method. He did not think that myomectomy should be performed where a very large incision or where much mutilation of the uterus was necessary. In his myomectomy cases he had rarely had to open the mucosa or to make very large incisions; in other words, the tumors had not been large. He agreed that it would not be wise to perform myomectomy where there were many tumors. In the two cases quoted by him, in which pregnancy took place, he was particularly requested to perform myomectomy. In one six tumors were removed by the abdominal method, and in the other, twelve or thirteen. Both were in doctors' wives, and pregnancy happened to follow at a later date. In neither of these cases were all the fibroids removed from the uterus, a number of very small ones being left untouched.

He did not see why there should be a larger mortality after abdominal myomectomy in selected cases than after supravaginal amputation or total extirpation. He had felt in reading Richelot's paper, in which he advocated total extirpation instead of supravaginal amputation on account of the occasional occurrence of malignancy in the cervix after the latter operation, that Richelot was exaggerating the importance of the latter condition. He thought that Dr. Noble's statistics were more important in indicating the performance of the complete operation for the occurrence of adenocarcinoma in the body of the fibrous uterus. He admitted that it was impossible in many cases to diagnose this condition before operation without curettage; and even with curettage the condition might not be recog-

nized, because the spot in which the malignancy existed might not be reached. Taking everything into consideration, he believed that the logical procedure was to do the complete operation in every case and to put out of consideration supravaginal amputation. He was very certain, however, that this procedure would not commend itself to the majority of operators, who would continue to take chances as regarded the sequelae.

He did not think that the mortality of the major operations in non-infective cases should be as large as eight or nine per cent. in the hands of expert operators. He believed that the percentage had fallen below this figure in this country in the last three or four years, and if Dr. Noble's statistics were correct, certainly the lives of women would be saved by carrying out these operations rather than by leaving the tumors untouched.

Regarding the surgical menopause, he had felt from his observation of the condition that the menopause symptoms were no worse, taking a large number of cases into consideration, after operation than they were in normal conditions, and he had felt that the phenomena were less marked and the health certainly better in those cases in which abnormal losses of blood were prevented. He had tried to make observations with regard to the differences between cases of uterine extirpation in which part or both of the ovaries were left and those in which the latter were removed, but he had been unable to form any accurate opinion on the subject.

Book Notices.

The Urine; and Clinical Chemistry of the Gastric Contents, the Common Poisons, and Milk. By J. W. HOLLAND, M. D., Professor of Medical Chemistry, Jefferson Medical College of Philadelphia. Seventh Edition, Revised and Enlarged. With 41 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. 174. (\$1.00 net.)

This standard work is too well and favorably known to make any extended review necessary. It is particularly rich in convenient and practical methods for the examination of the urine, gastric contents, the common poisons, and milk. In point of practical usefulness to both medical students and practising physicians, Holland's little work holds a high place.

Studies from the Department of Neurology. Publications of Cornell University Medical College. Vol. I. Pp. 239. New York, 1904.

This volume includes interesting descriptions of the formal (conventional) treatment of epilepsy and of special exercises for tabes dorsalis, for Parkinson's disease, and for aphasia, by Dr. Charles L. Dana; and accounts of a case of juvenile apoplexy in a man aged twenty-one, of a case of tumor of the right frontal lobe, and of a case of middorsal Pott's disease with compression myelitis, by Dr. J. Ramsay Hunt.

There are reprints of articles from various journals by Dr. Dana, Dr. Hunt, and Dr. Joseph Fraenkel. The volume is a very creditable evidence of the careful use of clinical material by the Department of Neurology of Cornell University Medical College.

Miscellany.

Sterility Caused by the Use of the X Ray.—The *Journal of Cutaneous Diseases* for March states that in its February, 1904, issue the experiments of Albers Schönberg were referred to as a warning of the danger of producing sterility incurred by x raying the testicles in a case of psoriasis presented by the writer before the December, 1903, meeting of the New York Dermatological Society. At that time it was asserted that the x ray was too powerful an agent to be used in the treatment of an affection which yielded readily enough to much milder remedies, especially when the disfiguring loss of hair and the unknown danger of causing necrostermia were to be considered. This patient was x rayed for lesions on the scrotum for twenty-five sances of five to eight minutes, or a total exposure of one hundred and twenty-five to two hundred minutes, and at present, or fifteen months since stopping treatment, has complete azoospermia.

This latter danger, in a much more insidious form, has been realized in the cases recently reported by Dr. F. Tilden Brown. Dr. Brown has made the unfortunate discovery that patients and physicians who had spent more or less time in an x ray atmosphere were the subjects of an azoospermia without being conscious in any way of deterioration or change in their potency.

The *Medical News* and the *Medical Record*¹ have already sounded the warning note in editorials, and have alluded to the experiments of Halberstädter (*Berliner klin. Wochens.*, January 16, 1905), showing that marked macroscopic and microscopic changes took place in the ovaries of rabbits which had been exposed to the Röntgen ray. "The histological change most in evidence was the complete disappearance of the Graafian follicles, in about fifteen days. Whether this loss is permanent and whether or not regeneration can take place, has not yet been determined. It was also found that the ovaries seemed more sensitive to the effects of the rays than the outer skin of the abdomen, and when compared with control experiments in male rabbits, developed degenerative changes in shorter time and with fewer exposures. How far these observations in animals apply to human beings cannot yet be definitely stated, nor is it known how permanent the effect may be." Of course, the question of individual susceptibility must also be taken into account, but since the wearing of an apron impervious to the rays, or the incasing of the focus tube so as to prevent the escape of all rays except those intended for a particular region under treatment, and avoidance of applying the rays to "danger zones," would seem to obviate all danger in this direction.

¹ See also this *Journal* for February 18, 1905, page 345.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending March 10, 1905:

Smallpox—United States.				
Places.	Date.	Cases.	Deaths.	
California—Los Angeles.....	Feb. 18-25.....	2		
California—San Francisco.....	Feb. 18-25.....	2		
Florida—Jacksonville.....	Feb. 25-Mar. 4.....	1		
Illinois—Chicago.....	Feb. 25-Mar. 4.....	16	3	
Indiana—Hammond.....	Feb. 21-28.....	1		
Kentucky—Louisville.....	Feb. 23-Mar. 2.....	2		
Louisiana—New Orleans.....	Feb. 25-Mar. 4.....	6		
Four imported.				
Michigan—Detroit.....	Feb. 25-Mar. 1.....	2		
Michigan—At 74 localities.....	Feb. 11-18.....	Present.		
Missouri—St. Louis.....	Feb. 25-Mar. 4.....	47	2	
Nebraska—Omaha.....	Feb. 25-Mar. 4.....	2		
New York—Mount Vernon.....	Feb. 25-Mar. 4.....	1		
Ohio—Toledo.....	Feb. 25-Mar. 4.....	3		
Tennessee—Memphis.....	Feb. 25-Mar. 4.....	23		
Tennessee—Nashville.....	Feb. 25-Mar. 4.....	6		
West Virginia—Wheeling.....	Feb. 25-Mar. 4.....	1		
Wisconsin—Milwaukee.....	Feb. 11-25.....	21		
Smallpox—Foreign.				
Bosnia and Herzegovina.....	Dec. 1-31.....	17	2	
France—Paris.....	Feb. 11-18.....	8		
France—Nantes.....	Feb. 8-22.....	19		
Great Britain—Leeds.....	Feb. 11-18.....	9		
Great Britain—Leith.....	Feb. 11-18.....	3		
Great Britain—London.....	Feb. 11-18.....	3		
Gt. Britain—Newcastle-on-Tyne.....	Feb. 11-18.....	5		
Great Britain—Nottingham.....	Feb. 11-18.....	1		
Great Britain—South Shields.....	Feb. 11-18.....	2		
India—Bombay.....	Jan. 31-Feb. 7.....	122	2	
India—Karachi.....	Jan. 29-Feb. 5.....	7		
India—Madras.....	Jan. 28-Feb. 3.....	1		
Italy—Lecce.....	Feb. 9-16.....	34		
Italy—Treviso Province.....	Feb. 9-16.....	4		
Japan—Ehime.....	Feb. 2.....	26		
Japan—Fukuoka.....	Feb. 2.....	2		
Japan—Hiroshima.....	Feb. 2.....	2		
Japan—Kumamoto.....	Feb. 2.....	1		
Japan—Nagasaki.....	Feb. 2.....	2		
Japan—Osaka.....	Feb. 2.....	8		
Japan—Yamaguchi.....	Feb. 2.....	1		
Mexico—City of Mexico.....	Feb. 28-Feb. 11.....	4	6	
Straits Settlements—Singapore.....	Jan. 14-21.....	4	1	
Smallpox—Insular.				
Philippine Islands—Manila.....	Jan. 7-28.....	5	1	
Yellow Fever.				
Mexico—Coatzacoalcas.....	Feb. 11-18.....	1	1	
Panama—Panama.....	Jan. 1-Feb. 14.....	27	8	
Cholera.				
India—Bombay.....	Jan. 31-Feb. 7.....	1		
Russia—Erivan.....	Jan. 16-23.....	1		
Russia—Sarawat.....	Jan. 16-23.....	5	3	
Plague—Insular.				
Hawaii—Alea.....	Mar. 2.....		1	
Plague—Foreign.				
Arabia—Aden.....	Feb. 4-11.....	280	257	
India—General.....	Jan. 21-28.....	38,204	33,087	
India—Bombay.....	Jan. 31-Feb. 7.....		450	
India—Calcutta.....	Jan. 28-Feb. 4.....		84	
India—Karachi.....	Feb. 28-Feb. 5.....		44	
Russia—Ural Territory.....	Jan. 3-9.....		8	15

Public Health and Marine Hospital Service:

List of the Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 8, 1905:

ACHENBACH, JOHN, Pharmacist. Granted leave of absence for three days from February 26, 1905, under paragraph 210 of the regulations. Granted leave of absence for seven days from March 3, 1905, under paragraph 210 of the regulations.

BILLINGS, W. C., Passed Assistant Surgeon. Granted leave of absence for fourteen days from March 3rd.

FRANCIS, EDWARD, Assistant Surgeon. Granted leave of absence for seven days from March 6, 1905, under paragraph 191 of the regulations.

GRUBBS, S. B., Passed Assistant Surgeon. Granted leave of absence for two days from March 7th

- KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for four days from March 1, 1905, under paragraph 210 of the regulations.
- LOPEZ, ESTEBAN, Acting Assistant Surgeon. Granted leave of absence for thirty days from January 1st. Granted leave of absence for five days from January 31, 1905, on account of sickness.
- MCLAUGHLIN, A. J., Assistant Surgeon. Granted leave of absence for six days from March 6th.
- ROSSELLO, M. M., Acting Assistant Surgeon. Granted leave of absence for seven days from February 18, 1905, under paragraph 210 of the regulations.
- STEVENSON, J. W., Acting Assistant Surgeon. Leave of absence for seven days from February 27, 1905, granted Acting Assistant Surgeon Stevenson, revoked. March 8, 1905.

Boards Convened.

Board convened to meet at Washington, D. C., March 10, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Assistant Surgeon General G. T. VAUGHAN, chairman. Assistant Surgeon H. McG. ROBERTSON, recorder.

Board convened to meet at San Francisco, Cal., April 3, 1905, for the examination of assistant surgeons to determine their fitness for promotion to the grade of passed assistant surgeon. Detail for the board—Passed Assistant Surgeon RUPERT BLUE, chairman. Passed Assistant Surgeon H. S. CUMMING. Passed Assistant Surgeon D. H. CURRIE, recorder.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending March 11, 1905

- BACHMANN, R. A., Assistant Surgeon. Detached from the *Wilmingon* and ordered to the *Villalobos*.
- BENTON, F. L., Passed Assistant Surgeon. Ordered to the Naval Recruiting Station, Philadelphia, Pa.
- COOKE, G. H., Medical Director, retired. Detached from the Naval Recruiting Station, Philadelphia, Pa., and ordered home.
- DE LANEY, C. H., Passed Assistant Surgeon. Detached from the *Petrel* and ordered to the *Marblehead*.
- HUNTINGTON, W. H., Pharmacist, retired. Ordered to the Naval Training Station, Newport, R. I.
- KERR, D. B., Passed Assistant Surgeon. Detached from the *Buffalo* and ordered to the *Boston*.
- MANCHESTER, J. D., Assistant Surgeon. Detached from the *Marblehead* and ordered to the *Petrel*.
- MILLER, J., JR., Assistant Surgeon. Detached from the *Boston* and ordered to the *Buffalo*.
- MICHEL, R. H., Assistant Surgeon. Detached from the *Villalobos* and ordered to the *Wilmingon*.
- RODMAN, S. S., Passed Assistant Surgeon. Detached from the *Pensacola* and ordered to the *Ranger*.
- TAYLOR, E. C., Assistant Surgeon. Detached from the *Bancroft* and ordered to the *Colorado*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 11, 1905:

- DEAN, ELMER A., First Lieutenant and Assistant Surgeon. Left Fort Riley, Kan., on March 3, 1905, on ten days' leave of absence.
- DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence from March 8, 1905.
- HOFF, JOHN VAN R., Colonel and Assistant Surgeon General. Granted thirty days' leave of absence.
- JONES, PERCY L., First Lieutenant and Assistant Surgeon. Reported on March 4, 1905, for temporary duty at Washington Barracks, D. C.
- MORSE, A. W., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence, to take effect on or about February 27, 1905.

PORTER, R. S., First Lieutenant and Assistant Surgeon. Left Fort Niobrara, Neb., on March 4, 1905, on ten days' leave of absence.

RENO, WILLIAM W., First Lieutenant and Assistant Surgeon. Left Fort Myer, Va., on March 8, 1905, for temporary duty as surgeon on the transport *Summer*.

SHILLOCK, PAUL, Major and Surgeon. Granted one month and fifteen days' leave of absence, to take effect on or about March 10, 1905.

Births, Marriages, and Deaths.

Married.

ALLEN—RUBEL.—In Louisville, Kentucky, on Wednesday, March 1st, Dr. M. K. Allen and Miss Jessie M. Rubel.

BIRD—GILLETTE.—In New York, on Tuesday, March 7th, Mr. Harrison Kett Bird and Miss Grace Gillette, daughter of Dr. Walter R. Gillette.

CHITTENDEN—BEEBE.—In New York, on Thursday, February 23rd, Dr. Arthur Smith Chittenden and Mrs. Anna Preston Beebe.

MENDE—PORTER.—In Paris, France, on Saturday, March 4th, Dr. Edwin Mende and Miss Elsie Porter.

SWAYNE—VODGES.—In Philadelphia, on Thursday, March 2nd, Dr. Horace R. Swayne and Miss Anna M. Vodges.

Died.

AMILON.—In Chicago, Illinois, on Wednesday, March 8th, Dr. Ivan C. Amilon, in the thirty-fourth year of his age.

CHRISTOPHER.—In Chicago, Illinois, on Thursday, March 2nd, Dr. W. S. Christopher, in the forty-sixth year of his age.

DINGMAN.—In Spring Valley, N. Y., on Saturday, February 25th, Dr. James Alva Dingman, in the fifty-seventh year of his age.

EDWARDS.—In West Plains, Missouri, on Thursday, March 2nd, Dr. W. T. Edwards.

ELLIS.—In Cincinnati, Ohio, on Thursday, March 2nd, Dr. Charles E. Ellis, in the fortieth year of his age.

FAHRNEY.—In Hagerstown, Maryland, on Sunday, March 5th, Dr. Daniel P. Fahrney, in the sixty-ninth year of his age.

FREED.—In Chambersburg, Pennsylvania, on Monday, February 27th, Dr. E. S. Freed.

HYSLOP.—In New York, on Saturday, February 25th, Dr. George Lederman Hyslop, in the eightieth year of his age.

JONES.—In Kansas City, Missouri, on Tuesday, February 28th, Dr. P. C. Jones, in the seventy-third year of his age.

LANGSON.—In Chadron, Nebraska, on Tuesday, February 28th, Dr. R. K. Langson, in the forty-fourth year of his age.

MEANS.—In Boston, Massachusetts, on Thursday, March 2nd, Dr. Andrew F. Means, in the sixty-seventh year of his age.

METCALF.—In Orvieto, Italy, on Wednesday, March 1st, Dr. George R. Metcalf, of St. Paul, in the fifty-eighth year of his age.

MILLS.—In Hume, N. Y., on Friday, February 10th, Dr. Julia A. Mills, in the eighty-sixth year of her age.

REYNOLDS.—In New York, on Saturday, March 4th, Dr. Warren O. Reynolds, in the fifty-seventh year of his age.

SHAW.—In Memphis, Tennessee, on Friday, March 3rd, Dr. Henry Jackson Shaw, in the eightieth year of his age.

SIM.—In Libertytown, Maryland, on Tuesday, February 28th, Dr. J. Thomas Sim, in the sixty-eighth year of his age.

TIERNY.—In Leominster, Massachusetts, on Tuesday, March 7th, Dr. Martin H. Tierney, in the forty-sixth year of his age.

ZIPPERLEN.—In Cincinnati, Ohio, on Tuesday, February 28th, Dr. Adolph Zipperlen, in the eighty-eighth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

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SATURDAY, MARCH 25, 1905

WHOLE No. 1373.

Lectures and Addresses.

MEDICAL PROGRESS.*

By J. A. WRIGHT, M. D.,

TOLEDO, O.

When we remark that medicine has made stupendous progress during recent years, we recognize a somewhat hackneyed expression, but one which will bear occasional repetition. Almost within the last decade new discoveries and changed theories have revolutionized our methods of diagnosis and treatment, if they have not actually resystematized the practice of medicine. Some of these changes have been most startling and radical and have so completely overturned our previous conception of things that the graduate of twenty years ago, who stood still and failed to keep up with the rushing trend of medical thought, would be as much lost in modern practice to-day as a South Sea Islander suddenly transported to the best drawing rooms of New York or Paris.

It would seem reasonable to expect that this sort of thing ought to stop sometime, somewhere, but we can gather assurance from the hurrying activity to be seen in every department of medicine and the ceaseless suggestions of progress along the lines of professional action from skilled toilers in our many fields, that not only is the good work going bravely on and the end not yet in sight, but that never before in the history of the world has the tirelessly nimble medical mind toiled so incessantly, intelligently, and effectively as at the present time; never before has superbly trained and keenly alert scientific skill been so pregnant of expectant fruitfulness.

Surgery, the great leader of medical advance, still keeps on the even tenor of its way, making history as it goes; marking its step so clearly that, in retrospect, one can plainly note its course from point to point during its brief but eventful modern era and marvel as well at its stupendous progress as at the dazzling possibilities of the future. Some one says "the supreme test of true progress is ever results." Judged

by this standard surgery, of all departments in medicine, is entitled to the victor's palm, for the steadily decreasing rate of mortality following abdominal sections and capital operations generally shows such phenomenal results, as compared with those following earlier efforts, that the greatly enhanced value of present method is distinctly apparent. Technique, preparatory and operative, to an onlooker seems well nigh perfect and it might be passing difficult to suggest in what way improvement could be made in this direction.

Of the many noteworthy advances in this branch it may be invidious to dwell on any specifically, but I cannot refrain from mentioning the procedure advocated by Dr. G. W. Crile of injecting cocaine solution into large nerve trunks immediately above the seat of contemplated operation. This method, technically called nerve blocking, has shown itself plainly efficacious in preventing the occurrence of shock and thus obviating a very grave danger in many operations.

That the use of cocaine as suggested would relieve pain was to be expected, and we know that, as an efficient anæsthetic, it has been very often injected into accessible tissues and within the spinal canal, but that arrest of sensation, in this manner, means also the prevention of shock is a revelation which, apart from its eminently practical value, proves very plainly that shock is of purely nervous origin; that it is not due, for instance, to hæmorrhage or exsanguination, which produces serious enough consequences indeed, but which ought to be called by its proper name. Incidentally, it opens up interesting speculation as to the relationship of pain and shock, which could be dwelt on with profit if it was not clear digression.

No better illustration of the hurrying rapidity of medical progress—which effects almost incredible ends and almost forgets them in the absorbing race to further conquest—can be given than to call attention to the fact that the transcendent story of the x ray is already old.

Only a few years ago the world was astounded when announcement was made that by means of Röntgen's discovery the hidden structures of the

* President's Annual Address, delivered before the Toledo, O., Academy of Medicine.

body could be visually perceived. This, surely, was startling and revolutionary. More than that it was in utter conflict with scientific dogma—with what was thought to be known of the very laws of nature—and, during all preceding ages, no one but the writers of whimsical fairy tales even dreamed of looking into and beyond structures completely impervious to brightest known rays of light. But now, how commonplace! Everywhere the progressive medical man demonstrates, with what may be rightly termed true clairvoyance, the processes of disease and deformity; the plain evidence of fracture and injury; the visible presence of deeply buried bullet and calculus.

Supplementary to this epoch-making discovery and almost obscuring it in importance, it was found that structural changes were effected by x ray exposure, and, by logical deduction, there has been evolved an essentially scientific scheme of treatment as the result of which previously intractable, incurable, malignant, and fatal diseases have been made to loosen their almost relentless hold on humanity. One of the nicest consequences of the use of this efficient therapeutic force is that the ultra modern surgeon no longer dreads, as before, recurrence of malignant processes after operation, for it has been proven beyond cavil that x ray exposure can, in many cases, prevent this heretofore irremediable disaster and save the sufferer from its otherwise inevitably fatal results.

Fluoroscopy, radiography, and radiotherapy have thus achieved definite, well established, and indisputable position as invaluable if not indispensable means of diagnosis and easily available methods of conquering many previously unconquerable conditions.

In allied departments of electrotherapy the forward movement has been steady and strong, and the present day sees static electricity, freed from the shackles of empiricism, occupying a deservedly high place as an effective remedial agent in a large number of peculiarly troublesome and very obstinate complaints. This form of electricity, with its intensified and powerful coefficient, the high frequency current, if not actually supplanting the so called orthodox methods of treatment, in many cases brings to their support such correction of faulty nerve force, stimulation of metabolism, and fortification of resistance that the period of disability is often greatly shortened and prompter restoration to health and strength reasonably assured.

Few branches exhibit greater signs of activity and reawakening interest than preventive medicine, but though much has been recently accomplished in this field, it is largely of indeterminate character and certainly very much more remains to be done.

The term implies concerted effort on the part of

physicians to guard humanity against the recognizable and preventable causes of disease and death, and this fully typifies the purest and highest conception of the true, altruistic aim of the profession. To shallow minds it may seem passing strange that an intelligent body of mortals would seriously endeavor to limit its business opportunities and curtail its own material revenue—and this is plainly what preventive medicine aims to accomplish—but, to the true physician, thoroughly imbued with the unselfish spirit of a vocation essentially unselfish, there is nothing that appeals more powerfully than a good chance to strangle in its incipency a menacing danger to life and health, which, if allowed to grow to maturity, will develop such strength and spread such disaster that the most strenuous and heroic efforts to conquer it must often prove futile.

If ætiological factors can be destroyed or avoided, it follows that the individual is not only protected but that the generation of countless microorganisms—the beginners of disease—whose mere existence is fraught with danger and death, is absolutely prevented. It has been stated by high authority that “five out of every ten diseases most widespread and fatal are due to the operation of causes fully recognizable and completely preventable.” If this is so—I do not know that it is even questioned—what grand results would follow a perfectly organized system of preventive medicine. If the good work was limited to tuberculosis alone—the great white plague with its annual death toll in the United States alone of nearly 150,000—what an immense triumph it would be to reduce by a large percentage its present frightful fatality. This is not only possible but practicable. Then we have pneumonia, next in order to tuberculosis as a death producing disease, with a recognized pathogenic bacterium; typhoid fever also, the prevention of which is definitely understood, and of which it has been well said that “every case is the result of criminal ignorance or of still more criminal negligence.”

With clear recognition of the causes of disease and definite understanding of means to make them inoperable, it seems a sad commentary on our boasted progress that according to good authority, “the sun shines daily on thousands of perambulating incubators of death and disease, each one of whom, during the hours of daylight, distributes enough germs about him to infect every man, woman, and child in the republic.” Still this neglect is more apparent than real, for, after all, we have knowledge important and primarily essential to accomplishment. All that is now needed is the perfection of methodical plans which can be carried out systematically and in concert by the whole profession, and thus will the evolution of preventive medicine be ultimately effected.

The growing interest in preventive medicine should be hailed, nourished, and stimulated by medical men and medical organizations everywhere as one of the most hopeful signs of impending brilliant achievement. While the field is wide, the soil is fertile and opportunity for success large and promising. It should never be forgotten that one of medicine's greatest triumphs was accomplished in this field, and who can tell, with the vastly superior power and advantage conferred by modern science, what names the future may not find inscribed on the roll headed by that of the immortal Jenner.

Did I say immortal? It is all too feeble a term. Did you ever think of the millions of cases of loathsome disease that Jenner's discovery has prevented? Think of the many thousands whose lives he must have saved since the first vaccination in 1796; think of the good work still going on, with vaccination firmly established and compulsory in every civilized nation under the sun; think of the myriads yet unborn, to be shielded from pestilence and death by its employment continued, as it must be, through coming ages as long as time endures, and realize, if you can, the immensity of a pyramidal monument that might be constructed to his memory, if every life saved and to be saved was represented by a single stone. Such a structure would, by comparison, make the great pyramid of Cheops look like an ant hill, and it would be but commensurate with the work of Jenner.

More real good to humanity than the accomplishment of any king, ruler, statesman, or potentate who ever lived has resulted from this single exploit of preventive medicine, and the time is surely ripe for other death dealing diseases to find their capacity for harm practically obliterated, as that of smallpox has been, by definite immunizing protection.

Materia medica alone, of all departments in medicine, has occupied an unenviable position in recent years. It seems as if pathology and diagnosis have so completely engaged the attention of workers in general medicine and have demanded such stress of energy that effort in at least an equally important direction is impossible. Not only this, it has become a decided fashion to belittle curative medication, many of the assumed leaders and some of the noted authorities tacitly uniting in what has been aptly termed a crusade of therapeutic nihilism. The result of this movement is just what might have been anticipated. Drugs are neglected if not derided, and the latter day product of the schools, though well equipped to make skillful diagnosis, is left helpless in the highest motif of the physician, the restoration of health.

To fit this unwholesome condition a new word has been coined and the therapist is now apologetically dubbed an internist. To me the term has an

offensive ring. Coming as it usually does from some ambitious surgical tyro, who, as he recounts often uncalled for if not questionable operations, mouths the word as though he found it sweet and as if he felt that it marked an insuperable chasm between the homely work of the general practitioner and his own more spectacular performances.

The scope of the general physician is wide, deep, and extensive. He must know and be able to recognize, almost by intuition, the multifold morbid activities that characterize innumerable ills; to discriminate at once as to the exact significance of symptoms presented; to estimate accurately the injury resulting from and the continuing effects of morbid influences; to perceive clearly the coming consequences of persistent pathological processes; to weigh delicately the relative power of resistance of ever varying constitutional individuality to ever differing intensity and always greatly modified types of sickness; as a wise general, to know the tactics of the enemy, and so to conserve the forces of nerve and blood and brain and life, that all may be so fortified against anticipated encounter with formidable reserves and allies of the enemy that the citadel, in time of danger, will be found impregnable. In addition to this and much more, he must have an intimate, comprehensive, accurately tabulated, and instantly available knowledge of therapeutic values; and when we know—as we must if properly informed—that the resources of material medicine are not narrow but practically limitless, some conception may be had of the mere intellectual horizon of the qualified therapist. If possessed of a busy practice, he must be vigilant, tireless, and sleepless, toiling with unfaltering energy by day and by night, in season and out of season; cold, wet, exhausted, and yet with supreme determination taking from the few short hours of needed rest the time required for necessarily strained and highly concentrated studious effort. The ground is vast, but he must cover it all.

Can human frame and mortal strength endure such strain and live? It can betimes, but think you not, O thoughtless critic, if one survive training like to this, he is not made, morally, physically, and intellectually, vastly greater and stronger? Let me give voice to long held conviction: The capable, extensive, conscientious, general practice of medicine either kills a man or moulds a giant.

As well call the competent surgeon an externalist or superficialist as use a word of like restricted meaning to designate the hardest, most deserving worker in the most expanded field of medicine, the greatest and most versatile of specialists, the general practitioner.

I have dwelt on this point to give timely and needed hint of an insufferable situation which calls for

redress, as well as strenuously to controvert the tendency of recent writers, on almost every morbid condition, to place the physician powerless in the presence of disease. Therapy is the very keystone of regular medicine. The only thing that marks definite and distinct separation from the irregulars. Better surrender your entire system of medicine if you cannot attack and overcome the enemy it is your special province to fight.

Talk, as you do, of the uselessness of medicine in typhoid fever and pneumonia, at every point in all stages of these diseases distinct and clearly defined internal medication is indicated. Its competent and intelligent employment will shorten the course, ameliorate unfavorable conditions, lessen suffering, and curtail mortality, pessimistic authority to the contrary notwithstanding. Let those who proclaim helplessness call themselves pathologists, hematologists, diagnosticians, or nurses, they are not physicians in the properly accepted meaning of the term.

The physician should heal the sick as well as know disease.

Along the line of *materia medica* perhaps the most startling and widely resented innovation on time honored methods and dogmas is what may be euphemistically termed the assault on strychnine. For scores of years strychnine has been regarded as an absolutely certain and reliable stimulant to the respiratory centre, also to the heart and vasomotor centres. According to every authority, under its influence the indispensable functions innervated by those centres were not only conserved and strengthened, but those of the spinal cord exalted and stimulated. Above all it was asserted to be supremely useful and wonderfully effective in overcoming all kinds of shock, surgical or otherwise, and that it could be particularly relied upon to increase and maintain arterial pressure.

Now comes Dr. Crile, one of the most patient, capable, and thorough of laboratory investigators, who, from a long series of critical, painstaking, and seemingly complete experimental studies, has proved, to his satisfaction and that of others, that this generally employed and time tested reliance is not to be depended upon, that it is not only useless but injurious and that, in its most valued applications—the relief of shock and the maintenance of blood pressure—it actually contributes to the very ends we aim to avert.

While too much credit cannot be given the doctor for his able and original work, and while his deductions should be accepted as food for deep and careful thought, yet we should remember that his investigations were conducted on the dog, an animal known to be especially susceptible to the toxic effects of strychnine, and we should also cautiously consider that laboratory finding is not by any means

always verified in clinical results. Still, a critical study of the series of tests reported should at least make us carefully observant and watchful to the end that this still mooted and highly important question be definitely settled.

If strychnine is to be displaced as an eligible remedy for shock, we may perhaps use it in other directions. It is said to stimulate the appetite for food, and to encourage other appetites, but it looks very much as if the authorities in *materia medica*, who have been getting pretty hard knocks in this and other matters, will soon have to carefully revise their treatises. After all, they are no worse off than our chemists, who, as a result of the discovery of radium and radioactive compounds, feel that the very foundation of present day chemical science, the atomic theory, is tottering to its fall.

Speaking of radium, it is rather unfortunate that this wonder working element has been exploited to its injury by the sensational press and the equally sensational but more mendacious charlatan. Apart from its phenomenal emanations of heat, light, and force that produces fluorescence, it effects structural changes in tissue, as does the x ray, but its action is feeble, exposure must be by close contact and, so far as can easily be discovered, it cannot be classed as an efficient curative agent in the cases to which the x ray is so effectively applicable. The London Hospital, after thorough, rigid, and wholly unprejudiced investigation, reports that its availability as a therapeutic agent has not been plainly established. I have personally investigated some of the startling newspaper cures of malignant diseases—where addresses were given—and was not surprised to learn, in every instance, that no such favorable result had been accomplished.

The internal administration of fluids made radioactive through the intervention of this element is based upon visionary hypothesis and, to put it mildly, is utterly empirical.

Radioactivity is a new and entrancing field of study. Beginning with the introduction of the x ray, nine years ago, followed by the discovery of the radioactive properties of uranium by Becquerel, in 1897, the later announcement that thorium, polonium, and other elements had similar properties, and the more recent, culminating discovery of radium, it has thrown the scientific world almost into a state of revolution. Largely from a consideration of this new demonstration of force, Sir Oliver Lodge asserts positively that matter is electricity and nothing else. Sir William Ramsay, a scientist whose conservatism and precision of statement are characteristic, says "it looks probable that atoms are not indivisible, but are disintegrated and reconstructed and that, in consequence, the transmutation of elements is no longer an idle dream."

The whole quantity of radium yet produced is exceedingly small, somewhere about forty grains, and when one thinks of the many thousands of specimens distributed throughout the world, most of them consisting only of the minutest fragments of fractions of molecules, not even of radium, but of some compound of radium, it leads quite naturally to the query: Which is the more gullible, the purchasers of these really typical homœopathic attenuations or the dear public upon and before which its wondrous curative properties are exploited?

The ancient branch of obstetrics has been justly called the parent of medical craft. It has been practised in a manner for many thousands of years, and one can easily go back in imagination to primeval times and realize that even then the pangs and dangers of childbirth must have evoked the best sympathy and most helpful assistance that the rude age afforded. The evolution of obstetrics, therefore, has been a long process. Unlike gynecology, which has been wonderfully developed in the last twenty-five years, obstetrics has been slowly growing for centuries. It is not then to be expected that as much recent progress should be had in this long practised art as if it were new in origin. Consequently, save that it has benefited in the general adoption of antiseptic and aseptic methods, and improved the means of forceps delivery, advance has until very recently not been noticeable. Within the past year or two, however, this department seems to have awakened to a sense of the activity everywhere else manifested and has made some creditable efforts to show that the last word has not been spoken even on the time honored, long practised science and art of obstetrics, and that works on this subject may have to be rewritten.

One of these advancing steps is the devisement by Gigli of extramedian symphyseotomy, by means of which the capacity of contracted and distorted pelvis is greatly increased and delivery at full term rendered safe and easy. The operation, which is devoid of danger, has been further improved in technique by Döderlein and employed by him and others in a considerable number of cases with marked and gratifying success.

Another more original and strongly progressive movement is the suggestion of spinal cocainization to effect painless parturition in normal labor.

Notwithstanding the biblical decree that women must bring forth offspring in anguish, it has ever been the dream of the accoucheur to obviate this condition. To this end general anæsthesia has been successfully employed, but its use has not been commonly established nor has it, for various reasons, been considered an unmixed blessing. A radical change in the conduct of labor is now proposed by Dr. Biers and Dr. Donitz, who have, for some time past, been

demonstrating that spinal anæsthesia with cocaine will entirely remove the suffering without destroying consciousness or interrupting the safe progress of labor. They have interested obstetricians generally in their highly successful efforts and others have been following the work with equally satisfactory results.

Dr. Martin, who has made use of this mode of anæsthesia in a series of thirty cases of delivery in healthy women at full term, endorses it unequivocally. He says, in a recent number of the *Journal of the American Medical Association*, "the anæsthesia is perfect and lasts from one hour to an hour and a half. If delivery occurs during this period the complete absence of pain during the entire process of parturition is most remarkable. Uterine contractions do not seem to be interfered with, but the expulsion of the child proceeds more slowly. Involution, lactation, and the progress of puerperal convalescence are not disturbed in any way."

The slight retardation noted by the doctor is very likely due to the reduction of voluntary muscular effort. To me this seems a positive benefit, as this violent and wholly unnecessary exertion not only exhausts the strength of the subject, but is also an important factor in causing lacerations.

It will readily be seen that the use of this method need not be restricted to normal labor, for with it the forceps ought to be easily employed, and every operative procedure associated with delivery, from version to repair of the perinæum painlessly effected.

Still another thought: If injection of cocaine solution into nerve trunks prevents shock, its effect on the spinal cord must certainly produce a like result and, in difficult labors, shock is certainly one of the serious dangers to be reckoned with and obviated if possible.

Work of this character is not simply speculative and interesting, but of the very highest practical value. If it is true that with this method there is little danger of untoward effects and that the results of its more general employment will be as satisfactory as the reports received positively indicate, it would seem not only advisable but imperative that the really progressive obstetrician equip himself for that which offers to be a realization of a long cherished ideal, the consummation of painless parturition.

In an address of this kind it is inevitable that many of the recent advances in medicine cannot be enumerated, and that those which have been mentioned cannot be considered in that fine detail their merits deserve; still enough has been said to show in a general way that, notwithstanding the progress which has been made, the real force of the movement has scarcely begun. It may in truth be likened

to an avalanche that starting slowly from the top of a high mountain gathers volume and energy as it moves on until, with resistless force and weight and speed, it sweeps away the barriers of brush and debris, obstructions of earth and stone, and opens up a fair wide vista from the valley below to the summit above the clouds.

What has been said of the sluggard graduate of twenty years ago is doubly true of the graduate of yesterday. No matter how well equipped in present day methods, if foolishly deaf to the echoing note of progress; if wilfully blind to the glowing signs of greater scientific advance, he, in far briefer space than his prototype, will be relegated to the distant rear, a crippled soldier left behind by the rapidly marching army, a lumbering craft beyond hailing distance of the fast disappearing fleet.

1822 CHERRY STREET.

Original Communications.

THE INFLUENCE OF INFECTED MILK IN THE DIET OF THE SICK—PARTICULARLY IN ACUTE INFECTIOUS DISEASES. WITH A REPORT OF A SERIES OF CASES OF MILK INFECTIONS IN TYPHOID FEVER PATIENTS.*

By DAVID L. EDSALL, M. D.,
PHILADELPHIA.

The enormous importance of infected milk in the production of digestive disturbances in infants has for years been clearly demonstrated and generally recognized, and energetic efforts are now being made everywhere to control the infant mortality by giving babies clean or Pasteurized milk only. The profession is also alive to the fact that tuberculosis, typhoid fever, diphtheria, and a number of other infectious diseases (probably most of those that are of bacterial origin, and perhaps some that are parasitic) may be transmitted through milk, and that some of these diseases certainly have been frequently so transmitted. It is also well known that typhoid fever, diphtheria, probably scarlet fever, and also other specific infectious diseases, have often flourished in epidemic form as the result of specific infection of milk. There are, furthermore, a number of striking instances on record of epidemics in which there were clearly marked clinical symptoms, but which were not due to any known specific infection, and these have been traced with great clearness to the milk supplied to the patients. Cases of this sort have occurred in both

adults and children; and the symptoms have been chiefly sore throat or gastrointestinal disturbance, together, usually, with fever and more or less severe constitutional symptoms. Cases more or less closely resembling those in the epidemics last mentioned, but occurring in small numbers in a household or singly, are, of course, occasionally seen by any careful observer and found to be probably due to the milk used; at times, indeed, they have been pretty clearly shown to be milk infections.

The types that have been mentioned are the chief forms of infection that are known to be produced by milk. In addition to these, it is recognized that milk may be the cause of toxic symptoms that are sometimes exceedingly violent and are not directly due to the bacteria present, but to poisonous substances produced by these bacteria.

All these are widely known possibilities; and if any of these infections or poisonings occurs, the attending physician, if he is alert, will attempt, among other things, to determine whether the milk is at fault. There is still another group of cases, however, in which the effects of bad milk are, I am sure, very often overlooked, chiefly because they are rendered obscure by other factors that are present. I mean those cases (occurring principally in persons on milk diet and especially in those with acute infectious diseases), in which symptoms are caused by the milk used in the diet, but in which these symptoms are not severe enough to arouse readily a suspicion as to their source; and in which similar symptoms may be and often are produced by the disease for which the patient is being treated. In other words, I mean cases in which the milk does not itself produce grave and evident infection, but in which it succeeds in making worse a disease that is already more or less bad; and in which the symptoms are likely to be attributed to the disease rather than to the food. That this occurs with some frequency has been generally believed by those interested in milk infections; but it is almost always a difficult point to prove, and there are, so far as I am aware, no clear records in medical literature of cases in which there has been any extensive evidence of its occurrence.

That it does occur and may be of much importance, is shown by the conditions that I am about to describe, which are conspicuous in that it was possible to demonstrate the facts with much comprehensiveness, and in that the series of cases observed was large. When I went on duty in the men's wards at the Episcopal Hospital on April 1, 1903, there were twenty-eight cases of typhoid

* Read by invitation before the Medical and Surgical Society of the District of Columbia, Washington.

fever in the acute wards. Sixteen of these patients were in the active stage of the disease; twelve were in the late decline or were convalescent. I was much impressed by the fact that six of the sixteen acutely ill patients had persistent diarrhoea which had resisted ordinary treatment; and that scarcely a patient in the wards was requiring enemas frequently—almost all having one to three spontaneous, and often loose stools, daily, while the six with decided diarrhoea were having from three to ten daily. Dr. D. J. Milton Miller, who had served the preceding four months in the same wards, remarked upon the recent persistence and frequency of diarrhoea in the typhoid cases and said that he believed the milk to be responsible for it; a suggestion that met the same thought in my own mind. It is my experience and, I think, that of most other observers, that typhoid patients, when well cared for and properly fed, require enemas in a decided majority of cases; and that very few have troublesome diarrhoea. More or less marked looseness of the bowels is common when cases are first seen and for a few days thereafter; but this is almost always due to previous bad feeding, and quickly responds to care in the diet, especially to a reduced amount of food. Severe diarrhoea is, of course, not a normal symptom of well managed typhoid fever, but is always an unfortunate complication; and even moderately marked diarrhoea is exceptional and is to be considered a complication, rather than a part of the disease. It is always an undesirable complication, for it is likely to be associated with distention and not infrequently, with abdominal pain, gastric disturbance, and decided evidences of toxæmia; and at best, it is likely to increase the prostration and the tendency to hæmorrhage and perforation.

In the patients under discussion, not only was intestinal disturbance from slight looseness of the bowels up to severe diarrhoea almost the rule rather than the exception, but other abdominal symptoms were also marked and common. Five of the patients complained within the next few days of attacks of colicky pain; a number showed decided distention; and several were nauseated. The typhoid cases also seemed more seriously ill than is common in an equal series of cases and abdominal symptoms other than diarrhoea occupied a conspicuous place in the picture in so many cases as to lead me to discuss the cause of it repeatedly with Dr. Harrar, who was then my resident. I had never seen this class of symptoms so prominent in such a large group of cases.

It is also worthy of mention, as not improbably related to this question, that four patients had dangerous hæmorrhage in the early part of

April; and that three others during this time had moderate hæmorrhage.

After having observed these conditions for several days and finding them persistent, I asked Dr. Ghriskey to make a count of the bacteria in the milk. I examined it chemically, and found 3.6 per cent. of fat, 3.45 per cent. of proteid, and no preservatives; in other words, the chemical conditions were entirely satisfactory. Four days later, Dr. Ghriskey reported to me that he had plated several specimens of the milk, and that in all he had found the bacteria uncountable after twenty-four hours in a 1 to 10 dilution; the number, therefore, being at least several millions.

These examinations were repeated several times, in order that we might be sure of our facts before giving troublesome orders; all the cases with severe diarrhoea being, however, for the time, put on liquids other than milk. The diarrhoea in the latter cases gradually ceased and at the end of five or six days, all were having but one or two stools a day. In the meanwhile, Dr. Ghriskey's bacterial counts were carried out; and each showed a very excessive number of bacteria. One showed only 200,000, all the others millions. These figures, conclusive enough at any time, were all the more so in this instance, since it was cool weather.

On the ground of these results, I gave an order that all the patients in the ward receiving milk should have only Pasteurized milk, the Pasteurizing to be done as soon as the milk was delivered at the ward. The results were very striking. From April 15th, at which time Pasteurizing had been generally established, to August 1st, when my service ended, there were admitted to my wards ninety-two other cases of typhoid fever. Of these, eight had diarrhoea on admission. In five of these eight, it subsided in three or four days and the patients afterwards required enemas most of the time. The three others had severe abdominal symptoms when admitted, were much prostrated, and died within a few days from these causes. Only four patients developed diarrhoea when in the house. In three of these it was mild (three to five stools daily and soon subsiding); in the fourth, it was severe. The latter patient, however, died of hæmorrhage and the autopsy showed his colon to be riddled with ulcers. The local lesion, therefore, probably sufficed to explain the abdominal symptoms in his case. Of the remaining eighty patients, fourteen had usually one or two, occasionally three, spontaneous movements daily; some of the time requiring enemas. The sixty-six others required enemas most of the time, occasionally having one or two practically normal spontaneous move-

ments. If the five that had diarrhoea upon admission but soon required enemas, be added to the last mentioned group, seventy-one of ninety-two patients usually required enemas, fourteen had nearly normal spontaneous movements, three developed mild diarrhoea in the house and one developed serious diarrhoea in the house, the latter patient having extremely extensive ulceration of the lower bowel.

Contrast these conditions with those mentioned as having been present at the beginning of April, when there were twenty-eight typhoid patients in the ward, sixteen of whom were in the fastigium of the disease. Of the latter sixteen, six had serious diarrhoea, while none of the other ten required enemas and several of them had already been under treatment for troublesome diarrhoea. Of the twelve that were in convalescence or in the late decline of the disease, only three required enemas; three had mild diarrhoea; and the remaining six had spontaneous movements with an occasional day of loose movements.

An even more striking contrast is afforded by the records of the cases in the men's wards during February and March. Within these two months, forty-eight patients with typhoid fever were admitted to the men's wards. Two of these died within two days; and therefore I have excluded them from the statistics. Of the forty-six others, only nine required enemas; eight had one to three spontaneous movements daily; and twenty-nine had diarrhoea. Of these twenty-nine, twenty had from four to ten stools daily for from one to three weeks (in one case, five weeks); while in the remaining nine there were repeated transitory attacks of diarrhoea, lasting one to three days with four to six stools daily.

Put in the form of percentage, from April 15th to August 1st, of ninety-two patients, seventy-seven per cent. required frequent enemas and only four and three tenths per cent. developed diarrhoea in the house; from February 1st to April 1st, of forty-six patients, only 19.5 per cent. required frequent enemas, while sixty-three per cent. either developed troublesome diarrhoea in the house or persisted in having diarrhoea for a long time after admission. The only noteworthy difference in the management of these cases during the two periods consisted in the fact that from April 15th to August 1st the milk was Pasteurized, while during February and March it was not.

That the difference was not due to any conditions relating solely to the men's wards is also shown by contrasting the records in the women's wards during the month of March with those dur-

ing June, the milk served there having been Pasteurized during the latter month, but not in the former. During March, eighteen cases of typhoid fever were admitted to that ward. Of these only six required frequent enemas; three had from one to three spontaneous stools daily; one had diarrhoea on admission, which soon subsided; and eight had persistent diarrhoea, with three to ten stools daily. Two of the latter patients died after having developed diarrhoea, distention, and increasing prostration; and one had severe and exhausting diarrhoea, persisting throughout the disease and until put on mixed soft diet during convalescence. In June, twenty-two cases were admitted. Of these fifteen usually had enemas; one had one or two spontaneous movements; two had diarrhoea on admission, in one of whom it persisted, while in the other it rapidly subsided; and in only two did diarrhoea develop while in the house and in these it caused but three or four movements a day and subsided within three and five days, respectively.

I have stated that in the first two weeks of April, in which time there were thirty-five cases of typhoid fever in my service, there were four instances of severe hæmorrhage and three of moderate hæmorrhage; while abdominal pain, distention, nausea, and severe general prostration were common. In the three and one half months after Pasteurization had been started, there were, in ninety-two cases, three severe hæmorrhages and two mild ones; while except in three cases in which severe abdominal symptoms were apparently the chief factors in producing death soon after their admission, abdominal symptoms seemed largely to have vanished. Previous to April 15th, they had constituted the principal feature of the group of cases; after that time there was so noteworthy an absence of severe abdominal symptoms that physicians visiting the wards remarked upon it.

The darkest corner of the earlier picture is shown by the record of deaths. Among the forty-six cases admitted to the men's wards during February and March, there were three in which death was caused by exhaustion following severe diarrhoea, distention, and other abdominal symptoms that developed in the house, and as I have mentioned two similar deaths occurred in the women's ward during March. Among the ninety-two cases on the men's side after April 15th, there were no cases in which abdominal symptoms could be said to have been even important contributory causes of death. The latter statement excludes the three cases that died with abdominal symptoms soon after admission; and it also

excludes two cases that died of hæmorrhage and of perforation, respectively, as I think that these accidents were unavoidable. While I do not maintain that the three deaths especially mentioned as having occurred in the men's ward during the months of February and March, and the two in the women's ward in March were unquestionably due to bad milk, I do think that there is a large probability that they were. Dr. Despard, who was my resident from May 1st to August 1st, and who had been daily in the wards in the preceding three months, remarked at the end of the service that the character of the group of cases had been entirely changed by Pasteurizing the milk and that he believed that this measure had probably saved as many as five lives. I consider this a fair statement.

I have remarked that the one fatal hæmorrhage that occurred after April 15th was probably an unavoidable accident and hence had nothing to do with the food. I believe equally, on the other hand, that the unusual frequency of hæmorrhages in the first two weeks of April may, in the light of the other observations that I have recorded, be fairly considered to have been partially or entirely due to the infected milk. I am quite prepared to believe that milk infection may increase the destructiveness of typhoid ulcers and thus increase the frequency of both hæmorrhage and perforation.

It would have been of much interest to attempt to determine whether any particular micro-organism produced the symptoms that I have described; but this was impossible, because Dr. Ghiskey was then occupied with a series of special observations on another subject. The points that are of particular interest in this series of cases are, however, sufficiently clear and convincing as an example of the type of milk infection to which I especially directed attention in opening this paper. It is to be noted that the infection produced by the milk was apparently not in itself severe, and that the symptoms due to the milk alone would probably not have been serious in otherwise normal persons. They acquired seriousness in these cases merely because the patients in whom they occurred were already the subjects of grave disease. Furthermore, just the same symptoms may be produced by typhoid fever alone. All these points lend obscurity to the actual meaning of the symptoms and to their source in instances such as this and make it very easy to overlook both. The description that I have given has probably conveyed the impression of a much more clearly defined set of circumstances than those that actually existed. I might readily have overlooked the relation to the milk,

had the trouble developed gradually before me; but as it was, I went on duty when the disturbance was at its height, and I also had the support of the opinion of Dr. Miller, who had carefully observed the cases and after trying various dietetic measures, had concluded that it was probably due to the milk. My description is necessarily *ex post facto* and based upon accumulated records; the impression produced while the events were in progress was much less clear. I insist somewhat upon this point because it is important to realize that in the class of cases that I am discussing we do not meet with anything that is as definite as is an outbreak of diphtheria or of tyrotoxicon poisoning, for instance; the circumstances, indeed, are far less clearly defined than they are in even the cases of gastroenteritis or of sore throat and the like, that have repeatedly been traced to milk, for the primary disease renders them obscure.

That such mild forms of milk infection occur with some frequency is, as I have said, firmly believed by those that are interested in securing a sanitary milk supply. One meets not infrequently, with individual cases or with groups of cases that are in their essential features not unlike those that I have described, but the circumstances are such, as a rule, that they do not permit of a determination whether the milk is at fault or not. I have recently seen in another hospital a case that showed the following main features: A robust young man, 28 years old, ran a mild course of typhoid fever until the beginning of the third week. Up to this time he had moderate constipation, extremely little distention, and no noteworthy abdominal or other symptoms. At that time he suddenly developed diarrhœa with foul stools, distention, increased fever, and prostration. These symptoms continued, the distention grew persistently worse, he rapidly lost strength, his heart failed, and he died four days after the sudden change in the symptoms. I had seen him throughout his illness, and previous to this transformation his case had aroused no anxiety. I had not been in a position to have his milk Pasteurized or to see that he got a reliable milk, but bacterial counts were made at the time of the milk that had been given him and they ran (in cold weather) anywhere between 60,000 and 7,000,000. I cannot state that this man died of milk infection, but considering the sudden and otherwise unexplained appearance of the abdominal symptoms, and the evident ready opportunity for dangerous infection of the milk as shown by the bacterial counts, I do not think it is straining a point to suggest that he probably did.

Cases in which it is not quite so evident that something new has been added to the old symp-

toms, but in which it is wholly possible that the milk is at fault, are sufficiently common to make this matter one of very great importance. That such milk infection, even if mild, is a serious matter when a grave disease is already present, needs no demonstration. Its importance to the surgeon, particularly when he is dealing with cases that require abdominal operations or have recently been subjected to them, is not less than that to the physician.

It is also evident that patients are not properly treated, unless this source of danger is put aside. The main question is how to avoid the danger. Some authors go so far as to recommend that milk be not used in the diet of patients with typhoid fever and other acute diseases, because it is so likely to be unclean. This is, I think, the weakest and the worst way out of the difficulty. Notwithstanding the common recent teaching concerning the use of a free diet in typhoid fever, I constantly become more firmly convinced that a diet composed almost exclusively of good milk is, and will remain, the best diet for most cases of acute infectious disease, particularly typhoid fever. I am unwilling to join in any agitation against the use of all milk, because it may be bad; and, certainly, merely to say resignedly that milk is an unclean food is to submit weakly to the common carelessness and the occasional knavishness of many in the milk traffic.

(To be concluded.)

Proposed Bill to License Undertakers.—A bill is now before the Pennsylvania State Legislature for the amendment of the act of 1895 for the licensing of undertakers in cities. The bill, which provides greater restrictions in the handling of the dead to diminish the danger from infectious and contagious diseases, is supported by the State Board of Undertakers and the Funeral Directors' Association of Philadelphia. It requires that all applicants for an undertaker's license shall have had practical experience in the business of undertaking for three years continuously with an undertaker or undertakers.

Proposed Legislation Against Spitting.—A bill has been introduced in the Pennsylvania Legislature which provides that all persons wilfully expectorating upon the footway or sidewalk of a street, alley, park, public square or place of any municipality in the State, or upon the floor of any railroad car, except smoking car, street railway car, omnibus, or other vehicle for public conveyance of passengers, or upon the floor of a theatre, railroad station, or other public meeting place, shall be liable, upon conviction, to pay the costs of prosecution, with a fine of from \$1 to \$5. Boards of health shall conspicuously post notices calling attention to the act. Corporations and individuals concerned in the various places specified shall post similar notices.

ON VARIOUS PLASTIC OPERATIONS.*

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The abdominal viscera have become the great centre of surgical interest at the present day. No wonder that other fields are somewhat neglected, although they are of high importance. Among the foster children of a great scientific province may be counted the kind of plastic operations which are illustrated by the cases I will present.

The first case is that of a baker, 38 years of age, who ten weeks ago smashed his right thumb in



FIG. 1.—Gangrene of thumb, one week after injury.

a dough-kneading machine. In a hospital of this city the laudable effort was made to fasten the lacerated fragment by suture. But, as shown in Fig. 1, taken a week after the accident, total gangrene of the larger part of the thumb took place. Fig. 2, made at the same time, shows the presence of a fracture of the first phalanx of the thumb in sideward displacement. It will be noticed that the extent of the gangrene is proportional to that of the area below the fracture line.

Under these circumstances the only procedure in question was amputation. Following the general practice, I would have removed not only the gangrenous portion of the thumb, but also the small fragment which articulates with the metacarpal bone, in order to save a sufficient amount of skin to protect the stump. But this would have completely destroyed the function of the

* Cases presented to the German Medical Society of New York, November 7, 1904.



FIG. 2.—Skiagraph of gangrenous thumb, showing lateral displacement in fracture of first phalanx.

thumb, and the patient might have been compelled to give up his occupation. I determined, therefore, to save the fragment and to borrow the protecting flap from somewhere else.

Encouraged by previous efforts of the same nature, I first thought of utilizing the skin of the anterior thoracic wall, but in view of the success of von Eiselsberg, as well as of von Mikulicz, I preferred to try the transplantation of a toe phalanx. I explained to the patient that he



FIG. 3.—Thumb covered by the flap, and thoracic incision line.

might gain a new phalanx, and what was more, a nail, while he would run the risk that the whole procedure might turn out a failure.

Two months ago, at the Postgraduate Hospital, I made the experiment. It was not very difficult to attach the thumb fragment to the second phalanx of the toe of the same side and to immobilize arm and leg by a well padded plaster of Paris dressing. For still greater security, I fastened the ball of the thumb to the dorsum pedis and connected the region of the elbow with that of the knee, by stout silk. In spite of these precautions too much tension was exerted on

the stump; the patient was rather nervous, and nutrition was inhibited. Failure convinced me that a secure apposition cannot be guaranteed by suturing the soft tissues only, but only by



FIG. 4.—Hand shifted under the thoracic skin-flap after removal of stitches (ninth day).

connecting the adjoining bones with a silver wire suture.

I then returned to my first proposition, lifting a fold of skin together with a few fibres of the pectoralis major muscle. To get muscular tissue easily, the anterior axillary line just below the mamilla is to be preferred as best for that

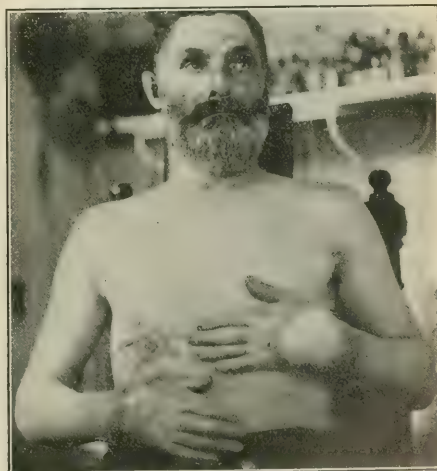


FIG. 5.—Flap healed, six weeks after separation.



FIG. 6.—Defect in frontal bone, showing diameter of skull in semilateral exposure.

purpose (see Fig. 3). The direction of the semilunar incision should be transverse, and as some shrinking of the flap is to be anticipated, it should be liberally outlined. The width of the pedicle of the flap amounted to less than an inch. About three fourths of the circumference of the thumb



FIG. 8.—Osteoperiosteal flap filling the frontal and lateral flaps covering the skull gap.

could be protected by the flap. A relaxation suture was carried between the ball of the thumb and the sternal region, and the whole arm immobilized by a thoracic plaster of Paris dressing. A fenestra was left in the region of the wound in order to control its course.



FIG. 7.—Defect of forehead healed by granulation.



FIG. 9.—Final result of osteoplastic operation.

After nine days I removed the thoracic flap, united the tissues, and sutured the cut surface of the flap to the gap in the stump.

As can be seen, the stump is now amply covered. There is enough projecting material left

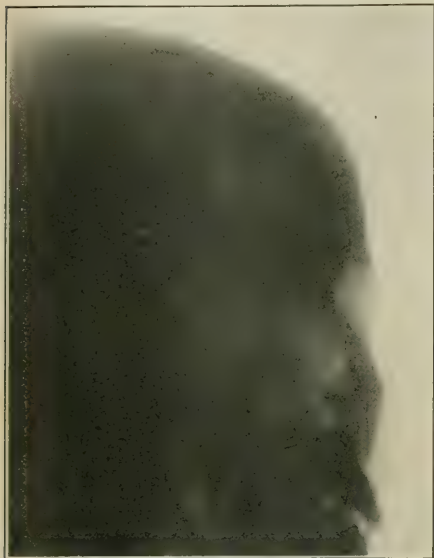


FIG. 10.—Defect in forehead filled up with osseous tissue, nine months after transplantation.



FIG. 11.—Four fingers grown together in a shapeless mass.

to permit grasping with this stump (Fig. 3). The defect left at the toe could be partially covered with skin taken from the dorsum of the foot, and has not disturbed the patient.



FIG. 12.—Skiagraph of Fig. 11.

Regarding the fact that the thumb possesses a value equal to the remaining four fingers, it seems to me to be of the greatest importance that the possibility of saving even so small a portion should be thoroughly considered before operation.

The second case is analogous to the first. A laborer, 40 years of age, had sustained severe burns, all of the third degree, in a fire. The wounds of his forehead healed without difficulty, but the dorsum of the left hand became extensively necrotic, and a large defect remained, for which Dr. I. M. Rottenberg, who treated the patient at the time, recommended transplantation of skin.

Four months ago I followed this proposition by forming a large flap in the anterior thoracic wall, so as first to make two longitudinal incisions, and after undermining the outlined area,



FIG. 13.—Denuded fingers shifted under the thoracic flap.

to give protection to the necrotic area of the hand. The hand, as indicated in Fig. 4, was shifted below the undermined flap and fastened to the margins of the denuded area of the hand. A large piece of xeroform gauze was placed be-

who gave a history of infection. Originally she came to my clinic at the Postgraduate Hospital to be treated for enormous necrosis of her frontal bone. I removed the os frontis in its totality, as can be seen by the bone fragments I present here, and tried to heal up the large defect by the open antiseptic wound treatment, keeping the absorbent gauze saturated with a strong solution of bichloride of mercury. At the same time constitutional treatment was administered.

Although the bone was removed in its entirety, as can be seen from the skiagraph (Fig. 6), which by slight lateral exposure shows the diameter of the bone at this area, no brain symptoms were ever observed during treatment. The extent of the lesion is shown in Fig. 7. Nine months ago I covered the lacuna by taking an osteoperiosteal flap from the top of the skull and implanting it into the defective surface by turning it forward. The large defect produced on the top of the skull was covered by extending the incisions sideways and downwards, thus forming two lateral flaps, which were drawn together in the middle of the

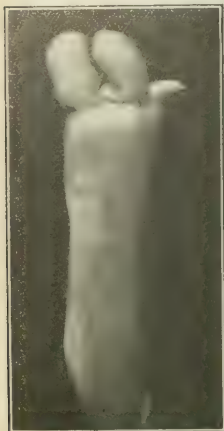


FIG. 14.—Index and small fingers covered by thoracic skin at the dorsum of the hand, four weeks after division.



FIG. 15.—Appearance of palm four weeks after separation of thoracic flap

low the palma manus in order to protect the exposed thoracic wound portion. The region of the wrist, as well as that of the elbow, was secured by strong relaxation sutures. Arm and thorax were surrounded with a plaster of Paris dressing, leaving a fenestra open for the treatment of the wounds. After a week I severed the upper integumental bridge and after another five days the lower. Fig. 5 shows the flap six weeks after the separation of the lower flap portion. The cosmetic, as well as the functional result may be called good.

The dorsum of the right hand shows considerable cicatrization, so that I am still undecided



FIG. 17.—Result three weeks after additional transplantation from thigh.



FIG. 16.—Fenestrated plaster of Paris dressing for transplantation from the anterior aspect of thigh.

whether epidermization will not be indicated. The larger thoracic wound is perfectly healed and causes no disturbance. Without transplantation the hand would, I dare say, have become contracted, which would have caused complete functional disability.

The third case is that of a woman, 38 years old,

denuded area. In front of the flaps, as well as behind, a small gap remained which could not be protected by scalp tissue; it filled up by the granulation process (Fig. 8). The small cicatricial area remaining is now fully covered by the hair. The frontal flap is also covered by hair, which does not worry the patient, since this arrangement corresponds with the latest fashion (Fig. 9).

Fig. 10 shows the gap nearly filled up with osseous tissue. On percussion it has been noted that the frontal defect is amply protected by new bone.

Case IV is that of a laborer, 53 years old, whose hand was caught in a printing press two years ago. It seems that his fingers were stripped of their skin, and no effort at epidermization and keeping the fingers separate being made, the four



FIG. 18.—Contraction caused by burn of the third degree.

fingers grew together in one confluent mass (Fig. 11). The skiagraph (Fig. 12), taken in July, 1904, that is two years after the accident, shows the phalanges tightly forced together. The outlines of the phalanges do not show distinctly, which is due partially to inflammatory atrophy of the bones, and also to compression and overlapping. Further up towards the wrist the bones appear to be normal.



FIG. 19.—Axillary flap transplanted from back.

This formidable stump was not only useless, but also an encumbrance to the patient. After ascertaining by the Röntgen method that the phalanges were still in existence, a fact which was by no means made evident by simple palpatory examination, I determined to separate the phalanges, even at this late period, and to try to cover them by transplanted skin. I began this task three months ago at St. Mark's Hospital; first removing the cicatricial tissue from the fingers, and then separating the little finger and the index finger. Then two longitudinal incisions were made after the methods observed in case No. 2, part of each finger being as much surrounded by the skin cover as possible (Fig.



FIG. 20.—Contraction of elbow, caused by burn, cured by transplantation of thoracic flap (at the eighth rib).

13). After nine days the upper, and after another five days, the lower portion of the flap were divided and trimmed around the small and the index fingers. Figs. 14 and 15 show the result four weeks later. Then the middle and fourth fingers were similarly treated. This time the flap was taken from the upper thoracic region, and in view of the necessity of furnishing new skin for the palmar surface, a tongue shaped flap was outlined instead of drawing on the thoracic integument. The base of the flap was at the left sternal margin and its top at the anterior axillary line. After reverting the flap the palmar surface of the two denuded fingers was sewed to the wound surface of the reverted flap, and the remaining thoracic gap almost entirely united by suture. Relaxation sutures were also used to secure good apposition. The arm and thorax were surrounded by a fenestrated plaster of Paris dressing. After nine days the pedicle of the flap was divided, and its wound margin sutured to

the palmar region below the upper ends of the middle and fore fingers. After another week the two fingers were separated, and as an abundance of skin was still left I was able to surround a portion of each finger with skin, thus furnishing a barrier to the tendency to an undesirable union.

The patient is now able to move his fingers well, and while their appearance does not satisfy aesthetic standards, he at least has fingers, and is able to use them. I would suggest that in cases of such injuries transplantation should be tried shortly after the injury is sustained; if possible as soon as the first reaction is over.

OSTEOARTHRITIS OF THE SPINE; REPORT OF A CASE.

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This case is reported as it demonstrates the rather common mistake made, in considering the leg pains of spinal osteoarthritis to be sciatica. That diagnostic error would scarcely be made if patients were subjected to complete physical examinations before an opinion was given. It also shows the great amelioration of the symptoms following spinal fixation.

Charles F., aged 38 years, married, a baker by occupation and a native of Germany, was admitted March 5, 1904, to the surgical side of the Hartford Hospital under the service of Dr. Bunce, the writer being house surgeon at the time. Family history, negative. Past history: Many years ago he received a bullet wound of the abdomen from which he made a good recovery; four or five years ago he had "muscular rheumatism" in his left thigh, which lasted only a few days. Otherwise he has always been well until his present illness. He drinks several glasses of beer a day, and occasionally to excess. He has had gonorrhoea, but not syphilis.

Present illness: In May, 1903, ten months before admission, he first noticed a "heavy feeling" in the small of his back. About six weeks later he began to have cramps in the back of the right thigh and leg. Soon similar pains were experienced in the left leg. His business necessitated working nights and the pains were always more severe when he first arose in the afternoon. At first they would wear off as he "got limbered up," but in about three months they became nearly constant, shooting down the right leg at one time and down the left one at another.

Since November 1st, the pain has been wholly in the right side; about this time he first noticed a "swelling" of the right hip. He has not been able to work for seven months as the pain is now so severe that he cannot walk a block without stopping to sit down once or twice on the curb. Many physicians were consulted and with one exception the diagnosis was sciatica. The last one told him he had a "tumor of his hip," and he comes to the hospital for x ray treatment.

Physical Examination.—The patient, a well nourished man, walked into the hospital limping with the right leg. As he stands the body is inclined forward and towards the left, the weight being borne by the left leg. The right one is held slightly in advance of its fellow with the foot abducted. The plantar arches are normal. The right hip is so held that there appears to be considerable fullness extending from the crest of the ileum to the right trochanter major. The gluteal folds are equal. There is a double scoliosis, the smaller one with its concavity to the right being in the upper dorsal region, and the large one in the lower dorsal and lumbar regions. Flexion of the vertebral column is much limited (see figure), especially in the lower half



Normal spine.

Osteoarthritis of the spine.

"Poker Back."

of the dorsal and lumbar regions. Flexion to the left is normal, but much limited to the right. Extension is also somewhat limited. When in dorsal decubitus the position of ease is with the right leg flexed on the thigh, and the thigh on the pelvis, the whole extremity being rotated outward. There is no shortening of the legs and no atrophy. There is no limitation of movement at the hip joint, nor is there any tenderness over the sciatic nerve. The prominence observed over the right hip when erect is not present in ventral decubitus. The knee jerks are equal and exaggerated. There is no ankle clonus. The heart, lungs, and abdomen are negative.

A plaster jacket was applied and he was discharged with instructions to return for a new cast in a month.

April 19, 1904. The patient returned for a new cast. Since leaving the hospital there has been constant improvement, the pain having largely disappeared, being present now for a short time in the back and legs when he first gets up. Recently a five mile walk was followed by no unpleasant effects. He now walks without limping. He was given a new cast and discharged.

July 13th. He returned for a plaster jacket, having broken the one applied in April. Since his last admission he has worked steadily on the street railroad and been free from pain while the cast was intact. He stands squarely on both feet and does not limp. There is no scoliosis. He was discharged after being fitted with a plaster jacket.

October 17th. The patient was readmitted.

He has worn his jacket constantly until three and a half weeks previously, and has been free from pain. For three days after he removed the jacket he felt as usual, but unfortunately at that time he lifted a heavy weight, and since has had pain in his back and left leg that has been increasing in severity ever since. The cramps in the left thigh are preceded by a burning sensation in the outer aspect of the left leg.

The mobility of the spinal column does not seem to be materially increased since the first examination made seven months before. The accompanying photograph was taken during his last admittance. It shows the extreme limit of flexion and should be compared with the normal spine in the same picture.

A new cast was fitted and in a few hours he remarked that he "felt as well as ever."

Through the courtesy of Dr. Philip Bunce the writer was permitted to report this case.

417 ALBANY AVENUE.

GONOCOCCUS INFECTIONS IN CHILDREN, WITH ESPECIAL REFERENCE TO THEIR PREVALENCE IN INSTITUTIONS AND MEANS OF PREVENTION.

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(Concluded from page 527.)

MEANS BY WHICH THIS FORM OF INFECTION IS SPREAD.

These will of course differ somewhat with the age of the children. Our patients have been mostly infants and children under three years, nearly or quite all wearing napkins. At this age direct contact, sexual or through the hands, plays no part.

The first and most obvious means of infection is through the medium of napkins. I have no doubt that gonococcus vaginitis is more frequently spread among young children in this way than in any other, especially in such institutions as day nurseries and homes for foundlings. Thorough disinfection of napkins is seldom followed in such places. For several seasons almost our entire efforts to arrest the spread of the disease were directed toward the handling of napkins. These were soaked in disinfectants, boiled in suds, and put through a steam sterilizer. At one time we even went so far as to abolish ordinary napkins and to use only gauze and cotton pads, which were burned as soon as soiled. Yet in spite of all these measures the infection spread unchecked. Thermometers were suspected and a separate one for each child employed, kept in 50 per cent. alco-

hol when not in use. Bottles and nipples were kept separate with the greatest care. Sponges were early abolished; wash cloths likewise were dispensed with, and only pieces of gauze or absorbent cotton used for bathing, which were immediately destroyed. Bathing in tubs was interdicted, yet, notwithstanding, case after case developed so long as children remained in the ward with those who were infected. These children came into no direct contact with one another, and even autoinfections, such as ophthalmia from vaginitis, were exceedingly rare. There could be but one explanation, viz., that infection was carried by the nurses in the process of bathing and feeding, but particularly in the changing of napkins. When it is realized that this is a thing which must be done from twelve to fifteen times every day the possibilities will readily be appreciated. Not only was it found impossible to keep infected children in the wards with others, but they could not be cared for by the same nurses. Quarantine of both children and attendants was therefore demonstrated to be the only means by which spreading could be checked.

What seems to be conclusive proof that the disease can be carried by nurses has twice been seen in the hospital. On the fourth floor was a ward containing cases of gonococcus vaginitis; on the seventh floor a child in quarantine for suspected diphtheria. Owing to a shortage of night nurses it became necessary for the same nurse to change napkins in the ward containing the cases of gonococcus vaginitis and of the child in quarantine three floors above. This child developed gonococcus vaginitis and no other communication than through the night nurse could be traced. There was no gonococcus vaginitis on the fifth and sixth floors, the day nurses were separate, different thermometers were used, and the napkins did not go to the same laundry. It seemed therefore conclusive that the nurse had conveyed the disease. The same thing occurred again a few months later under circumstances precisely similar. The night nurse now wears rubber gloves if she has to change napkins of gonococcus cases and others at the same time.

One of the most interesting as well as the most difficult questions to solve has been the portal of entry of the organism in the cases of gonococcus arthritis. It will be recalled that of these 26 patients 19 were males, and that only one of these had ophthalmia. In none was a urethral discharge observed. Many cultures were made from urethra, eyes, nose, mouth of these children—all with negative results. The time after admission when the symptoms of gonococcus arthritis were

first noticed is worth recording. In 5 cases they appeared during the first week after admission and in 11 cases during the second week; the others varied from the fourth to the eleventh week.

I do not think we can state definitely just how these children were infected, but I have a strong conviction that it was through the mouth. Most of these patients were very young infants, many suffered from marasmus and also from thrush. In one fatal case an abscess in the tracheal wall was found, the pus from which contained the gonococcus. The method of cleansing the mouth formerly employed in the hospital was that now in vogue in many institutions, and consists in the use of the nurse's little finger upon which is wound absorbent cotton. From the facts cited above I strongly suspect that this was the mode of infection, though we were never able to recover the gonococcus from the mouth by culture. This use of the nurse's finger has now been abolished and a small swab made with a wooden toothpick and absorbent cotton substituted, a method in every way to be preferred.

The possibility that either nurses or servants might be the origin of the house infection in children, was constantly in our minds. Yet, although the closest watchfulness was constantly maintained no evidence whatever could be found to support this opinion. Routine microscopical examination of vaginal discharges in nurses were not made; but this was done in several cases where some suspicions attached to wet nurses or servants, but always with negative results. I do not think that this could have been the source of infection in our institution. In every ward epidemic of gonococcus vaginitis we were able to trace the infection to one or more children admitted with the disease.

It is also worthy of record that during the entire eleven years we could find no evidence that any nurse or servant contracted gonococcus vaginitis from the children; the only case of infection among nurses being one of ophthalmia already mentioned.

PROPHYLACTIC MEASURES.

In a disease so difficult to cure and so highly contagious the utmost importance must be attached to measures of prevention. In the light of our experience two things are essential in institution practice: First, cases of gonococcus vaginitis must so far as possible be excluded. In the second place, if admitted by accident or otherwise they must be quarantined. In excluding cases only one thing can be depended upon, viz., microscopical examination of a smear from the vaginal secretion before the child is received.

This rule has been followed in the Babies' Hospital now for nearly a year with the effect of practically ending our difficulties. Certain cases can no doubt be recognized without a microscopical examination, but there are many others in which this is not possible. Mothers or others desiring admission of children frequently bathe them carefully before applying, especially if they have been refused admission elsewhere because of the discharge, and at the time of the application none may be noticed. Again, the milder forms cannot be detected by a gross examination. We must regard as dangerous not only cases with much pus and the gonococcus present, but also those with little pus and the gonococcus, and as very suspicious and requiring the closest kind of observation, cases with a moderate number of pus cells, even though no specific organisms are found. Of course at a general hospital children often apply with conditions, such as pneumonia and appendicitis, where they must be received, even though suffering from vaginitis. In special hospitals for diphtheria or scarlet fever also they must be received. For such children isolation wards should be provided. They should never be placed in the general ward with other children, the danger to boys being of course very much less than to girls.

Cases to be excluded from general wards should be not only those of vaginitis, but of ophthalmia and acute gonococcus arthritis as well; the latter may at first thought possibly seem quite unnecessary. No infection is possible from the joints themselves unless they have been opened. But such cases no doubt acquire the disease through some mucous surface, and if so acquired it may spread from the same one. In fact, we have one instance in which a boy with gonococcus arthritis of the elbow and with no lesion of the mucous membrane discoverable was apparently the source of infection for others in the ward. At present, therefore, and until the exact mode of entry of the gonococcus in these cases is positively known, I believe it is safer to isolate them.

Even with the rigid entrance conditions imposed, we have found that occasionally a case escapes detection. In order that such may be discovered and any spreading of the infection prevented, we have adopted the rule of examining microscopically once a week a smear from the vaginal discharge of every girl in the house. In a hospital where the admissions amount to from 50 to 100 children each month such frequent examinations seem to be necessary; they are certainly an added safeguard. In institutions which serve as homes for young children, where the ad-

missions are fewer, less frequent general examinations may suffice, but they are very desirable. In institutions where microscopical examinations are not possible, the use of the labial fold of gauze mentioned previously will be found valuable to detect slight discharges in infants; if these are purulent the case should be regarded as specific unless shown by microscopical examination to be otherwise.

If children are isolated, the quarantine must extend to their nurses and attendants. Not only should the day nurses, but the night nurses, be separate. The latter are I believe a not infrequent cause of spreading infection of all kinds in hospitals. On no account should napkins, underclothing, or sheets from infected children go into the general laundry of the institution.

The duration of quarantine it is difficult to fix accurately. It is not enough to continue it until all inflammation has subsided and a single negative examination for the specific organisms has been made; such children must be closely watched for two or three weeks longer and even then we may err.

In addition to the methods already considered, prophylaxis should include the most scrupulous care with reference to the napkins and clothing, especially the underclothing, of infected children. Napkins should be worn by all children with gonococcus vaginitis, no matter of what age, in order to prevent infection of the hands and thus a transference of the organism to the eyes or other parts. After their removal, napkins should be thrown into a strong disinfectant solution—we are now using formacol from 2 to 5 per cent.—and should invariably be washed separately from those of the rest of the institution. At present it is our custom to boil the napkins in hot suds, after which they are put through a steam sterilizer. The underclothing and sheets from the beds of infected children should be treated in the same way. In the case of young children special care is to be taken with reference to the toilet. Sponges are an abomination and should never be used in bathing in institutions. Wash cloths also may be a means of conveying infection and should not be employed about the buttocks or genitals, but only muslin, gauze or absorbent cotton, which can be destroyed after once using.

Infection, no doubt, in many cases is spread by the bath water where more than one child uses the same bath, as is not uncommon in many institutions. Even the bath tub may harbor the infection and convey the disease, although the water has been changed. During an epidemic

tub baths should be forbidden. A separate towel for each child is absolutely essential, and since towels easily become mixed these should be frequently sterilized like the napkins.

The most scrupulous precautions should be taken with reference to the nurse's hands; not only on account of the danger to herself but also lest she may by the hands spread the disease in cleansing the mouth or in handling the nipples of the feeding bottles. Nurses' hands should be carefully washed in a disinfectant solution after bathing or changing the napkins of each child.

Thermometers, catheters, syringes, or tongue depressors used for infected children may be a medium of contagion unless boiled or otherwise sterilized after use. It is hardly necessary to add that the system of feeding should be such that there is no possibility of the same nipple being used by different children.

After an outbreak in a ward, general fumigation and disinfection should be employed with as much thoroughness as after an outbreak of diphtheria or scarlet fever. Not only woodwork, beds, and bedding should be washed, but bath tubs, basins, and everything else which comes in contact with the child. The above measures if thoroughly carried out will do much to minimize the danger of ward infection. But we frequently saw all these things thoroughly done and yet the disease spread from one child to another until isolation was practised.

The scope of this paper does not permit me to enter fully into methods of treatment; none has been found by us to be altogether satisfactory.

GENERAL CONCLUSION.

1. We must recognize gonococcus vaginitis as a very frequent disease and one to be constantly reckoned with in institutions for children. It is also very frequent in dispensary and tenement practice and not uncommon in private practice of the better sort.

2. In its milder forms and in sporadic cases it is extremely annoying because so intractable; in its severe form it may be dangerous to life through setting up an acute gonococcus pyæmia or infection of the serous membranes, and in its epidemic form it is a veritable scourge in an institution.

3. The highly contagious character of gonococcus vaginitis makes it imperative that children suffering from it should not remain in the same wards or dormitories with other children. A similar danger though less in degree exists with the gonococcus ophthalmia and acute gonococcus arthritis or pyæmia.

4. It is practically impossible to prevent the

spreading of the disease if infected children remain in the wards with others. They must either be excluded from the hospital or if admitted immediately quarantined.

5. Cases of gonococcus vaginitis can only be excluded from hospital wards by the systematic microscopic examination of smears from the vaginal secretion of every child admitted. If a purulent vaginal discharge is present, such examinations are imperative and should be made as much a matter of hospital routine as the taking of throat cultures in children with tonsillar exudates. In the absence of microscopical examinations a purulent discharge in a young child may be assumed to be due to the gonococcus.

6. The quarantine to be effective must extend to nurses and attendants as well as to children. Furthermore, the napkins, bedding, and other clothing of infected children must be washed separately from that of the rest of the house.

7. Where the gonococcus is found with no vaginal discharge or with a very slight discharge, children should also be quarantined, although it is impossible at present to say to what degree such cases may be dangerous in a ward. One of the greatest difficulties in connection with the gonococcus vaginitis arises from the prolonged quarantine rendered necessary from the fact that these cases are of very chronic character and very resistant to treatment.

8. The danger to nurses from accidental infection, especially in the eyes, is considerable. At the present time they are not sufficiently instructed in this respect.

14 WEST FIFTY-FIFTH STREET.

DISCUSSION.

DR. F. C. WOOD said that some of the methods of the clinical pathologist might be of interest. The practitioner must always depend upon the morphological identification of the organism in smears. He had been accustomed to take advantage of the sharp morphology of the organisms when stained by means of the Jenner blood stain. Smears should be thinly spread and as soon as dry could be stained in the alcoholic mixture for three minutes. The Jenner stain gave a good differentiation because the cell body stained reddish, while the gonococcus took a deep blue stain. There were other cocci which could assume the biscuit shape and were also found in the bodies of the leucocytes. It was advisable to keep some stained smears containing undoubted gonococci to control the microscopical findings. If after some search organisms were found which were in the pus cells but which did not correspond to the morphology of the gonococcus it was convenient to do a Gram stain on top of the Jenner. The slide should be ringed with some waterproof ink or the position of the doubtful cells marked on the coordinates of a mechanical stage, and bet-

ter after a fixation of the slide by heat; a Gram stain could then be carried out as usual. Special care should be taken in obtaining the material so that the difficulties of diagnosis were not increased by the presence of a large number of saprophytic bacteria which were frequently present in the vulvar region. It was better to pass a small platinum loop into the vagina and urethra if possible, as the material would thus be uncontaminated. For preliminary disinfection of linen he recommended formaldehyde or carbolic acid, after which the clothing should be boiled or thoroughly steamed. The gonococcus is easily destroyed, though a non-penetrating disinfectant such as bichloride might leave living organisms inside a mass of mucus or pus.

DR. J. CLIFTON EDGAR said that from the obstetrician's standpoint gonococcus infection in infants concerned the eyes, mouth, stump of the umbilical cord, and the vulvovaginal canal. These are all infections of the mucous membranes excepting the umbilicus, which is an infection directly into the lymphatics or veins of the stump of the umbilical cord. In the experience of the obstetrician gonococcus infection of the eyes is the form of this infection most frequently met with. The delicate mucous membranes of the eye offer little resistance to this infection, and then injury during vaginal examinations or during labor may give rise to abrasions of the mucous membranes which render the occurrence of infection more liable to supervene. He said that we knew very little in regard to gonococcus infections of the mouth, umbilical stump, and vagina in the newly born and that nothing of value had ever been published on these infections. This was probably because the subject was divided between obstetricians, pædiatrists, and ophthalmists, each specialist caring only for a particular aspect of the subject. Recent writers made scarcely any distinction between gonorrhœa neonatorum and the same disease in young infants in general. It had been asserted that vulvovaginal gonococcus infection of the newly born had been recorded only a few times. Dr. Edgar believed that gonococcus infection intrapartum or directly postpartum of the mouth, umbilical stump, and vulva and vagina were very rare conditions. The obstetrician was chiefly interested in the prophylactic treatment of gonococcus infection of the newly born. The vaginal secretions have no bactericidal action on the gonococcus. Where this infection exists the fetus might be infected in utero and be born with a well developed conjunctivitis. If the vagina was usually sterile it needed no preparation for labor, if conditions were otherwise it did. He believed that in hospital practice such preparation was necessary in order to prevent ophthalmia neonatorum. In private practice he was not accustomed to use antepartum vaginal irrigations in deference to the popular belief that there was less gonococcus infection in private practice, yet occasionally he had seen gonorrhœal ophthalmia in spite of Credé's nitrate of silver method of prevention. Antepartum vaginal preparation, and Credé's nitrate of silver method after birth would greatly reduce the percentage of gonorrhœal ophthalmia, but they could

not abolish it. The obstetrician knew of no method that would positively prevent the occurrence of gonococcus infection of the fetus in a woman the subject of such infection. This danger would constantly threaten the child so long as men with gonorrheal infection are permitted to marry and women with this infection to conceive.

DR. R. B. KIMBALL said that he wished to emphasize the point that the only way to rid an institution of this infection was to prevent the entrance of more cases. They should be kept out of the wards. He related the history of an infection which broke out at Seabright in which the cases were carefully isolated and every possible precaution taken to prevent the spread of the disease, yet in spite of all their care the infection spread. He attributed it to the fault of the night nurses.

DR. HENRY KOPLIK said that when he took charge of the Mount Sinai Hospital service for children there was not a female child in the service who was not the subject of this infection. When a child was once infected he thought that child was more or less crippled for life. In his efforts to eliminate the disease he had finally devised a system of prophylaxis and isolation which was very satisfactory. Diapers were destroyed after being soiled. This was expensive, and in visiting other institutions to ascertain what cheaper method could be used he discovered a state of affairs confirmatory of what Dr. Holt had stated. There seemed to be no institution devoted to the care of children in which gonococcus infection was not endemic and epidemic. Dr. Koplik advised that children be bathed in their cribs as one means of preventing the spread of this disease. During the past two and one-half years Dr. Koplik had not had an epidemic of this infection, which he attributed to his prophylactic measures. Every case of gonococcus infection was immediately isolated, given a separate nurse, separate bed, and separate utensils. The beds were marked with red ribbons. Every child had its own thermometer, bed pan, liquid soap, etc. He did not believe that diapers, etc., could be disinfected, chiefly because nurses and help could not be depended upon to carry out instructions.

DR. T. S. SOUTHWORTH thought that it was more difficult to stamp out gonococcus vaginitis than diphtheria, scarlet fever, etc., because the former was clinically and apparently cured and might still be a menace, since the disease might be latent and break out at any time. He confirmed what Dr. Holt and the others had said in regard to the prevalence of this infection in the institutions of the city. Isolation he thought the only way to cope with the trouble, as ordinary nurses were not competent to prevent the extension of the disease from one patient to another. The efficiency of treatment depended upon the thoroughness with which it was carried out. Irrigations of bichloride solution, nitrate of silver, etc., were efficient if properly given. He advised the introduction of a gauze wick soaked in a five to ten per cent. solution of ichthyol, or a four to ten per cent. solution of silver. This prevented the walls of the vagina from coming into appo-

sition, facilitated drainage, kept up continuous medication, and emphasized the surgical nature of the case and the necessity of keeping on a diaper.

DR. ARNOLD KNAPP spoke of the diagnosis of gonococcus infection of the conjunctiva in the newly born, which he said could not always be made early from the clinical picture. There were very severe forms of conjunctivitis due to pneumococcus or streptococcus and quite mild forms due to the gonococcus. A microscopical examination should be resorted to in making a diagnosis. The prophylactic treatment was of the greatest importance. He thought Credé's method was very severe. He advocated disinfection of the parturient canal, careful cleansing of the eyelids after birth as the most important prophylactic measures. In gonococcus infection of the eyes he recommended ice compresses, frequent irrigation of the conjunctival sac and later silver nitrate.

DR. J. E. WEEKS said that the infection of the conjunctiva in children was the most frequent condition met with by the ophthalmologist, although it was not so frequent between the ages of three and ten years as under three. He believed that there was not an institution in New York city that was devoted to the care of infants and young children, but had had an epidemic of gonococcus infection at some time or other.

DR. W. R. TOWNSEND said that from the orthopaedist's standpoint there were three classes of cases, peri-arthritis, simple effusions into the joints, and cases of mixed infection with the gonococcus present. Plaster casts or braces he believed to be always indicated to get complete immobilization of the involved joints. Extensive operations upon the bone, even when involved, were not advised. The prognosis in arthritis occurring in children was better than in adults, because sepsis was better tolerated and recuperative powers were better.

DR. A. JACONI advised that records of gonorrheal infections should be obtained for two or three years at least from the different hospitals and dispensaries, which would give ample material to present to the board of health, and then, but not till then, could the Academy of Medicine expect it to take official notice of it. He did not think any motion should be made at present having for its purpose the presenting of the matter to the board of health.

DR. PRINCE A. MORROW believed that it would be useless to present the matter to the health board, because the board knew of the existence of the evil and regarded it as a *noli me tangere*.

Meeting of the Boston Medical Library.—A meeting was held on March 22nd at the library, and the following papers were presented: A Study of the Objective Methods of Diagnosis of the Stomach in a Medico-surgical Clinic, with Reports of Cases, by Dr. H. F. Hewes; The Recent Surgical Conceptions of Non-Malignant Disease, by Dr. J. G. Mumford. Discussion by Dr. F. Pfaff, Dr. J. C. Munro, Dr. F. B. Lund, Dr. E. P. Joslin, and Dr. C. L. Scudder.

A BRIEF RESUME ON THE ACTION OF SOME OF THE IMPORTANT SOMNI- FACIENTS, WITH CLINICAL NOTES ON A NEW HYP- NOTIC.

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DES MOINES, IA.,

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While I do not pretend to champion anything but the clearly defined and legitimate use of hypnotics, I do contend that at times they become as essential in the treatment of the overworked and partially exhausted nerve cells as the rest treatment itself in neurasthenic states, or the splint in certain traumatic injuries. In my own practice I have yet for the first time to regret the careful use of the sleep producers in any case, acute or chronic, when insomnia was a marked feature.

Chloral still holds its place as one of the purest and most effective hypnotics. Its depressing action upon the centres in the cord and medulla, however, is so marked as to preclude its use in some cases of pulmonary and cardiac affections. My clinical experience leads me to believe that it indirectly affects the heart and circulation by diminishing the blood pressure, but numerous experiments prove that it is a direct heart poison. Sudden death has followed its use from paralysis of the heart muscle. Death has also resulted from sudden paralysis of the respiratory centres.

Sulphonal and trional are less dangerous, and in most instances just as effective. The former is slow in action, and in my hands has never proved as satisfactory as the latter. Acute poisoning is less apt to occur from either of these drugs than from chloral. Therefore, as a rule, I have preferred to use them in all cases in which the circulation or respiration was strained or weakened.

Recently a new hypnotic has been brought to my notice, and my experience with it thus far seems to justify the conclusion that it is the peer of chloral in activity, without any of the latter's depressing phenomena upon the respiratory or circulatory functions. It is chemically trichloroisopropylalcohol



and is known as isopral. It occurs as a colorless, shining, crystalline powder, slightly soluble in water, and has a burning taste and a characteristic, pungent odor.

My experience with the drug has extended over a period of one year, and includes only cases in private practice. I herewith append brief notes on some of the cases in which it has been used, all of which I have carefully observed. Cases which I have not been able to follow closely are not included.

CASE I.—Mrs. D. P., housewife, suffering from hysterical excitement and sleeplessness due to the death of her brother; had a neurasthenic history with much agitation. Isopral, one gramme, produced sleep in one hour; excitement was allayed within one half hour. She slept six hours without awaking.

CASE II.—Belle R., domestic, had simple neurasthenia and had not slept for two nights. Isopral 0.65 grammes was ordered at bedtime. Not wishing to take medicine to procure sleep, the patient avoided taking the capsule until a late hour. The action was prompt, and the sleep lasted seven hours, although somewhat disturbed by dreams. About two weeks later the same amount was taken upon an empty stomach, and produced a slight burning sensation in the epigastrium. The sleep which followed was somewhat disturbed. On the following day a dose of one gramme at bedtime procured a good night's rest, the patient feeling refreshed upon awaking.

CASE III.—Walter B., solicitor, had suffered from sexual neurasthenia, and had not slept for three nights. Isopral, one gramme, at bedtime produced a sleep of five hours. On the following night one gramme was given; there were periods of waking and seminal emissions; much weakness (not due to the drug) was manifested on the next morning. On the following night 0.65 gramme gave the patient a restful sleep of about eight hours' duration, without dreams.

CASE IV.—Mrs. L., afflicted with ovarian neuralgia, neurasthenia, and hysteria. Her insomnia was completely overcome by 0.65 gramme of isopral, taken three hours after dinner. Sleep was normal and left no untoward effect.

CASE V.—Mrs. B., housewife, had acute endocarditis, and was unable to sleep during convalescence. Isopral was administered in a 0.65 gramme dose. The patient expressed herself as having had a "beautiful" sleep from its effect. No perceptible deleterious action upon the heart followed its use; slight distress was felt in the stomach, however.

CASE VI.—M. S., suffered from chronic morphinism and had undergone appendectomy. Following the withdrawal of the opiate there was no sleep for four nights. Isopral, 0.65 gramme, produced refreshing sleep. The drug in like doses was repeated upon several subsequent occasions, always with most gratifying results. It was always given upon an empty stomach, and sleep was generally produced within one hour.

CASE VII.—Miss K. B., waitress, had acute salpingitis. During convalescence she was unable

to sleep. A dose of 0.65 gramme had no effect, as it was taken immediately after eating. It was not repeated until the pains became less severe, when 0.45 gramme produced partial rest. The following night 0.65 gramme was followed by good results.

CASE VIII.—M. J. C., railway conductor, had herpes zoster, and had had no sleep for several nights. He took isopral, 0.75 gramme, at 9 p. m., but did not retire until after 10 o'clock. Not being asleep at 11 p. m., the dose was repeated; thus he took one and one half grammes. The sleep resulting therefrom was prolonged until 9 o'clock the next day. This was the largest dose I have given, yet there were no untoward effects following its use. On two occasions this patient took 1.35 grammes at one dose without producing any disagreeable symptoms and with satisfactory results as to its hypnotic action.

CASE IX.—J. E., merchant, suffered from an attack of nerve prostration following pneumonia. There was much general weakness coupled with almost complete insomnia, for which 0.65 gramme of isopral was given at 9 p. m., and repeated in one hour. He slept until 10 a. m. the following day. The sleep was apparently normal, and the patient felt refreshed, and no untoward effects were experienced.

CASE X.—Mrs. L. B., saleswoman, suffered from cystic ovaries and neurasthenia. Following an exacerbation of pelvic inflammation she was unable to sleep. There was mitral insufficiency with marked arrhythmia of the heart's action. Isopral, 0.65 gramme, was given and resulted in a delightful sleep without any apparent depression of the circulation.

CASE XI.—Mrs. John P., housewife, had tuberculosis pulmonalis, giving a history of not having slept for a week. Both lungs were involved; the evening temperature was 103.4°, and the pulse ranged between 95 and 118. Isopral, 0.65 gramme, was given upon an empty stomach at 9 p. m., and she slept until 8 a. m. the following day. A dose of one gramme was administered on the following night, for the purpose of observing its action on the respiration and pulse. The respiration, which had been noted as ranging between 23 and 27, was not affected. Neither were there any perceptible changes in the heart or circulation.

In all cases I have carefully studied the clinical effects upon the circulation and respiration. Thus far, however, in no instance have I been able to note any signs of depression in either. It does not slow the heart beat as does chloral, and I believe it to be equally effective in its action as a hypnotic. It is best given in capsules or wafers. When I first began to use the remedy the dose was not well established. Experiments up to that moment had been carried on upon the lower animals, and in some of the European insane hospitals.

I believe the best results are to be attained in doses of from 0.65 gramme to one gramme, and it should be taken upon an empty stomach. I do not know of any literature upon this product in the English language. Several reports in German, however, have been made, and these are very promising.

221-223 FLYNN BLOCK.

INDICATIONS FOR TREATMENT OF GASTRIC HÆMORRHAGE.

By F. GREGORY CONNELL, M. D.,

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In chronic hæmorrhages some form of medical treatment is indicated, the treatment being directed not so much toward the hæmorrhage as to the healing of the ulcer, the bleeding being merely a symptom of the ulceration.

If after a course of medical treatment, consisting of rest, diet, regimen, etc., the hæmorrhages and the other symptoms of the ulcer have disappeared, the case may be discharged as cured temporarily, but should be kept under surveillance for some time. On the other hand if, after a couple of months of medical treatment, either the small and repeated hæmorrhages or the signs and symptoms of the ulcer persist, then the chances are that a recovery will not be affected by the means adopted. Leube has said: "Ulcers that are not cured in four or five weeks by medical means will not be cured by longer treatment."

The question then presents itself, Shall the ulcer be allowed to remain, with the practical certainty of its becoming the exciting cause of an invalidism, more or less chronic if not including complications which may cause death or require an imperative operation at a time when the conditions will give rise to a much more grave prognosis than will such an operation at this time? Debove and Renault found in 100 cases of ulcer a perfect cure in 50, perforation in 13, foudroyant hæmatemesis in 5, tuberculosis in 20, inanition in 5, and other complications in 7. The answer, possibly involving some operative procedure aiming at the radical cure of the condition in the stomach before more hæmorrhages or other complications arise, must be worked out in each particular case.

In acute symptomatic hæmatemesis, it may be stated in a few words that prophylaxis is the only rational treatment of the vast majority of such cases; that is, in a case with a longer or shorter history of chronic ulcer, radical cure should be instituted *before* hæmorrhage or other complica-

most spontaneous lives. But when such an accident has been allowed to occur, radical procedures should be carried out as soon as possible, because, with our present knowledge of the pathology of the stomach, the findings in these cases do not encourage one in the belief that spontaneous or permanent cessation of the hæmorrhage is likely to occur.

When an ulcer exists with a thick hard base perhaps adherent to adjacent organs, with indurated edges, the blood vessels more or less isolated, with an opening involving but a part of the circumference of a large vessel, hæmorrhage from such a pathological condition as has been found to be present in many cases of acute symptomatic hæmatemesis is not as likely to cease spontaneously as it is to continue, and the sooner direct treatment is resorted to the better will be the prognosis.

In *acute non-symptomatic hæmatemesis*, the lines as to indications for treatment cannot be so closely drawn as in the symptomatic form. Prophylactic measures cannot be instituted. In the symptomatic, it is known, or is very presumable, that the hæmorrhages arise from a distinct, definite, and tangible pathological lesion, probably a chronic ulcer. In the non-symptomatic, the bleeding may originate from the same source as that of the symptomatic, but this is not usual. It more frequently springs from an acute ulcer, a fissure, an erosion of the mucous membrane, or from a condition which often cannot be located, even at autopsy in the most competent hands.

This lack of definite knowledge as to ætiology and pathology makes the indications for treatment necessarily unsettled and indefinite, and the best line of treatment more or less problematic. The fact that these hæmorrhages are many times found to be due to a general oozing of blood, as if the mucosa was weeping blood, and that a large percentage of them recover after palliative treatment, has tended toward making medical treatment the more commonly employed. But the fact that others succumb, and that these hæmorrhages can and do arise from distinct ulcers which have eroded large blood vessels, favors the employment of radical measures.

After *single acute hæmorrhages*, either symptomatic or non-symptomatic, medical treatment is usually advocated and instituted. Dieulafoy's procedure constitutes a marked exception, as he operates after a single bleeding if the blood lost equals or exceeds half a litre. He states that without surgical intervention, after a loss of that amount of blood, the patient will surely not survive, but if the amount of blood vomited is less,

the chances of recovery are fairly good without operation.

It has been conclusively proved, however, that the amount of blood vomited is no indication of the amount of hæmorrhage. A variable amount of blood may be passed into the bowel, only a portion of what is in the stomach may be vomited, or there may be no vomiting and the stomach remain full of blood. Nor may the origin be revealed by the vomited blood. Hæmorrhages sufficient to cause sudden death have been found to be of capillary origin, and in other cases the source has not been discovered even at autopsy.

Again, life and the hæmorrhages may be prolonged for weeks when even the large blood vessels have been opened, as may be seen by the tables of Savariaud.

As a matter of fact, little if anything is definitely known regarding this phase of the subject. There is no method of knowing whether a hæmorrhage is arterial or capillary. It is known that if arterial the chances of spontaneous arrest are slight, but that it may occur; that if capillary, the possibility of a natural cessation is more probable, but that it may continue and cause death. The only available means of attempting to decide upon these points before operation is the very unreliable clinical history, which should lead to a distinction into symptomatic and non-symptomatic acute hæmorrhages. The symptomatic, on account of a more pronounced pathology, will be more liable to repetition than the other, in which, as a rule, the pathological changes will not be so extensive.

From a careful study of cases it has been ascertained that the majority of acute single hæmorrhages are capillary oozings, and that many, but not all, cease as spontaneously as they began. Therefore it may be said that in acute single hæmatemesis, palliative treatment is indicated.

After *acute multiple hæmorrhages*, the question as to the most propitious time for interference will depend upon the history of the case, the character of the hæmorrhages, and the length of the interval. The moot point is whether surgery is indicated after a second hæmorrhage. After three or more bleedings, each profuse and succeeding one another rapidly, it is generally conceded that such an intervention is justifiable. The drawbacks to operating at this time are:

1. That the patient is in poor condition to withstand a severe major operation.
2. That cases do recover after repeated profuse attacks of hæmatemesis under palliative measures.

It will be remembered in considering these

drawbacks more carefully that to the best of our knowledge and belief the conditions will become worse, and in all probability death will supervene, if palliation alone is continued. The fact that death may follow an attempt to eliminate the cause of this poor condition—the bleeding—will not prevent the conscientious surgeon from doing what is clearly indicated, i. e., stopping the bleeding. The fact that the seat of the hæmorrhage is “internal” or “concealed” does not alter the underlying principle. Were it at the rectum, or at the mouth, an attempt would be made to secure the bleeding vessel.

Moullin, in this connection, says: “I may add that I have been consulted with a view to operating in three other cases of recent hæmatemesis, but the condition of the patients was so helpless that I would not take the responsibility, and they all died within twenty-four hours of my seeing them.”

In such cases the responsibility is not with the surgeon, but with the attending physician. Early transfusion, before surgery must be used as a last resort, is to be encouraged by every possible means. Yet it hardly seems fair to remove the last and only chance from the patient by refusing to operate because of this poor condition. Interference in such cases will do no harm, and the possibility of good resulting must be admitted. If only one in even a hundred can be saved, it would be well worth the effort.

There can be no doubt that cases of profuse and repeated hæmatemesis do recover after all attempts to stop the hæmorrhage have failed and the patient is supposed to be rapidly bleeding to death. Such instances appear in the literature of the subject, the satisfactory outcome being explicable by a decrease in strength and number of the heart beats and a lowering of the blood pressure, the results of syncope, aided by the fact that the coagulability of the blood is increased as its volume is decreased.

Such measures are evidently not to be considered as a realizable therapeutical method of producing hæmostasis, and when such a chain of circumstances results in a cessation of gastric hæmorrhage, not followed by death, it is certainly to be considered as a most fortunate accident.

To sum up: It may be stated as a general proposition that after a single hæmorrhage, palliative treatment is indicated; after three or more hæmorrhages, surgery should be resorted to. As to the proper line of treatment to be instituted after a second acute hæmatemesis, there can be found a great diversity of views.

Dieulafoy, again very radical, insists upon op-

erating if the hæmorrhage is repeated within twenty-four hours. Armstrong says: “Operate in all cases in which a second severe hæmorrhage occurs within seventy-two hours.” Mayo Robson advises: “After a second bleeding, even during the course of the hæmorrhage if the patient can stand it, or as soon after as his condition will permit, the operation to be done.” Bramwell, however, says of this advice: “If it is accepted and acted upon, operation for the arrest of hæmorrhage in cases of gastric ulcer will become of every day occurrence, with I fear . . . an increase rather than a decrease of the mortality.”

By far the greater number of operators have up to the present time advocated a waiting policy and a building up medical treatment, in the hope that the hæmorrhage would not be repeated. Russell says that while a second hæmorrhage by no means precludes recovery, it is a serious factor in prognosis, pointing, at least, to a considerable prolongation of the period of active symptoms.

This point, as to the proper mode of action after a second hæmorrhage, is still the burning question, so called by Rodman in 1900. We must continue to look to the future for a better and clearer light upon this part of the subject.

From the limited experience upon which this paper is based no conclusion of value can be deduced, but from the literature we are inclined to concur with Rodman, in advocating that “something should be done to prevent, what are reasonably certain, other hæmorrhages;” and we can reiterate his statement: “I am thoroughly convinced, from a careful study of all reported cases up to date, that none was operated too early, but many were too late.”

Bequest to the College of Physicians and Surgeons.—The will of the late Dr. William E. Griffiths, of 320 Schermerhorn Street, was filed for probate in the Surrogate's office on March 17th. By the terms of the will, Dr. Griffiths gives his household furniture to his mother-in-law, Mrs. Jane Snyder, and legacies to various cousins. To the Brooklyn Institute, engravings by Cláudia Stella of the date of 1640, after paintings by Poussin, a maple top stand made about 1790, and formerly used by his great uncle, Vice-chancellor McCoun, also a box of valuable minerals are given. All the residue of his estate, including his valuable property at the corner of Schermerhorn and Nevins Streets, he leaves in trust for the benefit of his friends George B. Little and Mrs. Harriet J. E. Sheldon, the former to receive four fifths of the income and the latter one fifth, and upon the death of both of these life tenants the whole residue goes to the College of Physicians and Surgeons of Columbia University.

THE DIAGNOSIS AND TREATMENT OF ACUTE PELVIC PERITONITIS OF GONORRHEAL ORIGIN.*

By BROOKE M. ANSPACH, M. D.,

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The gonococcus, in the production of peritonitis, usually confines its effort to the pelvis; the general peritoneal cavity is but rarely invaded; even though it is, the prognosis of this form of general peritonitis contrasted with other forms is favorable.

It is equally true that pelvic peritonitis due to the gonococcus is not often fatal. Although there may be permanent disability and chronic invalidism as a consequence, there is not *per se* a fatal result. Because of these facts acute pelvic peritonitis of gonorrhœal origin when confined to the pelvis may well be regarded as not immediately dangerous to life and as amenable to palliative treatment.

This form of peritonitis, however, bears in its clinical manifestation a resemblance close enough to appendicitis to make its diagnosis a matter of great importance. Conservatism in the one is justifiable and safe while in the other it is conducive to serious results.

There is probably no intraperitoneal inflammation so treacherous as that of the vermiform appendix; an apparently mild case may quickly become lethal. Sometimes the diagnosis is not made until autopsy or operation. In those cases of peritonitis in which the origin is not evident clinically, the appendix has been very often the seat of disease.

This is without doubt very generally recognized and the physician to-day is more on his guard against overlooking or misjudging appendicitis than any other intraperitoneal inflammation.

It is important then to distinguish acute pelvic peritonitis of gonorrhœal origin from acute appendicitis; and by acute pelvic peritonitis should be understood the inflammatory reaction which marks the initial passage of gonorrhœal pus to the pelvic peritonæum.¹

The subsequent attacks when the tube has begun to close with the formation of pyosalpinx may be just as acute as the primary ones, but usually the pelvic mass found upon bimanual palpation in the secondary attack, makes the diag-

nosis more or less evident. In the cases under consideration, there may be at first no pronounced pelvic mass; a woman previously free from acute pelvic disturbance is seized with sharp pain in the lower abdomen, maybe worse on one or the other side, associated with constipation, distention of the abdomen, fever, increased pulse rate, and more or less prostration.

Such symptoms very often indicate an acute inflammation of the appendix. It is to be remembered moreover that pelvic peritonitis may be and often is accompanied by appendicitis.

When appendicitis exists either alone or with inflammatory affections of the annexa, an operation in the majority of cases is advisable. On the other hand, in acute pelvic peritonitis due to gonococcus infection, operation had better be postponed. In distinguishing between these two, the previous history of the patient often indicates a correct conclusion. Although gonorrhœa in its early stage may escape the observation of the female, inquiries as to the existence of vesical irritability, leucorrhœa, the origin of the symptoms with reference to the marital state, and with relation to the menstrual period, frequently elicit ground for a tentative opinion.

Inspection of the parts, the orifices of Skene's glands, the vulvovaginal glands, and the cervix, gives additional evidence, oftentimes the most positive. Inquiry should be made concerning the classical symptoms of appendicitis. The history of repeated attacks, of habitual overeating, and of chronic indigestion together with the character and location of the pain, as a rule, afford a satisfactory clue. A comparative table of symptoms may be useful.

Gonococcus Pelvic Peritonitis.

History. Leucorrhœa or vesical irritability soon after marriage or suspicious intercourse.

Onset. At or directly after a menstrual period.

Pain in lower abdomen—worse perhaps on one or other side.

Gastrointestinal Symptoms. Nausea, vomiting, constipation, less marked.

Appendicitis.

History. Previous similar attacks. Habitual overeating, chronic intestinal indigestion.

Onset. After indiscretion in diet.

Pain beginning in epigastrium—not well localized at first—later localized to appendiceal region.

Gastrointestinal Symptoms. Nausea, vomiting, constipation, etc., more marked.

There is not so much to be learned by bimanual palpation as would be expected. Because of tenderness and rigidity a satisfactory examination of the tubes and ovaries without ether is frequently impossible. The position of the uterus, however, can be determined as well as the presence or absence of fixation of that organ. At an early stage there is little or no fixation and lit-

* Read before the Philadelphia County Medical Society, December 14, 1904.

¹ There is, of course, another form of pelvic peritonitis—viz., that produced by pyogenic organisms, notably the streptococcus. The history, however, in this form clearly indicates a source of pyogenic infection—the symptoms are all more severe than in the gonorrhœal form, and it very rarely occurs except after evacuation of the pregnant uterus.

the pelvic exudate. So that the examination, although admittedly unsatisfactory, may be entirely negative. In the cases forming the basis of this paper, the initial examination was negative, although the annexa could not be definitely palpated; the uterus was freely movable and there was entire absence of any well defined induration. Bimanual examination in cases of acute appendicitis is also usually negative in the absence of pelvic complications. When the appendix hangs over the pelvic brim a mass may sometimes be felt, but this is rather exceptional unless there is an appendiceal abscess.

Abdominal tenderness and rigidity are present over the entire lower abdomen in acute pelvic peritonitis in contrast to the more localized tenderness and rigidity seen in appendicitis. Occasionally in gonococcus pelvic peritonitis, there is more pain and tenderness on one or the other side; if that side happens to be the right, the resemblance to appendicitis is increased.

Tenderness of appendiceal origin may sometimes be elicited upon bimanual palpation when the right annexa are normal by drawing the uterus downwards and to the left side. This supposedly is due to traction upon the appendix by a fold of peritonæum running between the broad ligament and the mesoappendix.

There seems to be no question that acute appendicitis, especially when it is severe enough to be confounded with acute pelvic peritonitis, should be exposed to operation immediately. It is otherwise with acute gonorrhoeal pelvic peritonitis. Experience has shown that these cases do well if kept quiet in bed and given salines, copious douches of hot salt solution, and applications of heat to the abdomen. Under such expectant treatment the temperature and pulse-rate gradually approach the normal; there is less abdominal pain and distention. All of the subjective symptoms may disappear in four or five days.

At this late stage bimanual examination finds more or less fixation of the uterus, pelvic exudate and enlargement of the annexa. Operation during the acute attack, therefore, appears to be unwarranted and clinical experience bears out this view. Operation could not be followed by any better immediate result than palliation and during the acute stage it would expose the woman to acute general peritonitis.

Later on the gonorrhoeal pus becomes less infectious or inert; the economy has reacted to the toxic products thrown into the circulation, the extent of inflammatory involvement is recognized with less difficulty, and there is not so much like-

lihood of leaving tissues behind which will subsequently give trouble.

One cannot afford to stop here in considering the treatment of this disease, for there is a possibility in every case that the infection may become general. In such an event the danger is much greater and the question of operative interference is of more moment. If the peritonitis does become general, it is best to perform laparotomy without delay.

Hunner, who has collected a series of eighteen cases of general gonococcus peritonitis in which the diagnosis was substantiated by bacteriological evidence, found eleven recoveries and two deaths in thirteen cases subjected to operation; and five deaths in five cases not operated in. He has further reported twenty-one cases in which the diagnosis was positive, but based upon clinical evidence alone; in which there were eight recoveries and three deaths in eleven cases submitted to operation; and eight recoveries and two deaths in ten cases treated expectantly.

He is doubtful as to the advisability of operation, but well says that the exclusion of other sources of infection in these serious cases is sometimes impossible. From the statistics Hunner himself quotes one can see that in the cases positively diagnosed as gonorrhoeal peritonitis there was a large percentage of recoveries following operation (eleven recoveries and two deaths in thirteen cases operated in; five deaths in five cases treated expectantly).

If an opinion is based on this fact, and surely this is a more reliable criterion than the result in those cases in which there was no bacteriological confirmation, the question of operative interference must be answered in the affirmative. Therefore, in gonorrhoeal pelvic peritonitis if distention, vomiting, tenderness, and rigidity show a constantly increasing tendency, if peristalsis diminishes, if the facies of septic intoxication appears, operation is advisable. If upon opening the abdomen the diagnosis of gonorrhoeal peritonitis is confirmed it is best to confine one's efforts to the evacuation of any intraperitoneal collections of fluid. According to Hunner it does no good to attempt to remove fibrinous deposits upon the bowel or to separate adhesions; this is often productive of harm by opening up new avenues for infection and may result in the formation of new adhesions and postoperative obstruction. The diseased tubes, he says, if they contain appreciable quantities of pus should be removed. While the social condition of the woman and her childbearing proclivities must be considered in such cases and no rule can be laid down, I believe

that it is better to remove both tubes if they contain pus, whether they have gone on to the formation of pyosalpinx or not. In other intra-abdominal infections, the source of the trouble requires removal for the immediate good of the patient and why should it not be so here? Moreover, if the tubes are allowed to remain, it is quite probable that they will either subsequently give trouble or that they will be functionally useless.

When the peritonitis remains confined to the pelvis under the palliative measures given, the symptoms will subside, but there remain structural changes which may and usually do call for operative interference.

The temperature of the patient returns to normal, the pulse rate diminishes, and there is no spontaneous pain. At this time a bimanual examination is more satisfactory and gross inflammatory alterations are found about the annexa. Whether an operation should be performed at this time or not and the extent and variety of such operation is an entirely different question from those we have been discussing. Although conservatism is advisable in many of the less serious cases of suppurative gonorrhoeal affections of the annexa, these patients as a class would be better treated if they were exposed to operation as soon after an initial attack of acute pelvic peritonitis as structural lesions could be recognized in the pelvis. Certainly at this time there would be less need of a complete or very extensive operation.

I have selected the following cases, all occurring during the past year, as types of the condition under consideration:

CASE I.—R. H., single, aged 25 years. Two months before admission had sexual intercourse. One month before admission began to suffer from profuse irritating discharge. Present attack began three days before admission at the close of her last menstrual period. Sharp pain in lower abdomen, especially marked on the left side. Admitted May 10, 1904. Temperature, 100°; pulse, 108; respiration, 20. Abdomen distended, marked tenderness and rigidity over lower abdomen, slight nausea, constipation. Condition after 36 hours' treatment: Temperature, 100°; pulse, 120; respiration, 24. Pelvic examination, bilateral pyosalpinx. May 11, 1904, operation, right salpingectomy, left salpingo-oophorectomy. Smears from peritonæum show gonococcus. Recovery complicated by suppuration of right ovary.

CASE II.—M. S., single, aged 21 years. At age of 19 years had miscarriage, 6 months' child. September, 1903, had another miscarriage. Present attack followed closely upon last menstrual period, November 23rd to 27th. Sharp pain in lower abdomen. Admitted November 29, 1903. Temperature, 103°; pulse, 132; respiration, 40.

Abdomen distended, marked tenderness and rigidity, peristalsis diminished, slight nausea, constipation. Condition after five days' treatment: Temperature, 99°; pulse, 100; respiration, 24. Pelvic examination, bilateral tuboovarian masses. Skene's glands, vulvovaginal glands show macula gonorrhoea. Operation, December 3, 1904. Bilateral salpingectomy. Uneventful recovery.

CASE III.—A. S., single, aged 20 years. For past two years has had leucorrhoeal discharge. Last menstrual period ended November 1, 1903. Attack began November 4, 1903. At this time discharge ceased; sharp pain in lower abdomen, continued and grew worse until November 17, 1903, when it was so severe that she was compelled to go to bed. Admitted November 18, 1903. Temperature, 103°; pulse, 110; respiration, 28. Abdomen distended, pain and tenderness and rigidity in lower quadrant, constipation, nausea. Condition after six days' treatment: Temperature, pulse, and respiration normal. Pelvic examination, bilateral pyosalpinx, Skene's glands, vulvovaginal glands show macula gonorrhoea. Operation November 30, 1903, left salpingo-oophorectomy, right salpingectomy. Recovery.

The first case illustrates the difficulty sometimes experienced in deciding when to dispense with expectant treatment and enter the abdomen. After 36 hours of rest in bed, the use of salines and hot douches, the symptoms seemed to indicate that the infection was becoming general; accordingly celiotomy was performed. The infection was found entirely confined to the pelvis and it would have been better to postpone the operation until the acute stage had passed. As a result of this interference during the active period the right ovary which was conserved with the uterus underwent suppuration; the incision also broke down. In both of the other cases the healing was *per primam* and the convalescence was in every way normal.

In conclusion I wish to thank Dr. Clark for the privilege of reporting these cases, all of which occurred in his service at the University Hospital.

2049 CHESTNUT STREET.

Eastern Colorado Medical Association.—Physicians from Morgan, Washington, and Yuma counties met in Dray on March 11th and organized the Eastern Colorado Medical Association. The officers of the association are: President, Dr. E. D. McGill, of Wray; vice-president, Dr. E. J. Bales, of Wray; secretary, Dr. George E. Bilsborrow, of Yuma; treasurer, Dr. N. J. Phelan, of Akron; censors, Dr. A. L. Howe, of Wray; Dr. N. J. Phelan, of Akron; Dr. Turner, of Brush. The next meeting of the association will be held at Akron, April 4th. This initial meeting was called at the instance of Dr. McGill, and the attendance was good.

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AN APPARENT CURE OF ADDISON'S DISEASE WITH YEAST.

The diversity of uses to which yeast may be put as a remedy seems still to be growing. Dr. Dumas, of Lédignan (*Echo médical des Cévennes*, 1904, p. 245; *Revue française de médecine et de chirurgie*, February 6th), records a case in which Addison's disease was apparently arrested in its manifestations by the use of the drug. Before proceeding to the points of the case, we cannot forbear calling attention to some remarks of Dr. Dumas's that seem to proclaim him to be the possessor of the humor proper to a country doctor. Remarking that a single cure is a small matter, he applies to therapeutics the legal maxim *unus testis nullus testis*. He must have had a glimmering of a certain Aldine Club dinner joke at the expense of the guest of the occasion, Sir Conan Doyle, when he said, apropos of his making a diagnosis at the first glance, that this phrase from a song was applicable: *Rien qu'en voyant votre habit militaire, j'ai deviné que vous étiez soldat*. Finally, justifying the use of yeast even if it can only prolong life for a few weeks, he says: *Au fond, nous sommes tous des prolongés*.

But to the case. The patient was a widow, fifty-eight years old, who had been out of health for about three months when she applied to him for advice. She had come in a carriage from her

home, distant about five miles, and she entered leaning on the arms of her son and his wife. She sank to her seat exhausted. This exhaustion, coupled with the deep bronzing of her skin and her vacuous expression, led Dr. Dumas to an immediate diagnosis, as has been intimated, but he took the precaution of excluding a pigmentary syphilide, discoloration with silver nitrate, malarial cachexia, and diabetes. He prescribed a coffeespoonful of brewer's yeast, to be taken fifteen minutes before each meal, at the same time advising a diet of milk and vegetables. A fortnight later the patient's condition was improved, and at the end of another month she was to all appearances perfectly well. However, Dr. Dumas did not judge it wise to stop the use of the remedy, but he foresees that it will have to be stopped sooner or later; then, if a relapse occurs, he will resume it. He argues that suppression of the poisoning of suprarenal origin favors a return of the adrenals to their normal state, but he realizes that a permanent cure is not to be expected if the disease is due to organic degeneration of the suprarenals. That, however, he remarks, is quite as true when the suprarenal gland itself, fresh or desiccated, is administered.

SOME RECENT AMERICAN STUDIES OF CANCER.

In our issue for January 21st, commenting upon the experimental transmission of malignant disease among mice in the Gratwick Laboratory of the University of Buffalo, we intimated that the exact nature of the tumors engendered in the inoculated mice was up to that time somewhat uncertain, adding that they appeared to be sarcomatous rather than carcinomatous. The experiments were the work of the Cancer Laboratory of the New York State Department of Health. In a letter recently received by us from a prominent member of the staff of that laboratory the writer says: "I might state to you that this tumor has been seen by Orth, Welch, Councilman, and I might enumerate a long list of other authorities, and in no case has any one raised the question that this tumor is distinctly a malignant adenocarcinoma." Adenocarcinoma is a form of neoplasm described by Professor Jensen, of Copenhagen, from whom the Buffalo laboratory received its first infected mice. In some cases the

mice have recovered spontaneously, and their serum has been employed with a curative, or at least inhibitory, effect upon other infected mice. This being the case, it must be admitted, we think, that the experiments furnish some ground for hope that an efficient serum treatment of malignant disease may yet be elaborated.

It may be possible to reconcile all this with the view of Jensen's experiments presented by Dr. Edward H. Nichols, of the research committee of the Caroline Brewer Croft Cancer Commission, in the commission's third report, recently issued by the Medical School of Harvard University. "In no case," says Dr. Nichols, "has any organism been cultivated from the experimental tumors. All observers agree that the tumors are true transplantations, and that the tumors develop from proliferation of the transplanted cells and not from infection of the fixed cells of the inoculated animals. When tumor cells are excluded by filtering, in no case does the injected cancer juice cause tumors."

A priori, the parasitic nature of cancer seems plausible, and there are many who contend, not only that the disease is caused by a parasite, but, more specifically, that the parasite is a protozoon. But Dr. Nichols makes out a strong argument against the parasitic theory. He remarks that the alleged relative increase of cancer in recent years is disputed and has not been proved, and he thinks that local causes of the origin of cancer are improbable. The metastases in cancer, he avers, although they follow the same routes as those of infectious diseases, are of absolutely different origin and constitute the strongest theoretical argument against an infectious or parasitic nature of the disease. The cachexia, he thinks, is probably not entirely due to the character of the cancer itself, but is often dependent on secondary bacterial infection. He declares that there is no proof of the transfer of cancer from one human being to another by contact, and, although its transplantation from one animal to another of the same species is well verified, the production by any known parasite of epithelial proliferation analogous to that of cancer has not been demonstrated.

Between the confidence of the Buffalo school in the parasitic, even protozoan, origin of cancer and the negative attitude of the Boston school, we must

confess ourselves to be at present in a state of the greatest doubt, but we feel well assured that continued investigation will before long bring us to some positive conviction, and each group of investigators will be entitled to share in the credit of the result.

THE PREVENTION OF CEREBROSPINAL MENINGITIS.

We are face to face in New York with a degree of prevalence of this grave disease that, while perhaps it does not warrant alarm, certainly gives occasion for anxiety. During the week ending on February 25th it caused forty-nine deaths, during the succeeding week sixty, during the next week seventy-six, and during the week ending on March 18th seventy-six. We know that the Health Department is fully alive to the necessity of doing everything in its power in the way of limiting the prevalence of the disease, and we have no doubt that it is doing it. But its field of action is necessarily restricted; its efforts should be supplemented by all possible care on the part of individuals, as is always the case in matters of sanitation.

What, then, can the individual accomplish? It is the opinion of not a few of our rhinologists that the germ of cerebrospinal meningitis is taken into the nasal passages and thence gains access to the cranial cavity through the cribriform plate of the ethmoid bone. On this theory they advise the intranasal employment of germicides. We do not understand that they advocate strong applications or those that are difficult for an intelligent person to use; a simple saturated solution of boric acid, sprayed into the nasal passages twice a day, the throat being at the same time treated with the same solution, is thought to be sufficient, so far as concerns means that may safely be put into the hands of the public.

Much might be said in support of the belief that such simple measures would prove decidedly efficacious as a prophylactic of some others of the infectious diseases, and there can be no doubt that the care of the mouth and nose is generally neglected among persons who in other respects are commendably careful. Many of the pathogenic microorganisms are doubtless temporarily

arrested in the mouth and nose, and might readily be rendered innocuous before reaching more vital parts.

CEREBROSPINAL MENINGITIS AND TYPHUS FEVER.

There is a singular resemblance between the symptoms of cerebrospinal meningitis, which is now of such grave interest to residents of New York, and those of typhus fever that must have led, we think, to frequent confusion in the days before exact clinical diagnosis. Both are believed to be caused by inhalation of a specific germ, both are infectious and contagious, are characterized by similar eruptions, and resemble each other in their onset with fever, nausea, vomiting, delirium, coma, and convulsions. There is of each a fulminating form causing death in a few hours. Both diseases favor dirty and overcrowded places. Apart from the result of lumbar puncture, a procedure unknown until quite recently, the principal diagnostic point seems to have been the facies of typhus; the expression being described as drunken or besotted, while the countenance in meningitis is livid. A century ago, however, a besotted expression must have been common among the class most afflicted by typhus. When we note, moreover, that any clear history of meningitis is lacking previous to the beginning of the last century, while the records teem with accounts of jail fever, ship fever, etc., it is hard to escape the conclusion that many supposed cases of the latter were really cases of cerebrospinal meningitis.

ON PATHOLOGICAL HEREDITY.

The problem of heredity has occupied the critical minds from ancient times. Continuity of life from parents to children, transmission of parental features in physical and mental spheres from generation to generation, is undoubtedly a highly complex phenomenon which as yet is not fully understood. The first scientific work based upon embryological researches begins with von Baer, in the first half of the nineteenth century. Herbert Spencer's works and Darwin's biological observations contributed considerably to the subject, but the most creditable pathological inves-

tigations began with Morel. Since then various biologists have busied themselves with the effects of hereditary influences from the normal and pathological standpoints.

The value assigned to heredity outside of other factors, such, for example, as the capacity of adaptation to changing condition or other factors, cannot be overestimated. In normal conditions the potency of heredity in regard to particular traits and features is of common observation. To the sociologist and physician the study of morbid hereditary influences produced by various deleterious agents is a matter of paramount importance, as the thorough knowledge of their effects upon the human organism and individual tissues and organs will place in their hands powerful means of prevention. It has always been a matter of great practical interest to trace out and to understand the effect of alcoholism, syphilis, tuberculosis, plumbism, or other well known chronic intoxications on the individual and on his progeny.

The evolution of sexual cells in the ovaries and testes is diverted from its normal course when noxious agencies, like alcohol, etc., are introduced into the system. Quite recently it has been proved that the sperm, or germ, cells and the impregnated ovum become affected independently when the parent organism is under the influence of a toxic agent. Facts are abundant in literature testifying to the rôle of noxious agencies in pregnancy. Abortions are frequent; sterility and premature labor are equally frequent and sometimes their frequency is so pronounced that the fear of depopulation is maintained with good reason. According to Legrain's carefully collected personal statistics, over one third of the pregnancies ended with premature labor. But there is a problem of a more profound value to be considered, viz., if the child is born at full term, what will be the stigmata of the inherited pathological influence, and can they be transmitted to several generations? Among all the organs and tissues of our system, the most susceptible to the effect of various extraneous factors is the cerebrospinal system, and this great organ is the bearer of hereditary endowments of various character. It is striking to note that precisely in the

cerebral sphere deviations from normal functions are observed. Epilepsy, meningeal symptoms with or without convulsions, idiocy and imbecility with or without physical stigmata of degeneracy, all degrees of mental degeneracy from simple want of cerebral equilibrium, general nervous irritability, obsessions of various nature, or other varieties of neuropathy showing a special fragility of the nervous system, to total mental debility or insanities—all these facts are of such a frequent occurrence in cases of alcoholic indulgence in parents that no further comment is needed. Also examples of acute intoxication during or shortly before the sexual intercourse followed by these results are abundant. The French school especially, with Pinel and Esquirol of the older times, Bourneville, Legrain, Magnan, and Voisin among the later observers—elaborated the question of alcoholism and heredity. Bourneville, in 1896, investigated 1,000 idiots and found alcoholic parentage in sixty-two per cent. According to Roubinovitch, the distinguished alienist of Ste.-Anne's Asylum, of Paris, in over ninety per cent. of cases of degeneracy manifesting itself in idiocy, imbecility, or various mental derangements, parental alcoholism, and especially that of the father, was the sole factor. Dr. A. MacNicholl published in the *Quarterly Journal of Inebriety* in 1902 an interesting record showing the degenerative effect of alcohol on the progeny for four successive degenerations.

Legrain's investigations show an extremely interesting and significant point concerning the age at which mental disturbances begin to develop. They are usually precocious, affecting the unfortunate victims of parental excesses at the age of twenty and sometimes earlier. In quite a large number of families he observed insanities in infancy or at puberty. In the majority of his cases, viz., fifty-seven per cent., the subjects were idiots and imbeciles, and 44.40 per cent. were classified as insane. The effect of alcoholic heredity is therefore considerable, and with good reason alcohol occupies the first place among all the poisonous or noxious factors capable of producing degenerative conditions in races, individuals, tissues, organs, and cells, which are transmitted to several successive generations.

Next in order comes syphilis. We find here, again, the nervous system to be the greatest sufferer. Idiocy and imbecility are not infrequent consequences of parental transmission to the offspring. We are now familiar with occurrences of tabes or other nervous diseases acquired from inherited syphilis. In the columns of this journal some time ago the writer reported a case of juvenile tabes where specific infection could be traced to the parents. Congenital internal hydrocephalus, various meningeal manifestations, and malformations of brain and cord, such as meningocele, encephalocele, anencephaly, and spina bifida, can all be traced to inherited syphilis. Tuberculosis, various chronic intoxications, and diabetes may all lead to degenerative stigmata in the progeny, particularly in the domain of the nervous system.

The above enumerated facts regarding the maternal and paternal infections and intoxications are, in my estimation, of extraordinary practical importance. They call for our most solicitous attention and care. The safety and the existence itself of society are intimately associated with and depend upon the degree of attention we may give to this side of our life. Inauguration of special regulations concerning marriages is indicated. Efficient hygienic and prophylactic measures concerning various intoxications must be outlined and strictly observed. The evil arising from those factors and the racial extinction with which society is threatened should be unceasingly indicated and emphasized in the press and taught in schools. No man is in a more favorable position to understand and realize the importance of the subject than the physician. It is therefore the physician who is expected to bend all his efforts to spread this knowledge and call the attention of every thinking man to the great problem of pathological heredity. ALFRED GORDON.

THE UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN.

This monthly publication, now in its eighteenth volume, has been the medium in which many notable contributions to the advance of scientific medicine have been published, and its recent issues give promise of its long continuing to be a vehicle of the very highest order. The January

number is perhaps conspicuously noticeable by virtue of its containing several valuable articles on neurological subjects. The *Bulletin* is edited by Dr. Charles H. Frazier and Dr. William Pepper.

EXTENSIVE INJURY IN DEFLOURATION.

Reports of injury of the woman in the first coitus are not very uncommon, but such an extensive injury of this sort as is reported by Cealac, of Bucharest (*Revista de chirurgia*, 1904, No. 6; *Zentralblatt für Gynäkologie*, March 11th), must be rare. The woman, twenty-two years old, is described as of delicate build, and her husband's penis was found to be abnormally large. On the nuptial night he made three fruitless efforts at intercourse. In the fourth attempt he perforated the rectovaginal septum, making an opening an inch long, and lacerated the perineum. The woman stated that she had lost a good deal of blood at the time of receiving the injury.

A DANGEROUS PREPARATION.

At the instance of the editor of the *American Druggist*, an analysis has been made of a preparation advertised in certain medical journals under the name of Bonn's passiflora tablets, and the astounding fact is revealed that the tablets contain a large percentage of acetanilide, though there is no mention of this substance in the advertising matter of the company that markets them.

Obituary.

MEDICAL DIRECTOR GEORGE A. BRIGHT, OF THE NAVY.

Dr. Bright, who died in Washington last week, was a native of the State of Maine. He graduated from the Medical School of Harvard University, served on the house staff of the Massachusetts General Hospital, and began private practice in Concord, New Hampshire. In a few months, the civil war having broken out, he entered the navy as an acting assistant surgeon. At the close of the war he joined the regular medical corps of the navy, and, rising by the usual course of promotion, reached the rank of medical director. Not long ago he was retired with the rank of rear admiral. He was a man of engaging personality, and his career in the navy was long and creditable.

The Ladies' Auxiliary of the Society of the Lying-in Hospital offer a reading by Mrs. Le Moyne at Sherry's on Thursday afternoon, March 30th. The proceeds will go into a fund to be used among the East Side poor.

News Items.

Society Meetings for the Coming Week:

MONDAY, March 27th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, March 28th.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, March 29th.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

SATURDAY, April 1st.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 18, 1905:

	March 18.		March 11.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	383	9	349	10
Diphtheria and croup	321	34	296	26
Scarlet fever	249	25	270	19
Smallpox	1	1	1	..
Chickenpox	149	..	159	..
Tuberculosis	505	198	480	183
Typhoid fever	31	7	30	9
Cerebrospinal meningitis	135	72	..	76
	1,774	346	1,585	323

New York Physician Made a Knight.—At the recommendation of the Italian Minister of Foreign Affairs the King of Italy has made Dr. Antonio Fanoni, of New York, a Knight (Cavaliere) of the Order of the Crown.

Change of Address.—William W. Bostwick, M. D., late first assistant physician Sailors' Snug Harbor, has begun private practice at 551 West One Hundred and Fifty-second Street.

St. Vincent's Hospital, Staten Island.—At the last meeting of the medical board of St. Vincent's Hospital, West New Brighton, Dr. E. D. Wisely, of Port Richmond, was appointed medical attendant to succeed Dr. James L. Devlin, of New Dorp, who resigned on account of the distant location of the hospital from his home. Dr. E. C. Baldwin, of Fort Wadsworth, was appointed pathologist. Dr. W. W. Gilfillian, of Manhattan, was appointed consulting oculist.

A New Training School for Nurses.—A training school for nurses has been started at the new French Hospital, 450 West Thirty-fourth Street, New York. The course is to extend through two years, including a two months' probationary term, and will include experience in obstetrics and diseases of children, as well as all branches of general medicine, surgery, and gynecology. Applicants are not required to speak French, but will receive instruction in the language as a part of their course. The hospital has a capacity of about 130 beds, including private rooms, and both building and equipment are thoroughly modern.

Small Fire in Hospital.—A small fire started on March 17th in the office of the Presbyterian Hospital at 75 East Seventieth Street. It was put out with a hand extinguisher before it had opportunity to spread, and without causing any alarm among the occupants of the building.

Eastern Medical Society.—This society will give a concert and ball on the evening of March 28th at Terrace Garden. The object of the affair is a twofold one, to bring about a social meeting of the members of the society with other members of the medical profession, as well as with those of the allied professions, and to raise funds for the enlargement of the library so as to meet the scientific needs of the professional brethren of the East Side.

Hospital Saturday and Sunday Association.—Charles Lanier, of 50 Cedar Street, general treasurer of the Hospital Saturday and Sunday Association, is desirous that all treasurers of churches or trade auxiliaries who have not yet made their returns to him should do so at their earliest convenience, as the time is approaching when the distributing committee will be called upon to divide the general fund collected. Not only was the collection taken in the churches on the last Hospital Sunday nearly double the amount realized in the previous year, but the aggregate from all sources, which then was barely \$75,000, is now above \$90,000, and it is confidently believed that another year will bring it to the \$100,000 mark.

A Farewell Dinner to Dr. Osler.—Invitations are out for a dinner in honor of Dr. William Osler, to be given at the Waldorf-Astoria, New York, on the evening of Tuesday, May 2nd. The committee is a large one, including well known physicians of Baltimore, Montreal, Toronto, Chicago, St. Louis, Providence, Boston, St. Paul, Minneapolis, New Haven, Buffalo, New Orleans, San Francisco, Augusta, Ga., Ann Arbor, Syracuse, Cincinnati, Albany, Detroit, Richmond, Memphis, Philadelphia, Washington, Pittsburgh, Cleveland, Rochester, Louisville, Denver, Colorado Springs, Saranac Lake, Portland, Me., Nashville, and New York—a body of men, eighty in all, thoroughly representative of the profession. The gathering will undoubtedly be a large one, and the distinguished and amiable guest of the occasion cannot but carry from it to the new scene of his activities the pleasantest of memories.

J. Hood Wright Hospital in Need.—According to the forty-first annual report of the J. Hood Wright Memorial Hospital, just issued, there is a constant increase of service accompanied by a coincident increase in cost of maintenance, without a corresponding increase in reliable income. Taking the records for the last two years, the increase is 231 in patients treated in hospital; an increase of 509 in the number of patients in the emergency ward; 657 increase in days' treatment of patients; 319 increase in days' free treatment; 282 increase in days' treatment partly paid for; 529 increase of patients in dispensary; 358 increase of visits to dispensary; 27 increase in ambulance calls; and 145 increase in number of

operations. The question of increased cost of maintenance without a reliable and corresponding income is regarded as of very serious moment. By the efforts of patrons and members, with the addition of sundry gifts from friends, the hospital has been able to close the year and pay all bills without leaving a deficit. The treasurer's statement, however, shows that it has but \$671.33 available for current expenses with which to begin the new year.

Obituary Note.—Dr. Amos Harrison Brundage, who died Sunday at his home, 1073 Bushwick Avenue, Brooklyn, in his seventy-seventh year, was one of the founders of the New York State Medical Society. He was born at Benton, Pa., and after graduating from the Central College at McGrawville, N. Y., he taught school for several years in Pennsylvania, at the same time being postmaster at Fleetville and conducting a drug store. He studied medicine, and in 1855 graduated from the medical college of the New York University. When the civil war broke out he joined the One Hundred and Seventy-ninth Regiment, New York Volunteers, and later was acting surgeon of the Sixth New York Regiment of cavalry under General Sheridan, and was present at the surrender of General Lee at Appomattox. At the close of the war he moved to Cohoes, N. Y., and in 1881 he settled in Brooklyn. He was a member of the Brooklyn Medical Society. He is survived by two sons, Dr. Albert N. Brundage, of Brooklyn, and the Reverend Henry E. Brundage, of Denver, Col.

The Meningitis Commission.—The commission to investigate cerebrospinal meningitis, appointed by Health Commissioner Darlington, had its first meeting on March 21st, in the Health Department building at Fifty-fifth Street and Sixth Avenue. The commission consists of Dr. W. F. Polk, Dr. W. B. James, Dr. W. T. Northrup, Dr. Simon Flexner, Dr. J. F. Van Cott, Dr. E. K. Dunham, and Dr. William K. Draper. Dr. Polk, who is dean of the Cornell Medical School, has not yet accepted the appointment. He was the only member not in attendance. His place as chairman of the commission was filled, temporarily, by Dr. James. Dr. Draper was appointed secretary. The commission spent some time studying maps of the city with regard to the prevalence of the disease in certain localities, and in considering the conditions peculiar to those localities. They also had before them the tabulated statistics of the disease for several years back. Dr. Northrup, Dr. James, and Dr. Draper, representing the clinical section, and Dr. Flexner, Dr. Van Cott, and Dr. Dunham, the bacteriological section, then considered in groups the points to be investigated under each head. The commission decided to issue cards to doctors in hospitals, with blanks to be filled in with data, as was done by the pneumonia commission last year. While the final list of questions to be asked in these cards was not settled, the commission will want to know, from the bacteriological standpoint, what are the evidences of communicability and what is known of the biology of the disease bacilli, with reference to differentiation, agglu-

tionation, and pathogenesis. Clinically they will inquire about the effect of drying on the bacilli and viability in spray, as bearing on isolation and infection. Complete information about the patients' surroundings and the conditions under which they were stricken with the disease will also be collected. It is probable that the scope of the investigation will be world wide and that information will be sought from hospitals all over the globe. This commission is the second of the kind appointed in New York. The pneumonia commission, appointed last year, is still at work, but expects to publish the results of its labors in a short time.

PHILADELPHIA.

Changes of Address.—Dr. John Hamilton Small, to 914 South Forty-eighth Street; Dr. Robert N. Keely, to Brown's Mills in the Pines, N. J.; Dr. H. R. M. Landis, to 130 South Twenty-third Street.

Marriage.—Dr. Herbert Norris and Miss Harriet W. Frothingham were married on March 15th. After a wedding trip in Europe and a summer spent in Nova Scotia, Dr. and Mrs. Norris will reside at 313 South Eighteenth Street.

Scientific Society Meetings for the Week Ending April 1, 1905.—Monday, March 27th, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, March 28th, Northwest Medical Society; Philadelphia Neurological Society.

Nurses' Home Dedicated.—A home for the nurses of the Woman's Hospital was dedicated with appropriate ceremonies on March 15th. Dr. Alice M. Seabrooke, superintendent of the Woman's Hospital, and Miss Margaret P. Saunders, president of the board of directors, received the guests.

Abortive Inquest by a Coroner's Jury.—A coroner's jury has found that Lillian G. Ware died of peritonitis in the Howard Hospital. The inquest failed to reveal who had removed certain of the internal organs after death and had thereby frustrated an autopsy by the coroner's physician.

Personal.—On March 11th, Mr. Henry S. Wellcome, of the firm of Burroughs, Wellcome, and Co., of London, England, who, with his wife, is making a visit to the United States, was tendered a reception at the Philadelphia College of Pharmacy. Mr. Wellcome presented a gold loving cup to the college in memory of his student days, he having graduated in the class of 1874.

Dr. and Mrs. Charles H. Frazier have issued invitations for receptions on March 18th and 25th to the faculty of the medical department of the University of Pennsylvania.

Report of the Kensington Hospital for Women.—The twenty-first annual report of the Kensington Hospital for Women has just been received. During the year 388 patients were treated in the wards, of whom 136 were cases for abdominal section. There were 446 other gynæcological operations performed. In the dispensaries 628

new patients were treated, who made a total of 3,003 visits, and of whom 70 were admitted to the wards. The hospital needs a department for the isolation of septic patients, with an operating room for such cases exclusively; a larger nurses' home; a high pressure steam sterilizing plant; and a modern steam laundry. The finances of the institution, according to the treasurer's report, show a deficit of about \$2,000.

Mount Sinai Hospital Dedicated.—On the afternoon of March 13th the Mount Sinai Hospital at 1407 to 1429 South Fifth Street was dedicated and opened to the public. There were exercises in the B'Nai Reuben Synagogue and an inspection of the new buildings. Dr. M. Y. Belber, Dr. L. Effron, Dr. A. Brav, Dr. B. L. Gordon, Dr. S. J. Gittelson, Dr. Edwin Rosenthal, Mrs. M. Y. Belber, Mrs. David Phillips, Mrs. Henry S. Belber, Mrs. L. Mark, Miss Jeanette Kabat, Miss Ida Sperling, and Mrs. L. Bernstein were of the reception committee.

Deaths.—Dr. A. B. Craig died at his home on March 13th of cerebrospinal meningitis, which he contracted from a patient on whom he had been in attendance. Dr. Craig, who was 33 years old, graduated from the Jefferson Medical College in 1893. He was an assistant demonstrator of surgery in the Jefferson Medical College, where it is proposed to erect a tablet to his memory.

Dr. W. W. Meyers died on March 11th at his home, 1940 North Twenty-first Street, aged 60 years. Dr. Meyers graduated from the Maryland University and Medical College. He was an assistant surgeon in the navy during the Civil War. For twelve years, up to six years ago, he was a medical inspector in the city of Philadelphia.

The Health of the City.—The following cases of transmissible diseases were reported to the bureau of health for the week ending March 11, 1905:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	178	12
Scarlet fever.....	38	1
Chickenpox.....	55	0
Diphtheria.....	56	11
Cerebrospinal meningitis.....	5	1
Measles.....	20	0
Whooping cough.....	11	3
Tuberculosis of the lungs.....	63	80
Pneumonia.....	92	82
Erysipelas.....	13	1

The total deaths for the week were 599 in an estimated population of 1,438,318, corresponding to an annual death rate of 21.66 per 1,000 population. The total infant mortality was 123; under one year, 102; between one and two years, 21. There were 45 still births; 23 males and 22 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 7; dysentery, 3; diarrhœa and enteritis under two years, 11. The increase in the number of cases of typhoid fever, 178 cases this week (ending March 11th) as compared with 92 cases last week (ending March 4th), is attributed by the health authorities to a failure of the people to boil or to filter their drinking water. From the district receiving filtered water exclusively (twenty-first and twenty-second wards) there were 6 cases re-

ported, and from the district part of which receives filtered water (part of twenty-fourth and twenty-seventh wards), 12 cases were reported. It should be remembered that many of the inhabitants of these districts spend the day at work in districts in which filtered water is not supplied. The death of a physician from cerebrospinal meningitis, contracted from a patient, and the closure of a school from Friday night until Monday morning for fumigation, because one of the pupils was reported suffering from cerebrospinal meningitis, has given rise to a great deal of hysterical clamor in the newspapers, none of which is warranted. The weather bureau records show that the climatic conditions are moderating; the maximum temperature for the week was 49° on the 10th, the minimum was 16° on the 5th. The total rainfall was 1.62 inches.

Bureau of Health Statistics.—During February, 1905, the division of medical inspection of the bureau of health made 2,215 inspections, excluding those of schools. There were 25 cases submitted for special diagnosis. There were 4,950 visits made to schools and 823 children were excluded from school. Two hundred and fifty-five cultures were taken, 91 injections of antitoxine were given and 557 vaccinations were done. In the division of milk inspection 3,895 inspections were made of 89,791 quarts of milk, of which 45 quarts were condemned. One hundred and two chemical examinations and 671 microscopical examinations were made. In the division of disinfection 196 fumigations were made for scarlet fever, 252 for diphtheria, 74 for typhoid fever, 68 for tuberculosis, 82 for various other diseases, and 18 fumigations of schools were done. In the bacteriological laboratory 1,800 examinations were made for diphtheria, 330 examinations of blood for the serum diagnosis of typhoid fever, 688 examinations of milk, 104 of sputum, and 961 bottles of antitoxine were supplied. One hundred and forty-eight analyses were made in the chemical laboratory. The following are the statistics of the Municipal Hospital for February, 1905:

	Remain- ing.	Re- ceived.	Dis- charged.	Died.	Remain- ing.
Diphtheria	65	72	72	14	51
Scarlet fever.....	122	51	75	5	93
Smallpox	0	0	0	0	0
Other diseases.....	0	1	0	0	1

Henry Phipps Institute Report.—The first annual report of the Henry Phipps Institute for the study, treatment, and prevention of tuberculosis has been issued and one of its features was commented on in our editorial columns.¹ The report is a carefully prepared record of the work done by this institution and its excellent staff during its first year of activity. It shows that 2,039 cases were treated during the year, of which 254 were treated in the hospital wards. These cases are then classified according to nativity, age, social condition, occupation, source of contagion, etc., in a very thorough manner. A summary of the autopsies is made by Dr. Joseph Walsh; the laryngological work is described by Dr. George B. Wood; the neurological report by

Dr. D. J. McCarthy has been noted as indicated above; Dr. Mazzyck P. Ravenel describes an uncommon case of fibroid phthisis with marked bronchiectasis; Dr. H. R. M. Landis makes a report on the colored patients; and Dr. J. W. Irwin gives a valuable statistical study of tuberculosis in Philadelphia. The report also contains the popular lectures delivered during the year under the auspices of the institute by Dr. Edward L. Trudeau, Dr. William Osler, Dr. G. Sims Woodhead, Dr. Herrmann M. Biggs, and Dr. Eduardo Maragliano.

GENERAL.

Detroit Board of Health.—Dr. J. B. Kennedy has been elected president of the board of health of Detroit, to succeed S. T. Douglas; Dr. C. G. Jennings is the new vice-president.

The Erie County Medical Society, of Buffalo, has elected these officers: President, Dr. Arthur Bennett; vice-president, Dr. Grover Wende; secretary, Dr. David E. Wheeler; treasurer, Dr. Adolph H. Urban.

Gift to a Cleveland Dispensary.—Mr. John D. Rockefeller has given \$25,000 to the Women's and Children's Free Dispensary of Cleveland. The conditions have not yet been made public, but it is supposed that the institution is to raise a similar amount.

Bequests to Chicago Charities.—Among the bequests of the late John D. Murphy, of Chicago, were the following: St. Luke's Hospital, \$2,000; Alexian Brothers' Hospital, \$2,000; Mercy Hospital, \$2,000; Home for Destitute Crippled Children, \$500; Presbyterian Hospital, \$2,000.

Medical Society of the Missouri Valley.—A well attended meeting of this society was held at Kansas City, March 23rd and 24th. Twenty-nine papers were read and discussed. An enjoyable "smoker" was held at the Midland Hotel on the evening of March 23rd.

Dr. Osler's Successor.—Dr. William T. Councilman, of the Harvard Medical School, has been elected to succeed Dr. William Osler as professor of medicine at Johns Hopkins Medical School. Dr. Councilman graduated from the medical department of the University of Maryland. He has been professor of pathology at the Harvard Medical School since 1892.

Resignation of Dr. F. W. Draper.—Dr. F. W. Draper, for twenty-eight years medical examiner of Suffolk county, Mass., has tendered his resignation to Governor Douglas, to take effect June 30th, next, at which time his appointed term ends. Dr. Draper was appointed to the position at the time the office of medical examiner was created, and he holds an unimpeachable record during four terms of seven years each.

An Acknowledgment by Dr. Wieder and Dr. Springer.—We regret that our issue of March 18th went to press too early to allow the appearance of the following acknowledgment, which should have formed the concluding paragraph of the communication on Tuberculous Meningitis

¹ New York Medical Journal and Philadelphia Medical Journal, March 4, 1905, p. 447.

and Stricture of the Rectum, by Dr. Wieder, of Philadelphia, and Dr. Springer, of Wilmington, Del. In conclusion the writers wished to express their gratitude to Dr. Roland G. Curtin and Dr. William E. Hughes, in whose ward the case occurred, for permission to publish the same, and to Dr. J. Dutton Steele for his valuable assistance in the preparation of the pathological report. Dr. Wieder and Dr. Springer wish also to express their gratitude to Dr. Striker for permission to report the case of Uraemia and Pericarditis in our issue of March 4, 1905, and to Dr. J. Dutton Steele for his valuable assistance in preparing the pathological report of the same case. This acknowledgment was inadvertently omitted at the time of publication.

The Optometry Bill at Albany.—The Rosenstein bill, which seeks to regulate the practice of optometry in this State, was opposed before the assembly committee on public health on March 15th by a delegation representing the New York State Medical Society, headed by Dr. Frank Van Fleet, of New York, and composed of Dr. M. L. Foster, Dr. Alexander Shaw, Dr. Theodore Mundorff, and Dr. J. R. Schwinzer, of New York, and Deputy Health Officer Edward Clark, of Buffalo. The main contention against the bill was that a man should not be licensed by the State to care for the eyes unless he understood the practice of medicine and was familiar with anatomy. The bill was favored by B. B. Clark, president of the State Optical Society; W. W. Bissell, E. E. Arrington, of Rochester; A. T. Kenney, of Utica; S. Stern, of Kingston; and A. J. Cross, and Alexander Martin, of New York. They contended that the enactment of the bill into a law would preserve the public health, as it would stop inexperienced persons from caring for the eyes. At present they claimed that there is no law to stop peddlers or any persons from fitting eyeglasses, no matter how incompetent they may be.

Special Trains to the Next Meeting of the American Medical Association.—Arrangements have been completed under which the Northern Pacific Railway will run three solid special trains through to the Pacific Coast for physicians who go West early in July to attend the coming sessions of the American Medical Association. The first special will run through from Chicago, leaving June 30th and reaching St. Paul July 1st, proceeding West and stopping at Gardiner, Mont., for a five and a half day tour of the Yellowstone National Park. A second solid special train will leave Chicago July 1st, reaching St. Paul July 2nd, and proceeding West to Gardiner for a similar tour of the Yellowstone. A third special train will leave Chicago July 6th, running through to Portland, with stops at several important points. The Northern Pacific has been designated as the official route for physicians, and the National officers will go West on one of the first two specials, in both of which accommodations are nearly all taken up. Arrangements are now being made by numerous small parties for space in the third special, and it is possible that additional trains will be arranged for if the demand for reservations continues. Each special

will be made up of standard Pullman equipment, with through dining cars and ample baggage accommodations. Every facility which adds to luxurious comfort *en route* is being arranged for, and the train schedules have been worked out with especial reference to the convenience of the travelers. The third special will arrive in Portland the morning before the convention opens. Berth reservations should be made through C. A. Matthews, General Agent Passenger Department, N. P. R., Chicago. Service can best be afforded if physicians will cooperate in this matter, arranging their plans accordingly.

Statement of Mortality in Chicago for the Week Ending March 18, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Mar. 18, 1905.	Mar. 11, 1905.	Mar. 19, 1904.
Annual death rate per 1,000.....	14.57	16.41	15.02
Total deaths, all causes.....	557	627	578
By sexes—			
Males.....	324	364	338
Females.....	233	263	240
By ages—			
Under 1 year.....	133	135	103
Between 1 and 5 years.....	51	70	35
Over 60 years.....	98	112	122
Important causes of death—			
Acute intestinal diseases.....	27	28	14
Apoplexy.....	15	13	24
Bright's disease.....	34	38	24
Bronchitis.....	31	30	22
Consumption.....	63	82	74
Cancer.....	22	19	20
Convulsions.....	14	19	19
Diphtheria.....	11	2	10
Heart diseases.....	42	45	32
Influenza.....	8	10	2
Meningitis.....	17	22	28
Nervous diseases.....	17	22	2
Pneumonia.....	103	138	137
Scarlet fever.....	2	1	5
Smallpox.....	3	8	..
Suicide.....	11	8	7
Typhoid fever.....	4	8	7
Violence (other than suicide).....	29	25	26
Whooping cough.....	11	6	2
All other causes.....	108	117	123

A very gratifying decrease of the total number of deaths and of the death rate is noted. The total 557 deaths is seventy fewer than for the previous week and the rate is 14.57 per cent. less. The principal reductions are in consumption—nineteen fewer—and in pneumonia—thirty-five fewer. A wholly unanticipated increase of deaths from diphtheria occurred—eleven, as compared with only two the previous week. There had been no forewarning of this, the laboratory examinations during the previous fortnight showing a marked reduction in the findings of the diphtheria bacillus. Nor was there any common source of infection; on the contrary, the cases were widely distributed over the city. The obvious explanation is that, by some sinister coincidence, the diphtheria antitoxine was not administered in the early stage of the disease or not in sufficient quantity. No child dies of diphtheria to whom 3,000 units of antitoxine are administered within the first forty-eight hours of the attack—repeated, of course, if necessary. And when in doubt as to the nature of a "sore throat," don't hesitate. Give the child the benefit of the doubt—and give it antitoxine at once. If not diphtheria, no possible harm can result. If diphtheria, a life will be saved.

Pith of Current Literature.

LYON MEDICAL.

February 5, 1905.

1. Cystic Peritonitis with Compression of the Common Bile Duct, By MOUISSET and VALLAS.
2. Mutism Lasting Sixteen Months in a Degenerate Tramp. Cure by Suggestion, By LANNOIS and FEUILLADE.

1. **Cystic Peritonitis With Compression of the Common Bile Duct.**—Mouisset and Vallas describe a case of localized peritonitis which involved the fold of omentum at the level of the bile ducts, called in the French textbooks *l'arrière-cavité des épiploons*, which compressed the common bile duct. The condition was relieved by operation. Unfortunately a fistula from the duodenum resulted.

2. **Mutism Cured by Suggestion.**—Lannois and Feuillade report the case of a man, 26 years of age. His history is followed from birth. He had a remarkable memory for insignificant facts, such as dates, not only of important events, but of the birthdays of the various inhabitants of his native village, the paging of a book, and the exact contents of each page, and had a vagabond spirit which caused him to roam as a tramp. In 1900 he began to stammer. The stammering became worse until in June, 1903, he lost the power of speech. In November, 1904, speech was restored by means of suggestion.

February 12, 1905.

1. The Social Struggle Versus Tuberculosis, By JULES COURMONT.
2. Intravesical Separation and Ureteral Catheterization, By Dr. RAFIN.

1. **Social Struggle Versus Tuberculosis.**—Courmont's argument is that social conditions are largely responsible for tuberculosis, by the crowding together in unsanitary surroundings people who have not been successful in the social struggle. As remedies he considers disinfection of the sputum and sterilization of milk as of great importance, but a reduction of poverty, misery, and alcoholism, with hygienic improvement to be necessary to control the disease.

2. **Intravesical Separation and Ureteral Catheterization.**—Rafin presents the relative merits of these two methods of obtaining the urine from each kidney for examination chemically, microscopically, and bacteriologically. The two methods are compared from various standpoints, the dangers and difficulties are considered and the conclusion is finally reached that neither one is perfect. Intravesical separation, with Luys's instrument, is preferred by those who are unable to overcome the difficulties presented by cystoscopy and ureteral catheterization, as well as by those who dread renal contamination, but the catheterization is preferred by those who are skilled in its performance.

February 19, 1905.

Temporal Abscess of Otitic Origin; Trepanation; Recovery; Clinical and Therapeutical Considerations, By EUGENE VILLARD and LECLERC.

Otitic Brain Abscess.—Villard and Leclerc describe a case of otitic brain abscess. The patient was brought in in a state of coma and exhibited no symptoms of localization. The mastoid was opened at the level of the antrum, the lateral sinus exposed and found normal. The cerebellar fossa was also normal. Finally the bone was trephined 3 cm. above the external auditory meatus and an abscess found situated deeply in the temporal lobe. Recovery was prompt. Six months after the operation the patient's intellect was clear and he complained only of occasional headache and vertigo, the attacks of which were growing less marked.

February 26, 1905.

1. The Antituberculosis Dispensary, By JULES COURMONT.
2. Complementary Note on the Action of Formic Acid on the Muscular System, By E. CLÉMENT.

1. **The Antituberculosis Dispensary.**—Courmont in this article, which is supplementary to the one published last week on the social struggle versus tuberculosis, presents a description of a dispensary of the Calmette type at Lyons, of the division of the patients into contagious and non-contagious, of the establishment of a sanitary barrier about contagious tuberculous cases, and of the routine of management.

2. **The Action of Formic Acid on the Muscular System.**—Clément says that formic acid increases the muscular force and activity, as well as the power of resistance to fatigue, and presents the experimental results from which he has deduced the statement. Acting on the vesical muscle it facilitates micturition and increases the force on emission. It exercises a very favorable effect of diuresis, particularly in combination with alkalies. It increases the tonicity and contractility of the muscles of the larynx. Beneficial effects were observed in three cases of arteriosclerosis with albuminuria. It increases arterial tension when low by its action on the cardiac muscle, but decreases it when high from trouble with the peripheral circulation by its action on the muscular fibres of the arteries. The dose for an adult is 2 to 3 grammes, according to the height and weight of the person. Sodium formate may be used in rather larger doses.

PRESSE MEDICALE.

February 18, 1905.

Syphilis of the Stomach, By GEORGES HAYEM.

Stomachal Syphilis.—Hayem reports several cases in which symptoms of various gastric conditions were counterfeited. The clinical histories, symptoms, and the results of examinations of the contents of the stomach after the ingestion of a test meal are given. His conclusions are that the stomach is not rarely the seat of tertiary syphilis, which can produce serious clinical manifestations and simulate many definite types of stomach diseases. The first type given is that of ulceration with hæmatemesis, symptomatically resembling ulcer of the stomach. The second type is one of benign stenosis of indeterminate cause, without tumor, resembling a stenosis of ex-

trinsic origin. The third is a pyloric or prepyloric tumor, suggestive of the development of a cancer of the pylorus. The fourth simulates a cancerous stenosis. Our knowledge of these conditions is incomplete. The diagnosis is invaluable when it can be made. Analysis of the gastric juice furnishes an important indication, because although its constituents closely resemble those in cases of cancer a difference is found in the absence of the lactic reaction, though it may be objected that this reaction is not absolutely constant in cases of cancer. For treatment he recommends hypodermic injections and washing out of the stomach with a solution of potassium iodide. In cases of stenosis of obscure origin it is wise to try specific treatment first unless the demand for operative relief is urgent.

February 22, 1905.

Mediterranean Fever in Tunis,

By CHARLES NICOLLE and M. TRIOLO.

Mediterranean Fever in Tunis.—Nicolle and Triolo describe the clinical features of Mediterranean, or Malta fever as met with in Tunis, together with the culture of the micrococcus melitensis, the pathogenic agent of the disease.

SEMAINE MEDICALE.

February 15, 1905.

The Conduct of a Case of Foreign Body in the Œsophagus of an Infant,

By L. BERARD and R. LERICHE.

Foreign Body in the Œsophagus of an Infant.—Berard and Leriche say that radiography should be practised whenever possible to locate accurately the position of the foreign body. Then there are three things which may be done; it may be removed through the mouth, be removed by œsophagotomy, or be pushed down into the stomach. The latter is not a good procedure as it risks not only lacerations of the mucous membrane, but also that the attempt may cause impaction and complete obstruction lower down at a point less accessible by operation. With the aid of the œsophagoscope extraction through the mouth can sometimes be safely practised, but without the aid of this instrument the operation is not safe. External œsophagotomy is usually the preferable procedure. It is a simple operation, more easily performed on a child than on an adult, and less dangerous than has been thought. In all cases the passage of a œsophageal sound is useless and is apt to be dangerous.

RIFORMA MEDICA

February 11, 1905

1. Surgical Intervention in Ascites Due to Cirrhosis of the Liver (*To be continued*),

By ORESTE CIGNOZZI.

2. On the Biology of Certain Anaerobic Germs, and on an Easy Method of Growing Them in Cultures (*To be continued*),

By GIULIO TAROZZI.

3. Parkinson's Disease. Postinfective and Family Paralysis Agitans,

By PAPINIO PENNATO.

3. Parkinson's Disease.—Pennato reports two cases of paralysis agitans which developed in two very young members of the same family, both of whom had recovered from typhoid fever shortly

before the onset of the nervous affection. While the infectious character of Parkinson's disease cannot be affirmed with certainty, yet it is unquestionable that it follows infectious maladies, especially dysentery and typhoid fever. Parkinson's disease rarely occurs as a family affection, and for this reason the present cases offer a special interest. Bury reported two cases, while Borgherini reported three cases in one family and Gowers also saw two members of the same family affected. The patient, whose history is given in full, fell ill with typhoid fever at the age of twelve years, and during convalescence began to show the characteristic tremors and the tendency to fall backward. The symptoms grew worse until she was admitted to the hospital at the age of thirty-six years. Her brother was affected in the same way after typhoid fever, also at the age of twelve years. She died of the results of a mitral stenosis which had developed in the meantime. A study of the lesions found convinced the author that the pathological basis of paralysis agitans is not a diffuse senile change in the nervous system. It is in these cases occurring in comparatively young subjects that the theory as to the senile character of these changes in Parkinson's disease can be studied with profit. The lesions found in this case in brain, spinal cord, and peripheral nerves seemed to have been the result of an excessive use of all the organs and tissues of the body for a considerable time. In the absence of vascular changes, however, the case does not confirm the theory that the changes are due to precocious senility.

February 18, 1905.

1. Hemiplegia in a Case of Pneumonia (*To be continued*),
By CARLO FEDELI.

2. Effects of Removal of the Pancreas,
By TORINDO SILVESTRI.

3. Surgical Intervention in Cirrhosis of the Liver with Ascites (*Part II*),
By ORESTE CIGNOZZI.

4. The Biology of Some Anaerobic Germs, and an Easy Method of Cultivating Them (*Part II*),
By GIULIO TAROZZI.

2. Effects of Removing Pancreas.—Silvestri found as the result of experiments on dogs, that the constant effects of removing the pancreas consisted of a transient glycosuria, occurring within twenty-four or thirty-six hours after the operation, and followed afterwards by a slight glycosuria which lasted from forty to sixty days. There were also disturbances of digestion and nutrition, emaciation, polyuria, excessive and abnormal appetite, and thirst. These disturbances were not fatally progressive, but disappeared after a time. The results seem to show that the pancreas has an influence on the metabolism, regulating the processes thereof in some way. This is proved by the fact that injections of the extract of pancreas in these dogs proved of benefit to the general metabolism, but did not have any effects on the glycosuria. The removal of the spleen and of other organs acts in the same way, although less markedly. The results obtained by various observers with animals with removed pancreas vary greatly, and this is the principal difficulty in solving the question as to the action of the pancreas. These differences in

results, the author thinks, are due to the individual predisposition of the animals, as one author has produced glycosuria of various types by experimentally inducing neuritis in the peripheral end of the cut vagus. The differences in results also depend, in a measure, on the ages of the animals used, and also on the presence of various complications, due to the operation, etc. The results which he obtained correspond closely to the symptoms seen in man in severe forms of diabetes. He pleads for a broader interpretation of the term diabetes, and asks that glycosuria should no longer be held synonymous with that disease. The worst clinical forms of diabetes sometimes are accompanied by very little sugar, and the lightest cases show sometimes the largest amounts. He considers diabetes as a disease of autolysis, in which the decomposition of the proteid molecule goes on too fast, in which there is, so to speak, a gangrene of the organism. The bulimia and the polyphagia are only results of this abnormal decomposition.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

February 5, 1905.

1. A Case of Peripheral Paralysis of the Peroneal Nerve due to Measles, By G. B. ALLARIA.
2. How Does Tubercle Develop Under the Direct Influence of Specific Antituberculous Serum? By GIOVANNI GHEDINI.
3. Abnormal Development of the Clitoris, By VIRGILIO MAGGIONI.
4. Two Cases of Atrophy of the Optic Nerve as the Result of Injuries to the Head, By AGOSTINO CARBONE.

1. Peripheral Paralysis of Peroneal Nerve due to Measles.—Allaria reports a case of measles which was followed by paralysis of the peroneal nerve, and which he deemed to be of peripheral origin. The patient was a girl, aged nine years, who began to complain of pain in one foot, "which felt as though she wore a tight shoe" during an attack of measles. After the eruption had disappeared and she was again allowed to walk, it was noted that she dragged that foot. The leg muscles were atrophied and on the affected (left) side, the cutaneous sensibility was diminished and the skin reflexes were abolished. The patient slowly recovered under the use of massage, electricity, etc.

2. Action of Direct Application of Antituberculous Serum on Tubercle.—Ghedini injected virulent cultures of tubercle bacilli into the joints of a number of rabbits. Some of these animals were left untreated, and developed typical and severe tuberculous synovitis and arthritis. Another series received subcutaneous injections of antituberculous serum (Maragliano's) into the skin of the back, while still another set received these injections directly into the joints. In the second group, the rabbits which received subcutaneous serum injections, the reaction to the tuberculous infection was very much diminished, while in the animals which received the antituberculous substance directly into the affected joints the reaction was still more feeble. Ghedini thinks that the direct injections were more effective because the antituberculous substance did not become diluted with blood plasma, nor did it need to travel a long distance before it reached the affected

spot. The practical application of these researches would be in the injection of antituberculous serum into tuberculous joints, or into tuberculous testicles. These injections would have to be given in doses of from two to five c.c. at intervals of two or three days for two or three months.

3. Anomaly of Clitoris.—Maggioni's case of anomalous clitoris occurred in a subject, twenty years old, who presented all the secondary sexual traits of a woman, and who showed regular labia majora and minora. In place of the clitoris there was, however, a large erectile organ which resembled a penis in every respect, except that the meatus urinarius was situated in the vestibule beneath the root of the enlarged clitoris. The enlargement of the organ began when the patient was twelve years old. She began to menstruate at eighteen and the little finger introduced into the vagina could make out the presence of an os uteri. The author cautions against mistaking such cases of enlarged clitoris for hermaphroditism.

February 12, 1905.

1. Diplococcemia with Multiple Secondary Localizations, By ALFREDO ROSSI.
2. A New Method of Serum Diagnosis in Tuberculosis, By E. MARZAGALLI.
3. Experimental Diplococcic Meningitis Due to Inhalation, By V. MARAGLIANO.
4. Contribution to the Study of Intestinal Occlusion Due to the Diverticulum of Meckel, By A. D. MONTINI.
5. Acute Circumscribed Edema in Malaria, By FERRUCCIO BINDI.
6. Acute Mastoiditis with Intracranial Complications of Otitic Origin, By D. PAPI.

1. Diplococcemia.—Rossi's patient was admitted with the signs of acute articular rheumatism. The sensorium was markedly depressed, there were no sweats, and the joint lesions appeared when the disease had already reached a considerable height. On the fourth day after admission, the ninth of the disease, the patient developed a pneumonic focus, which behaved in the regular way. When resolution set in an exudative pericarditis came on. There was also a diastolic-presystolic murmur at the mitral valve and a systolic murmur over the aorta transmitted upward. Bacteriological examination showed the presence of a diplococcus in the blood. The diplococcus of Fraenkel rarely localizes in the aorta as it did in this case. The patient recovered.

2. Serum Diagnosis in Tuberculosis.—Marzagalli gives the details of an interesting new method of serum diagnosis which he has used in tuberculosis. The preparation of homogeneous cultures of the germ is difficult, although Arloing and Courmont and others have succeeded. An easier method which the author proposes is to make an extract or pulp from the protoplasm of virulent and living tubercle bacilli by washing the germs in cold water, so as to remove all traces of culture media, and then triturating them with distilled water and filtering the triturate in Chamberland's filter. The resulting extract is an opalescent alkaline fluid, which is precipitated on the addition of the serum of tuberculous patients.

In order to make the diagnostic test, it is necessary to have tubes of this "pulp" in various dilutions, and to add a varying amount of the serum of the patient or animal experimented upon. If the result is positive, a precipitate will appear within four hours in a dilution of one part in five. The dilutions used should be that just mentioned, also 1:10, or 1:15, etc. The serum may also be poured into a very small test tube, and a little of the pulp fluid may be poured down the sides of the tube. A ring of precipitate will show a positive result at the point of contact of the two liquids. The various exudates may be used for diagnosis, but it is better to use pure blood serum. The method is much easier than that of Arloing and Courmont (with homogeneous cultures which agglutinate). The germ pulp can be kept for some time without deteriorating.

ROUSSKY VRATCH.

January 29, 1905.

1. On Chronic Diphtheria or Diphtheroid of the Larynx,
By A. D. PAVLOVSKI.
2. The Alleged and the Actual Incapacity for Reading,
By R. A. KATZ.
3. The Hedonal-Chloroform Method of Anæsthesia,
By A. G. ZALOGI.
4. A Case of Acute Dermatomyositis,
By M. A. GOLDENBLUM.
5. The Treatment of Scabies with Eudermol,
By V. F. DEMITCH.

1. **Chronic Diphtheria or Diphtheroid.**—Pavlovski discusses the subject of the atypical forms of diphtheria, which are characterized by chronicity, by the absence of the regular diphtheritic lesions, and are recognized as diphtheria only by the presence of the diphtheria bacillus in virulent form. Escherich gave the name *diphtheroid* to these cases. Recent researches have revealed a whole group of diphtheritic affections which have nothing in common with ordinary diphtheria clinically, and which when they attack the larynx are often accompanied by a dry atrophic state of that organ, with chronic hoarseness, or with attacks of croup without membrane. The same class of processes due to the diphtheria bacillus have also been recognized in certain forms of chronic fibrinous rhinitis and of atrophic rhinitis, as well as in some types of chronic fibrinous conjunctivitis. The author suggests that the term *diphtheromycosis* be applied to all the affections produced by the diphtheria bacillus, taken as a group. He reports a number of cases of chronic diphtheria of both the tonsils and the larynx. In one case of what appeared to be a follicular amygdalitis clinically, diphtheria bacilli were found, and remained for two weeks. A relapse of the disease occurred afterward, and the bacilli remained for three weeks longer. In another case there was acute amygdalitis and pharyngitis without membrane. Diphtheria bacilli were found, and antitoxine produced favorable effects. Death, however, occurred on the sixteenth day from paralysis of the heart. A third case was one of typical chronic diphtheria of the larynx with very slight atrophic changes, and no membrane. In this case diphtheria bacilli were found and persisted for a long time.

2. **Real and Imaginary Alexia.**—Katz studies two cases observed among public school children, in both of which there was said to be alexia. He finds that, besides the real inability to read on account of congenital word blindness, there is a pseudoalexia, due to astigmatism and other congenital visual defects. This was the case in a boy who came under his observation and in whom the proper glasses corrected the alleged alexia. Visual defects which give an apparent alexia in children may be due to irregularities in the development of the eye as the result of hereditary syphilis. Real alexia may be divided into the severe form in which the child is letter blind, and the milder form, in which the child is only blind to words. In these children visual memory for letters is developed rapidly, but the child has difficulty in remembering word images. In the severe cases the memory for figures is also affected, as a rule, while in the mild forms the child can memorize figures. Reading, however, cannot go on smoothly, because words are remembered according to the auditory memory or the motor-sensory memory of speech, or the motor memory of writing and not the visual memory. Mild forms of alexia are apt to be confounded with astigmatism or other visual defects which are characterized by extreme slowness and frequent mistakes in reading, as well as by severe and constant headaches. A diagnosis between real and false alexia is of great importance and should be made early, inasmuch as the false type which is due to visual abnormalities can be speedily corrected by glasses, while the real variety, due to cerebral maldevelopment, requires a course of prolonged special teaching and training. The severe cases of alexia are incurable.

4. **Acute Dermatomyositis.**—Goldenblum describes a case of dermatomyositis—that peculiar affection of the skin and muscles which was first classified as a separate disease by Unverricht. An interesting feature of the case reported was the fact that bacteriological examination revealed the presence of streptococci in the muscular tissues of the patient. These germs have been found also in the muscles in other cases of dermatomyositis, and have been connected with the infectious ætiology of the disease. Clinically, dermatomyositis is characterized sometimes by a short sudden rise of temperature, with general malaise, prostration, and weakness, headaches, and sweating. A few days later the pains in the muscles supervene. Sometimes the disease sets in with these pains without any preliminary symptoms. The muscular pains increase in severity until they become well nigh unbearable, and the patient does not dare move or allow any one to touch him. Any muscle may be affected, and the only one thus far known to have escaped is that of the bladder. The respiratory and deglutition muscles are often severely involved and at times the affection may prove fatal. Of fifteen cases, eleven ended in the death of the patient. The prognosis of the disease is very grave. Catarrhal angina often accompanies the disease and sometimes there is nephritis. In the case reported the patient was a man twenty-two years old, with a negative history, except that he had had a previous attack nine years before. The disease began with a maculopapular eruption; later on during the disease, œdema ap-

peared at various points. The patient died of exhaustion and of inanition owing to the involvement of the pharyngeal and respiratory muscles. He never lost consciousness. The author regards this case as one of streptococcus infection, with the tonsils or pharynx as probable portals of entry.

February 5, 1905.

1. On the Surgical Treatment of Diseases of the Bile Ducts (*To be continued*), By M. M. KOZNETSOFF.
2. The Characteristics of Bullet Wounds in the Present War, By N. K. CHOLINE.
3. A Case of Acute Articular Rheumatism in a Nursing Infant, By V. V. SHENGELIDZE.
4. Case of Penetrating Wound of the Abdomen, with Prolapse of the Injured Intestine; Case of Compound Fracture of the Skull with Injury to the Brain, By J. G. DILLON.

2. Character of Bullet Wounds in Russo-Japanese War.—Choline finds from a study of gunshot injuries in the present war, that the Japanese bullet fulfils sufficiently well the requirements of humanity, for the absence of contusion and fragmentation in its track renders the treatment of wounds received by the Russians easy and simple. The wounds as a rule heal rapidly without complications. The majority of the soldiers who received wounds of the skull, the chest, the abdomen, or the spine, required more or less protracted treatment at some place close to the battlefield. He recommends the establishment of as many hospitals as possible close to the battlefield so as to avoid if possible the tedious and dangerous transportation of the wounded. The possibility of late complications, in his opinion, requires that the patients be kept in the hospital for a long time, so as to give the wounds a good opportunity to heal. The present conditions of transporting the wounded are highly unsatisfactory and even fatal to the wounded, and this matter requires immediate and rational correction. Some details in this paper may be interesting to American surgeons: The author begins by saying that the Russian surgeons had been unacquainted with the effects of small calibre rifle bullets before the present war. He himself had charge of 230 wounded at the Hospital of the Nobles in Harbin. Most of the wounded arrived there five or six days after the battle in which they were wounded, so that his experience with fresh wounds was limited. The Japanese bullets have the greatest initial velocity yet attained by any rifle projectile, i. e., 750 metres a second. The worst wounds produced are those made within a distance of from one to five hundred metres. Beyond five hundred metres the wounds are all clean and heal easily. The range is two thousand metres. The bullet is 6.5 mm. in diameter and weighs 10.5 grammes, while the Russian bullet is 7.6 mm. in diameter and weighs 13.7 grammes. The great peculiarity of the Japanese bullets is their straight course and their penetrating power. No tissue of the body deflects them, and they pass through interposed objects, such as thick books in wooden bindings. Their calibre is so small that the opening of entrance is indistinguishable from that of exit. Sepsis was rarely noted in these cases, as no fragments of clothing were

carried in by the swift passage of the projectile. Sepsis was noted usually only in those soldiers who had been probed and examined at the first aid station in the field. The author warns against all such probing as unnecessary and dangerous. The Japanese bullets have a special tendency to wound blood vessels and nerve trunks. Bones suffer comparatively clean penetration. Wounds of the joints healed with remarkable smoothness, and but rarely was an operation required.

3. Acute Rheumatism in an Infant.—Shengeldize describes a case of articular rheumatism of the acute type in an infant aged about two weeks. The mother suffered from the same trouble while nursing this little girl. The infant had the typical swelling, redness, pain, etc., at the ankle, and at one of the interphalangeal joints, fever, etc. The author found but a few similar cases in literature. He thinks that rheumatism may be transmitted by the mother to a nursing infant. Schaefer believes that the disease may be transmitted through the placenta. It is remarkable that heart complications have thus far not been observed in infants with acute rheumatism, but it is possible that they develop later when these infants are no longer under observation. A noteworthy feature in the case reported was an exudate in one of the maxillary articulations.

4. Two Successful Operations.—Dillon's cases (wound of the abdomen and fracture of the skull) are only remarkable because the operations were performed in a hospital at Vilna, where there is no operating room, and it is almost impossible to sterilize anything. The room in which this surgeon operates is used also as a dispensary, an office, and a drug shop.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 18, 1905.

1. Clinical Examination of the Urine. A Critical Study of the Commoner Methods (*To be continued*), By RICHARD C. CABOT.
2. Models for Teaching the Anatomy and Operative Treatment of Inguinal Hernia, By DANIEL N. EISENDRATH.
3. A System for the Surgical Correction of Hare Lip and Cleft Palate, By GEORGE V. I. BROWN.
4. The Surgical Aspects of Major Neuralgia of the Trigeminal Nerve. A Report of Twenty Cases of Operation on the Gasserian Ganglion, with Anatomical and Physiological Notes on the Consequences of Its Removal (*Continued*), By HARVEY CUSHING.
5. Some Minor and Borderline Psychoses of Alcoholism, By FRANK PARSONS NORBURY.
6. Tumors of the Brain. (Discussion on the Papers of Kendig and Wolfstein, and of Brown and Keen.)
7. Twist of the Pedicle of Ovarian Cysts Complicating Pregnancy. A Clinical Lecture, By MILES F. PORTER.
8. The Blood in Lobar Pneumonia, with Remarks Concerning Treatment, By EDWARD C. ROSENOW.
9. Immunity. Chapter VIII (*Continued*).

2. Models for Teaching Surgery.—Eisendrath illustrates and describes a set of models he has devised for facilitating the teaching of the

operative treatment of inguinal hernia. Two kinds of model are recommended: (1) A frame on which are stretched in succession various layers of different colored sweater cloth and muslin. Each of the layers corresponds to a definite component of the abdominal wall. By properly cutting and sewing together the various pieces of cloth an artificial inguinal canal is formed, through which a cord and a sac are thrust. The various steps of any operation can now be easily demonstrated. (2) In the second model a box without ends and with slatted sides is used in place of the frame. The pieces of cloth are stretched on the slats. With this model it is possible to view the structures represented from all sides.

3. **Hare Lip and Cleft Palate.**—Brown advocates the adoption of a more or less formal system for the treatment of hare lip and cleft palate. In his present paper he barely touches on the technics of operation. He occupies himself chiefly with a discussion of the general principles which should be observed in order to obtain good results. He claims originality for the following methods: (1) The reduction in the width of the palatal fissure by means of an appliance which is fastened to teeth on opposite sides of the jaw and which is furnished with a screw which when tightened narrows the palatal cleft. (2) A form of preparatory treatment for infants suffering from lip deformities which tends to overcome the deformity before operation is resorted to. (3) Various minor operative procedures. The article is illustrated, but several of the illustrations referred to in the text are missing.

5. See this *Journal*, Vol. LXXX, page 232.

8. **The Blood in Pneumonia.**—Rosenow asserts: (1) That the pneumococcus can be isolated from the blood of pneumonia patients in about ninety per cent. of all cases. (2) That pneumococci in the blood may be demonstrated, not infrequently, before the advent of typical physical signs. They tend to disappear at or about the crisis and are usually absent after it. (3) Other things being equal, a high leucocyte count is a favorable sign. (4) It seems probable that the pneumococcus, by its growth in the consolidated lung and in the blood of the patient during life, produces acids as it does in the test tube, and that some of the symptoms of pneumonia are due to this acid intoxication. If this is a fact it would probably be well to follow the practice that has recently been adopted by Billings of giving pneumonia patients large and repeated doses of sodium bicarbonate.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 16, 1905.

Abuse of Medical Charity.

- (a) Medical Charity, By GEORGE W. GAY.
- (b) Some Abuses of Medical Charity, By HASKET DERBY.
- (c) Abuse of Medical Charity in Boston, By J. W. ELLIOT.
- (d) The Private and Public Hospital, By ALFRED WORCESTER.
- (e) The Regulation of Medical Charity, By FARRAR COBB.

- (f) A Possible Remedy, By JOHN C. MUNRO.
- (g) Medical Charity at the Massachusetts General Hospital, By FREDERIC A. WASHBURN, JR.
- (h) The Physician and the Hospital Private Patient, By E. W. CUSHING.
- (i) Certain Faults in Medical Charities, By SAMUEL CROWELL.
- (j) Abuse of Medical Charity in the Suburban Districts, By CHARLES H. COOK.

The Abuse of Medical Charity.—The ten papers on various aspects of medical charity were read at a joint meeting of the Medical Library and the Suffolk District Branch of the Massachusetts Medical Society. The papers do not concern themselves so much with medical charity in the abstract as they do with the alleged abuses encouraged by some of the Boston hospitals. The chief grievance seems to be against the Massachusetts General Hospital. This hospital has a certain number of rooms, ranging in price from twenty to thirty-five dollars per week, to which private patients are admitted. They are attended free of charge by the regular staff and under no circumstances is the attending physician allowed to make any charges for either medical or surgical services rendered. The papers will be chiefly of interest to Bostonians, as it is stated that one half the population of their native city has been pauperized medically, while in New York and Philadelphia only one quarter of the population gets medical service free.

MEDICAL RECORD.

March 18, 1905.

1. Results of Fifteen Hundred Operations for the Radical Cure of Hernia in Children, Performed at the Hospital for Ruptured and Crippled Between 1891 and 1904, By WILLIAM T. BULL and WILLIAM B. COLEY.
 2. Acne and Its Treatment, By GEORGE T. JACKSON.
 3. The Limitations of the Value of Nitroglycerin as a Therapeutic Agent, By H. P. LOOMIS.
 4. Psychological Aids; or the Practical Use of Well Known Laws of the Mind, By EUGENE COLEMAN SAVIDGE.
 5. Report of a Case of Vaginal Cesarean Section with Recovery, By SIMON STRAUSS.
1. **Hernia.**—Bull and Coley give a very complete analysis of the 1,500 cases they have operated in from December, 1891, to October, 1904. We can only give a few statistics. All the operations reported, with the exception of 20, were performed on children under fourteen years of age. Only one tenth of the children under treatment for hernia were subjected to operation. The mortality was three tenths of one per cent. There were six relapses after 1,076 Bassini operations, and five relapses after 125 operations in which the cord was not transplanted.
2. **Acne.**—Jackson believes that it is probable that acne is due to a parasitic infection of the skin. In order that the disease get a foothold it is necessary for the soil (the skin) to offer a favorable habitat for the offending organism. If these views are accepted the indications for treat-

ment are: (1) Improve the condition of the skin, so that it will no longer be a suitable culture ground for the bacillus. (2) Empty the follicles of the skin of the colonies of bacilli. (3) Keep the skin constantly aseptic, so that any bacilli that escape on it will be killed, and no new infection of the skin will be possible. The author meets these indications as follows: (1) Constitutional treatment and regulation of the diet with a view to placing the patient in as perfect a state of general health as possible. (2) Mechanical cleansing of the skin by means of the curette, the acne lancet, and the comedo expressor. (3) Chemical disinfection of the skin. The drugs that are of greatest service in acne are sulphur, resorcin, mercury, and salicylic acid. Lotions are better than ointments, and the old fashioned *lotio alba* is often of the greatest value. The author has not as yet met in private practice a case of acne which he would have been willing to treat by means of the x ray.

3. **Nitroglycerin.**—Loomis, as the result of clinical and laboratory observations, reaches the following conclusions regarding the therapeutic value of nitroglycerin: (1) The usual dose of nitroglycerin ($\frac{1}{100}$ grain) is too small to produce any effect in pathological conditions; $\frac{1}{50}$ grain is a minimum dose. (2) It is a perfectly safe drug to use. Even in the large and repeated doses used he has never seen any ill effects. (3) High arterial pressure in man is not perceptibly affected by it, nor is dilatation of the blood vessels apparent. (4) Its effects are very transient as shown by the experiments on dogs, and the ordinary dose of $\frac{1}{100}$ grain every four hours could not possibly have any effect on the arteries. (5) Nitroglycerin is said to increase the quantity of urine in chronic Bright's disease, but after keeping accurate records of the daily amount of urine passed, he was never able to satisfy himself that any increase seen was due to this drug. (6) He believes that in conditions due to arterial spasm so called, such as angina pectoris, migraine, and asthma, nitroglycerin may be of benefit, in full doses often repeated, but not in arterial sclerosis where the arteries themselves are more or less changed. For relaxing the arteries and reducing the blood pressure in arterial sclerosis there is nothing equal to five grains of chloral given every four hours.

MEDICAL NEWS.

March 18, 1905.

1. The Fresh Air Treatment of Surgical Tuberculosis,
By LINSLEY R. WILLIAMS.
2. Aural Affections in Children; Necessity of Their Early
Recognition by the Family Practitioner,
By HERMAN JARECKY.
3. The Widal Test for Practising Physicians,
By JOHN H. BORDEN.
4. The Technic of Perineal Prostatectomy,
By GEORGE RYERSON FOWLER.
5. Superficial Inguinal Hernia, with Report of a Case,
By ALBERT E. SELLENINGS.
6. The Importance of the Physical Examination of the
Back in General Diagnosis, By JOHN P. ARNOLD.

7. Local Anæsthesia, by Cataphoresis and by Mechanical
Pressure,
By WILLIAM JAMES MORTON.

1. **Surgical Tuberculosis.**—Williams reviews the work that has been done abroad, specially in France, to test the value of the seaside open air treatment of surgical tuberculosis. The reports from Europe are very encouraging. In the summer and winter of 1904 similar experiments were conducted at Coney Island. The author tells in detail the history of this American experiment. With regard to results, it may be said, in a general way, that they were satisfactory. The author holds that it has been proved that constant fresh air and good food, with the aid of orthopaedic and conservative surgical treatment, is the only way of treating surgical tuberculosis. He believes, but cannot prove, that sea air is the best air. The cost, including repairs and equipment, was \$2.44 per diem a patient. For maintenance of patient only, \$1.13. Sixty-three children were cared for during a total of 4,926 days.

2. **Ear Affections in Children.**—Jarecky calls attention to the importance of promptly diagnosing and vigorously treating the ear affections of children. The possible consequences of neglect are emphasized.

3. **The Widal Test.**—Borden does not discuss the real Widal test, but the method of testing for typhoid fever based on the precipitation of dead typhoid bacilli, held in suspension in a proper medium by means of the serum of typhoid patients. The author gives (1) a method of making the suspensions of dead bacilli and (2) a method of using it. The paper is based on original work performed at the Presbyterian Hospital. The author concludes: (1) The method is to be adapted to use by the practising physician because its technics is simple and free from danger, and because the reading of the reaction is absolute. It is either positive or negative. For the diagnosis laboratory it seems specially fitted because requiring so little time for its application. (2) It is possible that a similar suspension of characteristic bacteria may be used in the diagnosis of diseases other than typhoid fever. (3) The methods of collection and dilution suggested are thought to be simpler and more rapid than those heretofore employed.

4. **Prostatectomy.**—Fowler asserts that no hard and fast rule can be laid down for guidance in choosing between suprapubic and perineal prostatectomy. The latter method is, however, generally to be preferred. The author describes briefly his method of doing an enucleation and a resection. He does not believe that any instrument is ever needed for the purpose of dragging the prostate into the wound. It is probable that the instruments which make pressure upon the prostate from within the bladder are at times responsible for the paralysis of the vesical sphincter so frequently observed.

6. **Examination of the Back.**—Arnold asserts that in every case of disease, whether acute or chronic, marked indications will be found by a

careful examination of the spine in the region supplied by the posterior primary divisions of the spinal nerves corresponding to those segments of the spinal cord from which the affected parts derive their innervation. No part of the body can be functionally or structurally diseased without there being a disturbance either primarily or secondarily in those segments of the cord from which the part receives its nerve supply, and these diseased conditions invariably express themselves by indications which can be readily detected along the spinal column by a careful examination. The author gives general directions which will enable any one to test the truth of his assertions. As it is somewhat difficult to find in the ordinary textbooks the data essential to the location in the spinal cord of the nervous mechanisms of different parts of the body, he has appended to his paper a brief description of the nervous mechanisms of the different parts of the body and the segments of the cord from which they arise.

AMERICAN MEDICINE.

March 18, 1905.

1. Cholecystitis as a Complication of Lobar Pneumonia: with a Report of Three Cases, and Remarks on Icterus in Pneumonia, By J. M. ANDERS.
2. Primary Tuberculosis of the Female Breast, with Report of a Recent Case, By G. W. SPENCER.
3. A Dissertation on Temperament, Diathesis, Dyscrasia, Predisposition, Cachexia, Susceptibility, Idiosyncrasy, and Heredity (*To be continued*), By HOMER WAKEFIELD.
4. Surgical Treatment of Bright's Disease, By W. HERSHEY THOMAS.
5. Ætiology and Pathology of Bright's Disease, By W. E. ROBERTSON.
6. Postoperative Nasal Hæmorrhage; Calcium Chloride; Secondary Anæmia: Rapid Recovery, By REYNOLD WEBB WILCOX.

1. **Cholecystitis and Pneumonia.**—Anders presents notes of three cases of pneumonia complicated by cholecystitis. Two of the patients recovered and one died. The diagnosis was based entirely on the clinical pictures presented. It would, therefore, be unwise to draw too definite conclusions. Jaundice in pneumonia has been observed not infrequently. Opinion varies as to its origin. It has been assumed to be due to blood destruction. This is not probable. Most reliable modern opinion is to the effect that icterus is a symptom or complication of pneumonia only when a catarrhal (mechanical) obstruction of the biliary passages occurs. This obstruction may be confined to the intrahepatic biliary canaliculi. Similarly, the jaundice accompanying cholecystitis is caused by the associated catarrhal infection of the bile ducts.

2. **Tuberculosis of the Breast.**—Spencer reports one case which he believes was primary. Diagnosis is at times difficult before operation, the condition resembling closely a chronic mastitis of indefinite origin. In the author's case tubercle bacilli were demonstrated in the excised tissues. According to the author proper treatment consists in removal, in one piece, of the entire breast, together with the skin overlying

the diseased focus, and the glands, fat, and fascia from the axilla.

4. **The Surgical Treatment of Bright's Disease.**—Thomas reviews the history of the surgical treatment of Bright's disease from the time of Harrison's first publication in 1896. The bulk of the paper is an exposition of the views set forth by Edebohls. The author concludes that with the exception of nephrotomy for renal calculi and the drainage of abscess, and nephrectomy for the excision of renal tumors, renal decapsulation is to be preferred to all other surgical procedures upon the kidney, for the following reasons: 1. No damage whatsoever is done to important secreting structures. 2. It involves less danger from hæmorrhage. 3. Other things being equal, it is to be preferred on account of the greater simplicity of wound treatment. It should also be noted that renal decapsulation has now been employed between 200 and 300 times, and that so distinguished a surgeon as Roswell Park advises decapsulation of every kidney operated upon for any reason.

6. **Calcium Chloride.**—Wilcox reports the case of a man who four days after an intranasal operation began to bleed profusely from the nose. Packing did not control the hæmorrhage and the patient's condition soon became desperate. He was then placed on calcium chloride, forty grains in one dose, each day. Soon after this treatment was instituted the bleeding became controllable. The author has always had good results from the use of calcium chloride when it is administered in single large daily doses either by the mouth or by the rectum.

LANCET.

March 4, 1905.

1. The Changes Produced by Inflammation in the Conjunctiva. (*Hunterian Lectures, I*), By M. S. MAYON.
2. Peritonitis, a Bacteriological Study. (*Erasmus Wilson Lectures, II*), By L. S. DUDGEON and P. W. G. SARGENT.
3. Plastic Surgery, By C. R. B. KEETLEY.
4. The Treatment of Severe Curvatures in the Tibiæ by Means of Manual Osteoclasia, By T. H. OPENSRAW.
5. The Cause of Pain in Cases of Gastric Ulcer and Its Bearing Upon the Operation of Gastrojejunostomy, By C. W. M. MOULLIN.
6. A Case of Recurrent or Successive Ovarian Papilloma with Sequent Ventral Hernia, followed by Cervical Epithelioma; Two Abdominal Cæliotomies; Operation for Ventral Hernia; Vaginal Hysterectomy; Recovery, By E. S. BISHOP.
7. The Medical Man as Expert Witness, By W. B. RANSOM.

1. **Conjunctivitis.**—Mayon begins the Hunterian lectures on the changes produced by inflammation in the conjunctiva, with an account of the development of the conjunctiva, passing on to the histological changes which occur in inflammations. The result of his investigations has been to lead him to agree with Whitfield's opinion that the endothelial and perithelial cells play an important part in the production of mononuclear leucocytes and plasma cells.

2. **Peritonitis.**—Dudgeon and Sargent, in the second of the Erasmus Wilson lectures, take up the bacteriology of appendicitis. The chief interest in this subject centres around the colon bacillus. Many observers, however, hold that the colon bacillus is an organism which is very easy to cultivate and grows very rapidly and, therefore, the more delicate but more virulent organisms are never isolated. It is the streptococcus pyogenes, the pneumococcus, and the "staphylococci" which are supposed to be most easily outgrown by the bacillus coli. In not a single instance among their cases did the writers obtain the streptococcus pyogenes from the peritoneal cavity in acute diffuse non-perforative peritonitis due to appendicitis. Further, in those cases in which the streptococcus is found in the peritoneal cavity the prognosis is practically hopeless. If this organism were, therefore, frequently present in the peritoneal exudate in appendicitis the mortality would be very much higher than it is at present. In only one case was the pneumococcus isolated, and then in association with the colon bacillus; so that the pneumococcus cannot be the important organism in appendicitis that it has been assumed to be by some. The usual tendency of the pneumococcus is to produce diffuse peritonitis without any of the changes which are met with in perforative peritonitis. As regards the pathogenic staphylococci they have found the white staphylococcus in almost every variety of peritonitis; it is by far the most common organism met with in the peritoneal exudate at a distance from the site of origin of the acute lesion, and is frequently found in the peritoneal cavity in the "interval cases" of appendicitis. The important bearing which it is found to have on the prognosis of a case of peritonitis when present in the peritoneal exudate alone or some time previously to the arrival of the colon bacillus, cannot be overestimated. It does not appear to have any influence in the prognosis of those cases which are due to the streptococcus pyogenes or bacillus pyocyaneus. The chief results which arise from injecting the white coccus into the peritoneal cavity of animals are the production of an extensive phagocytosis and also a selective action of the body fluids. In only one instance did the authors find an anaerobic organism. This was the bacillus aerogenes capsulatus of Welch, and was isolated from the pus of an abscess in which the appendix was found to be gangrenous. The bacillus pyocyaneus appears to be extremely virulent when present in the human peritoneal cavity. It does not produce the green pus in the peritoneum, such as is often seen in a local abscess. Virulent cultures which kill the patients in a few days do not usually produce any chromogenic staining of the pus. In the large majority of cases the bacillus pyocyaneus causes death when present in the peritoneal cavity, and is only less virulent than the streptococcus pyogenes in that it takes a little longer to cause death. In every variety of appendicitis the colon bacillus is the most important pathogenic organism. In nearly every instance more than one strain of this bacillus is present, either in the abscess, peri-

toneal exudate, or elsewhere. And these various strains differ in virulence. If during an interval operation for appendicitis the colon bacillus be allowed to escape into the peritoneal cavity probably fatal peritonitis will ensue. The colon bacillus will not grow in the presence of the bacillus pyocyaneus, being always outgrown and destroyed by the latter. The colon bacillus is less virulent than the bacillus pyocyaneus and much less so than the streptococcus pyogenes. If present alone in the peritoneal exudate "at a distance" then the prognosis is extremely grave, while if the phagocytes are all degenerated then the prognosis is practically hopeless. The co-existence of the staphylococcus albus renders the prognosis less grave, though still very bad. As regards the rôle of the phagocytes in peritonitis, the authors assert that they are able to show that the coarsely granular eosinophile cell, which most observers have considered to be non-phagocytic, is one of the most important phagocytes in the early stages of peritoneal infection, while the finely granular polynuclear cell becomes the important phagocyte in the later stages of peritonitis. Washing out the peritoneal cavity in cases of peritonitis does harm in that the phagocytes are washed away, new organisms are allowed to enter, and the original infecting organism is carried still further into the recesses of the peritoneum. The small lymphocyte was also shown to possess phagocytic powers.

5. **Gastric Ulcer.**—Moullin states that the reason for the intensity of the pain in so many cases of gastric ulcer is because the inflammation, starting from the lymphatics that drain the region of the ulcer, spreads to the parietal peritoneum and makes it infinitely more sensitive. And the cause of the pain is the pull of the stomach on these inflamed sensitive areas, so that it is naturally felt most severely when the pyloric end of the stomach is at work.

BRITISH MEDICAL JOURNAL.

March 4, 1905.

1. The Prospects and Vicissitudes of Appendicitis After Operation, By SIR F. TREVES.
2. Some Peculiarities of Appendicitis in the Female Sex, with Special Reference to Appendicitis Occurring During Pregnancy, By G. HEATON.
3. The Relationships Between Colitis and Appendicitis from a Surgical Point of View, By C. B. LOCKWOOD.
4. The Operative Treatment of Certain Severe Cases of Indigestion, By W. B. CLARKE.

1, 2, 3. **Appendicitis.**—Treves, in his article on appendicitis, discusses the degree of imperfect relief or of imperfect recovery after operation, and the complications which may attend operation and are independent of the direct surgical results of the case. He first suggested, in 1887, the removal of the appendix during the quiescent period. Since then he has observed a number of cases in which attacks occurred after the removal of the appendix: of forty-five such cases, there was coexisting ovarian trouble in nine, persisting or relapsing colitis in eight, persisting local pain

in seven, and neurasthenia in five. It is almost impossible to distinguish between chronic appendicitis and chronic oophoritis. In operations upon women the right ovary should be systematically examined when the appendix is being removed: a somewhat larger opening than usual should therefore be made in these cases. The association of colitis and appendicitis is common. The colon trouble may be primary and lead, by extension, to inflammation of the appendix. Or in cases of chronic appendicitis, the appendix may act as a culture tube for bacteria, the contents of which are emptied from time to time into the cæcum, setting up trouble there. Ventral hernias are quite common after evacuation of perityphlitic abscesses: other imperfect results are persistent sinuses, recurring abscesses, recurring attacks of appendicitis, and fecal fistulæ. The persisting sinus, in the majority of instances, is due to a diseased appendix, or to a retained concretion. The relapsing abscess is due, almost without exception, to the same causes. The original collection of pus is evacuated and drained; the wound heals; after a varying period of time the patient has pain and tenderness in the part with fever and constipation; a second abscess appears and is opened. The writer has known the abscess to appear ten times before the patient was dealt with by radical operation. In a few instances there is no apparent abscess, but in its place a troublesome inflammatory mass in the iliac fossa or pelvis. While fecal fistulæ exist another attack of appendicitis is exceedingly uncommon. The fistula, unless due to cutting or tearing of the bowel, has a tendency to close spontaneously. The fistulæ which appear some days after the evacuation of the abscess do better than those which are evident at the time of the operation. A still diseased appendix or a retained concretion is often the cause of the persistence of the fistula. While the appendix should be removed in every case in which it gives the least trouble, yet the following facts are urged against its removal in every case of abscess: 1. Only seventeen out of a hundred cases ever have a second attack. 2. The mortality of second attacks is comparatively small; about seven per cent. 3. The operation is often not only very difficult, but distinctly dangerous. With the exception of fecal fistula, intestinal obstruction, and persisting or extending abscess, the principal complications which may attend operations for appendicitis are those only of septic infection. Pylephlebitis occurs, and also pleurisy and empyema from direct local extension of inflammation from the original seat of infection. The parotiditis is probably due to oral sepsis. The common thrombosis of the left femoral vein cannot be readily explained: it may be due to the increased use of the left thigh after the operation, as compared to that of the right side. Of ten patients who were the subjects of appendicitis, and were operated on for acute intestinal obstruction, six died. After an appendix abscess has been opened and drained, other abscesses may form: these fall into three groups: 1. The residual abscess, in which a reaccumulation of pus takes place underneath or close

to the operation scar: no signs of another attack of appendicitis. 2. The secondary abscess, the result of the direct extension of the inflammatory process from the primary abscess. 3. The abscess which accompanies subsequent attacks of appendicitis.

Heaton discusses appendicitis as it occurs in women, especially during pregnancy. The disease is much commoner in men than in women. Pregnancy does not seem to predispose to a primary attack of appendicitis, but may light up a secondary one, by stretching and breaking down old inflammatory adhesions. Pregnancy greatly increases the risks and dangers of the disease: the further advanced the pregnancy the worse the prognosis. If suppuration takes place the risk to life increases enormously; miscarriage almost invariably takes place, and the risk of general septic peritonitis is extremely grave, all limiting adhesions being broken down. The attack may occur at any stage of pregnancy, and may be of all degrees of severity. The mild cases may be mistaken at first for the vomiting of pregnancy. These cases of appendicitis in pregnancy seem to run an unusually rapid course, and it should be an invariable rule to operate at once, without waiting for the evidence of pus formation. The uterus and pelvic viscera are to be disturbed as little as possible. When general septic peritonitis already exists the prognosis is almost hopeless. It is not necessary or advisable to empty the uterus after opening the appendicular abscess. But abortion takes place in 86 per cent. of the cases. In all cases of miscarriage a history of appendicitis should be sought for. The appendix is also probably responsible for many so called attacks of right sided pelvic peritonitis in women. In relapsing appendicitis in young women the attacks of pain frequently occur just before or at the menstrual period, and are determined by the congestion of the tube and ovary. Appendix, ovary, tube, and omentum are frequently found at operation adherent to one another.

Lockwood discusses some of the forms of colitis from a surgical point of view, and especially in their relation to appendicitis. The relation of simple mucous colitis to appendicitis is a mere question of extension by proximity, and the bowels soon recover when the appendicitis has ceased. But where the mucous colitis is primary and due to coprostasis, the colitis does not disappear with the appendicitis, but only when the fecal lumps have been removed.

4. **Abdominal Operations.**—Clarke discusses the operative treatment of severe indigestion, and lays down the following propositions: 1. Ruptured gastric and duodenal ulcers should always be treated surgically without delay. 2. Severe cases of hæmorrhage which threaten life should likewise be treated by opening the belly and securing the bleeding point or points. 3. When chronic ulcers of the stomach and duodenum cease to improve under medical treatment, surgical interference is indicated and is capable of affording much relief.

Proceedings of Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of February 1, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

Recent Advances in the Technics of Röntgen Therapy.—Dr. CHARLES LESTER LEONARD read a paper with this title. In considering the apparently antagonistic results published in reference to Röntgen therapy he said it must be remembered that positive evidence was more valuable than negative. Cures could not be alleged as yet, but an inhibitory action had been absolutely demonstrated. The apparent variation in results he explained by variations in the technics and experience of the operator. The effective dose he considered difficult to arrive at, because it must be strong enough to injure pathological cells and yet not too strong for normal tissues. In addition, varying qualities of the Röntgen ray produced different effects, and the quality must be adapted to the individual lesion. The physiological action was stimulant and alterative. In large doses it stimulated the autolytic ferments within pathological cells, which resulted in their dissolution and absorption. The difficulty in administration lay not only in adapting the proper quality of ray and dose to the individual lesion to be treated, but also in the fact that the clinician must know how to produce the dose with a complicated mechanism and must be able to recognize when the right quality and quantity were being employed by their clinical effects. While any dose and any technics would produce some effects, exact dosage was essential to the efficient employment in difficult cases, and, as with all other powerful remedies, clinical experience in adapting the dose to the individual patient counted in the final result. Increased knowledge and improved technics had recently made marked advances in treatment possible and promised greater efficiency.

The Treatment of Non-Malignant Diseases by the Röntgen Ray.—Dr. RUSSELL H. BOGGS, of Pittsburgh (by invitation), presented this paper. He called attention to the necessity of distinguishing between the non-malignant diseases which should and those which should not be treated with the x ray. While the continual cry of technics might become tiresome to some who thought the subject could be mastered speedily, the method of application of the rays and the judgment of the operator accounted largely for successful or unsuccessful work. It was just as essential to administer a therapeutic dose when applying Röntgen rays as it was when prescribing powerful drugs. It should be remembered that it was not so much the x ray that cured as the judgment with which it was employed. He considers the x ray one of the best therapeutic agents known for the treatment of acne and many other skin diseases, but he thought it not necessary in many instances to treat the trivial and

less obstinate cases by this method, since cures might be effected with other treatment causing less inconvenience to the patient. For the treatment of lupus he regarded the x ray, supplemented by the Finsen light, as the most efficient therapeutic agent. He also considers the use of the x ray the most efficient treatment for tuberculous glands, Hodgkin's disease, and selected cases of goitre.

The X Ray Treatment of Malignant Growths.—Dr. ENION G. WILLIAMS, of Richmond, Va. (by invitation), read this paper. He said that the results of the practical use of the ray as reported by the different operators had differed greatly; the general profession had been misled by the over-enthusiastic as well as by the pessimistic operators, so that the true value of the ray had yet to be found out. To determine the therapeutic value of the ray, it was necessary to consider, first, the factors concerned in its production and variation and the methods of the application in treatment; secondly, the histological changes due to it; and, thirdly, the nature and situation of the growth to be treated. The tissues most influenced by the ray were those having a large proportion of cells whose vital processes were very active, tissues as were found chiefly in malignant tumors, carcinoma and sarcoma. Benign tumors, composed largely of intercellular substance with a small proportion of cells not actively proliferating, were therefore only slightly or not at all influenced by the ray. From his observations he concluded that the prognosis depended upon the character of the growths and upon their accessibility to the proper quantity of radiant energy. He believed that the ray was indicated in superficial growths. For deep growths, until there could be shown more uniformly good results, radical surgical procedures should be recommended, to be followed by sufficient x ray exposure to destroy malignant cells several inches from the surface. "Inoperable" cases should be treated, because of the remarkable results in the relief of pain which had been noted.

Dr. GEORGE C. JOHNSTON believed the time had come to make inquiry concerning the merits of the x ray as a remedial agent. Many of the allegations put forth he attributed to over-enthusiasm and inexperience. On the other hand, there was a mass of evidence put forth by some of the best men of the profession, men of age, experience, and mature judgment, whose opinions were worthy of acceptance. The success or failure in the application of the agent depended upon the dose, and the dose of the x ray was composed of several factors: (1) The length of time the agent was allowed to act; (2) the distance from the source of the ray to the patient; and (3) the degree of vacuum of the tube emitting the ray. The third factor was incapable of any accurate measurement short of actual observation of the radiation itself. Another factor was penetration, and this must be adapted to the depth it was desired to reach. Since some tubes produced a burn easily, Dr. Johnston advised beginners to test every tube in radiographic work before using it on a patient. The test might cost them fifty cents; if tested on

the patient, possibly \$50,000, if the operator had it. In radiographic work the x ray man must have a certain technics, with every detail of which he must be familiar. In radiotherapeutic work he must have a technics more exact and capable of immediate variation to suit individual cases.

Dr. Johnston's position was that the legitimate x ray man did not consider himself the successor of the obsolete surgeon, but was proud to be accorded the position of qualified assistant to the surgeon, believing that he had at his command an agent which would afford the surgeon better results in his malignant cases. A postoperative radiation was frequently effective in removing a possible focus of disease, and he had demonstrated to his own satisfaction its power of inhibiting the growth of malignant tissue. The management of postoperative radiation should not be left to an assistant or nurse, but be under the charge of a thoroughly qualified x ray operator.

The future of malignancy, Dr. Johnston believed, depended upon the general practitioner, because he saw the cases first. Personally, he found that each month he had more of the early cases of cancer, such as cancer of the breast, sent to him for treatment. His recommendation in such cases was a Halsted operation and radiotherapy to prevent recurrence. He had cases *apparently* cured by this method, which remained so. He preferred to call them cases of inhibition, more or less permanent, with the hope that it would remain permanent. The need of x ray workers, he said, was the cooperation of the surgeons and pathologists. As soon as all worked together in harmony, malignancy and other diseases would present a brighter future.

Dr. JOHN B. SHOBER said that in his experience with x ray work he had seen mostly the cases of malignant disease in women, and in six or seven cases of "inoperable" carcinoma of the cervix he had noted the inhibitory action of the agent. In one case of recurrence following hysterectomy for carcinoma of the uterus, treated by the x ray and radium, the growth, which was of the size of an English walnut, disappeared in the course of ten weeks and there was no sign of recurrence. In a case of carcinoma of the breast in which the patient had positively refused an operation, Dr. Shober undertook the treatment by the x ray, with the understanding that the patient would consent to an operation if the growth developed under treatment. The growth increased in size, but softened and then diminished in size, and there ultimately remained no sign, except a small induration, possibly the result of an accumulation of fibrous tissue in the site of the disease.

Dr. GEORGE EREY SHOEMAKER considered that after the surgeon's work was finished he owed the duty to his patient of having the x ray applied for a definite time. From his own experience with cancer of the uterus he would advise, first, the cautery, after that, surgical excision of the part, including the cautery scar, and after that, the x ray. This treatment, he thought, offered the most hope in a field which had been discouraging.

Dr. W. S. NEWCOMET referred to the value of the x ray as shown in desperate cases. He showed on the screen the picture of a case of trachoma in a girl of about sixteen which had existed since the age of three months. She had been able to count fingers only in the light. As the result of the x ray treatment she could now see a distance of two or three blocks.

Dr. LEONARD said that the papers of the evening showed the results achieved. Since the development of the technics he felt that much more might be expected from the treatment, and he believed that the future was brighter than the past in regard to the value of the x ray. An agent which showed itself capable of inhibiting a growth should be carefully studied, not only by the x ray men, but by the general profession.

Book Notices.

The Diseases of Society. (The Vice and Crime Problem.) By G. FRANK LYDSTON, M. D., Professor of Genitourinary Surgery, State University of Illinois, etc. Philadelphia: J. B. Lippincott Company, 1904. Pp. 626. (Price, \$3.00.)

The author states that this work has been in preparation for many years, and that he presents what he believes to be truths that have been gleaned from study and observation of sociology, criminology, criminal anthropology, and penology in so far as they bear upon social disease in its various manifestations.

After a general consideration of the subject in the first chapter, which is entitled social pathology, the author considers the principles of evolution in their relations to criminal sociology and anthropology. In discussing the relation of theology and religion to social evolution he commends the Salvation Army for its excellent work, and properly holds that some expounders of peculiar and fanatical creeds, by diverting vacillating minds into safe channels, are powerful factors for practical moral good.

The author concludes that no single factor operates alone in the production of a special form of social disease, but that several of some twenty different causes are usually combined. We shall all agree to this dictum in the section on suggestion and crime: "It would certainly be illogical and unfair to the press to hold it responsible for the flotsam and jetsam among its readers. It should, however, be held responsible where it takes advantage of the specific gravity of morals and caters to the baser elements of normal man, and, more especially, the morbid tastes of the degenerate."

The chapter on neuroses in their relation to social diseases is a very interesting review of brain development, the criminal skull and brain, several mental diseases, and suicide.

Under the heading of the chemistry of social diseases is described the relation of alcoholic, narcotic, and autogenetic toxemia to vice and crime.

There is much that is suggestive in the chapter on anarchy in its relations to crime, the author holding that there is a governmental, political, and municipal anarchy, an anarchy of capital as well as of labor, and even an anarchy of law.

The profession must cry *peccavi* to the charge, in the chapters on sexual vice and crime, that: "Reputable medical men have ever been remiss in their duties to the public so far as instructing it in sexual matters is concerned." We agree with the author that it is unjustifiable and false to accuse the medical profession of aiding and abetting prostitution by advising fornication. It is the duty of the physician to suggest continence rather than prophylaxis. Experience has proved that the regulation of prostitution and inspection of prostitutes do not decrease the spread of venereal diseases; if the medical profession ignores this fact and endorses the former measures, it will, by minimizing the fear of disease from promiscuous intercourse, remove one of the most powerful checks on the spread of the social evil. There are those who will think that the author is simply in advance of his epoch in advocating the desexualization of certain criminals.

Dr. Lydston believes that genius is abnormal, that it is both a product and a cause of degeneracy, and that it is correlated with other phenomena of degeneracy that are recognized generally as social diseases, so he has written an entertaining chapter on genius and degeneracy.

While in the chapters on the characteristics and on the types of the criminal the author professes an agnostic attitude, the impression one has from the reading is that he inclines to the school of Lombroso in attaching importance to the so called stigma of degeneracy.

The final chapter, on the therapeutics of social disease, is most interesting, and there are few physicians who will not agree as to the academic value of the remedial measures that are advanced, though their practicability is hampered by the prejudices and conservatism of society. The book is worthy of the author's reputation, and it deserves and is likely to have a wide discussion.

Miscellany.

Hallucinations.—Dr. William A. White, in the *Journal of Nervous and Mental Diseases*, for November, 1904, gives the clinical history of ten cases which leads to four conclusions:

1. Hallucinations are false perceptions. This implies that there must be something to perceive and that something is in the environment and can enter as a factor into the mental life only through the intermediation of sensations. Ideas cannot be perceived.

2. Hallucinations are secondary sensations either arising in the same sensory field, in which case they might be described as illusions in the sense of Esquirol, or arising in other sensory fields, in which case their secondary character is quite clear.

3. The mental state in illusions and hallucinations is the same.

4. Given the sensory elements the falseness in their perception is due to central derangement. The several theories of hallucinations, particularly those which attribute their origin solely to centric disturbance with reverse currents in the sensory nerves, go a long way around, and take great pains to find an explanation which in real-

ity is close at hand. Titchener estimates that there are more than 44,435 elementary sensations or sensation qualities appreciable by the various sense organs, and says, furthermore, "each one of these 40,000 qualities is a conscious element, distinct from all the rest, and altogether simple and unanalysable. Each one may be blended or connected with others in various ways to form perceptions and ideas. A large part of psychology is taken up with the determination of the laws and conditions which govern the formation of the sensation complexes."

The sensory elements of perception in whole or in part have but a marginal or subconscious value. But because they may have been displaced from the focus of clear perception, relatively or absolutely, because perhaps they cannot be replaced except by a special effort, or perhaps not at all, they are none the less real. Many sensations are normally not appreciated at all, either because of their weakness or because of the preponderance of some other sensations. In fact, this is an absolutely necessary condition for mental concentration. If it were otherwise and all sensory impulses were appreciated at their full value, coherent thought would become impossible. Thus it is that sensations that under ordinary circumstances would hardly, if at all, rise above the threshold of consciousness, may acquire an unusual value, and being thus out of harmony with the actualities they represent, a false perception is the result. This is especially well shown in the phenomena of dream consciousness.

It is necessary, in order that the particular sensory stimulus receive the specific interpretation that stamps it as a hallucination that there be a certain state of preparedness on the part of the mind. The mind of the patient with tinnitus aurium who hears a voice is especially attuned to respond in that particular way.

The author has never failed to find a peripheral pathological process in all hallucinated cases which he has examined which could explain directly or indirectly the hallucinatory phenomena. The peripheral process need not be pathological in order to account for a hallucination, as in the dream hallucination and the hypnotic hallucination, but it is hardly conceivable that the auditory hallucinations of a paranoiac which are practically constantly present, unless the patient's attention is distracted, could be produced by other than a constant irritant, which would necessarily be pathological in origin. Hence the necessity of careful and painstaking examination of all hallucinated cases. With all the possibilities in view the author would be unwilling to accept other than a peripheral explanation of any hallucinated case.

The Circumstances and Treatment of Movable Kidney.—Treves, in the *Practitioner*, for January, 1905, refers to this condition as a malady of modern times. Glénard says it occurs in 22 per cent. of adult females, and is more frequent on the right than on the left side.

The first reliable clinical description of this condition was made by Rayer in 1839. It is com-

mon in women with weak muscular development and especially in those who have borne many children. In the majority of cases it is attended with diminution of the circumferential fat. It may result from injury, from violent exercise, etc. In making a diagnosis the patient may lie on the back while the examiner presses the loin in front and behind, just below the costal arch, with the extended fingers of the two hands, the right in front and the left behind. As the patient takes a deep inspiration, the movable organ slips downward, and as the fingers close upon it, it may be felt to glide away. The patient may then lie upon the sound side when the movable organ will be found near the median line by the compressing fingers of the two hands. A further examination should also be made in the standing position. Glénard observes four degrees of descent of the organ. In the fourth or extreme degree there is rotation and almost a transverse position of the organ. A kidney which is displaced may become the seat of hydronephrosis, while its ureter may be bent or twisted. A distended gall bladder is sometimes mistaken for a movable kidney, but the two conditions may co-exist. Symptoms may be absent, or there may be severe pain, irritability, nausea and vomiting, a sensation of dragging in the abdomen, flatulence, constipation, indigestion, etc. Nephrorrhaphy is not demanded in the great majority of cases, and though the risk to life from the operation is small, and success attends the large majority of operations, it should be the last and not the first resource.

It is imperative when there are torsion symptoms and when ordinary methods of treatment have failed to bring relief, such methods including rest in the recumbent position, with careful feeding, careful attention to the digestive organs, and general massage.

If a truss is properly made, and so adjusted that pressure is directed upward and outward upon the organ, the kidney may be kept securely in position. The author has made use of such a truss in more than 300 cases with perfect satisfaction, and has abandoned the operative treatment of this condition, except in urgent cases or those in which the truss could not be satisfactorily worn.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended March 17, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Dist. Columbia—Washington.	Mar. 4-11.	3	
Florida—Jacksonville.	Mar. 4-11.	1	
Georgia—Macon.	Mar. 4-11.	1	1
Illinois—Chicago.	Mar. 4-11.	6	
Illinois—Danville.	Mar. 4-11.	16	
Kentucky—Louisville.	Mar. 2-9.	4	
Louisiana—New Orleans.	Mar. 4-11.	17	
Five imported.			
Michigan—Detroit.	Mar. 4-11.	1	
Michigan—At 187 places.	Feb. 4-11.	38	2
Missouri—St. Louis.	Mar. 4-11.	38	
New York—Mount Vernon.	Mar. 4-11.	1	

New York—New York.	Mar. 4-11.	1	
Ohio—Zanesville.	Jan. 25-Feb. 4.	1	
South Carolina—Charleston.	Mar. 4-11.	2	
South Carolina—Greenville.	Feb. 25-Mar. 11.	20	S
Tennessee—Memphis.	Mar. 4-11.	7	
Tennessee—Nashville.	Mar. 4-11.	1	
West Virginia—Wheeling.	Feb. 25-Mar. 4.	1	
Wisconsin—Milwaukee.	Feb. 25-Mar. 11.	28	

Smallpox—Foreign.			
Brazil—Bahia.	Jan. 21-Feb. 16.	27	2
Brazil—Paris.	Jan. 29-Feb. 12.	47	Present.
Brazil—Rio de Janeiro.	Jan. 29-Feb. 12.	47	22
China—Shanghai.	Jan. 22-Feb. 4.	15	foreigners, 55 deaths, natives.
Ecuador—Guayaquil.	Feb. 14-21.	2	
Ecuador—Porte Viejo.	Feb. 23.	Present.	
France—Paris.	Feb. 18-25.	23	
Great Britain—Birmingham.	Feb. 18-25.	3	
Great Britain—Glasgow.	Feb. 27-Mar. 3.	2	
Great Britain—Hull.	Feb. 4-11.	2	
Great Britain—Leeds.	Feb. 18-25.	4	
Great Britain—Leith.	Feb. 18-25.	1	
Gt. Britain—Newcastle-on-Tyne.	Feb. 18-25.	11	
Great Britain—Nottingham.	Feb. 18-25.	1	
Great Britain—South Shields.	Feb. 18-25.	5	
India—Bombay.	Feb. 7-14.	124	
India—Calcutta.	Feb. 7-14.	2	
India—Karachi.	Feb. 5-12.	3	
India—Madras.	Feb. 4-10.	2	
Italy—Catania.	Feb. 18-25.	1	
Norway—Christiania.	Feb. 11-25.	3	
Russia—Moscow.	Feb. 4-18.	13	4
Russia—Odessa.	Feb. 11-18.	2	1
Russia—St. Petersburg.	Feb. 4-11.	5	
Spain—Barcelona.	Feb. 10-9.	20	
Turkey—Constantinople.	Feb. 12-19.	4	
Uruguay—Montevideo.	Feb. 7.	Epidemic.	
West Indies—Grenada.	Feb. 9-23.	10	

Yellow Fever.			
Brazil—Rio de Janeiro.	Jan. 29-Feb. 12.	16	7
Ecuador—Guayaquil.	Feb. 14-21.	4	
Panama—Panama.	Jan. 1-Mar. 4.	33	14

Plague—Foreign.			
Brazil—Rio de Janeiro.	Jan. 27-Feb. 12.	20	6
India—Bombay.	Feb. 7-14.	587	
India—Calcutta.	Feb. 4-11.	106	
India—Karachi.	Feb. 5-12.	54	52

Public Health and Marine Hospital Service:

List of the Changes of Station of Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 15, 1905:

BARNES, W., Acting Assistant Surgeon. Granted leave of absence for two days from March 15th.

BERRY, T. D., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., March 27, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

BILLINGS, W. C., Passed Assistant Surgeon. Granted extension of leave of absence for five days from March 17th.

BOGESS, J. S., Assistant Surgeon. Granted leave of absence for four days from March 21st.

EBERSOLE, R. E., Assistant Surgeon. Granted leave of absence for ten days from March 15th.

FRANCIS, EDW., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., March 27, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

HAMMOND, A. P., Acting Assistant Surgeon. Granted leave of absence for five days from March 7, 1905, under paragraph 210 of the regulations.

LONG, J. D., Assistant Surgeon. To report to chairman of board of examiners at Manila, P. I., May 15, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

MATHEWSON, H. S., Passed Assistant Surgeon. Granted leave of absence for five days from March 13th.

McCoy, G. W., Assistant Surgeon. To report to chairman of board of examiners at Manila, P. I., May 15, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

MCLAUGHLIN, A. J., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., March 27, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

STONER, G. W., Surgeon. Granted three days' leave of absence under paragraph 191 of the regulations.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for two days from March 16th.

WARREN, B. S., Assistant Surgeon. To report to chairman of board of examiners at Washington, D. C., March 27, 1905, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

WICKES, H. W., Passed Assistant Surgeon. To rejoin station at Reedy Island Quarantine.

WILSON, R. L., Passed Assistant Surgeon. Relieved from duty at the Hygienic Laboratory. Bureau letter of February 8th, granting Passed Assistant Surgeon Wilson leave of absence for one month from March 1, 1905, amended so that said leave shall be for twenty-three days.

Boards Convened.

Board convened to meet at Washington, D. C., March 27, 1905, for the examination of assistant surgeons. Detail for the board—Assistant Surgeon General G. T. VAUGHAN, chairman. Surgeon D. A. CARMICHAEL. Passed Assistant Surgeon JOSEPH GOLDBERGER, recorder.

Board convened to meet at Manila, P. I., May 15, 1905, for the examination of assistant surgeons. Detail for the board—Passed Assistant Surgeon V. G. HEISER, chairman. Passed Assistant Surgeon CARROLL FOX. Passed Assistant Surgeon C. W. VOGEL, recorder.

Bureau letter of March 8, 1905, convening a board to meet at San Francisco, Cal., April 3, 1905, for the examination of assistant surgeons, revoked. March 13, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 18, 1905:

BARTLETT, C. J., First Lieutenant and Assistant Surgeon. Left Army and Navy General Hospital, Hot Springs, Ark., on ten days' leave of absence.

BOURKE, JAMES, First Lieutenant and Assistant Surgeon. Reported for temporary duty at Medical Supply Depot, New York city.

DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon. Reports change of status from duty to on leave of absence for thirty days.

PIERSON, R. H., First Lieutenant and Assistant Surgeon. Left the General Hospital, Fort Bayard, N. M., on forty days' leave of absence.

PORTER, R. S., First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Granted six months' leave of absence.

SNYDER, HENRY D., Major and Surgeon. Ordered to proceed from Fort Sam Houston, Texas, to Governor's Island, N. Y., as witness before retiring board.

WILSON, WILLIAM H., Captain and Assistant Surgeon. Granted four months' leave of absence, with permission to go beyond the sea.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 18, 1905:

ANDERSON, F., Medical Inspector. Detached from the *Brooklyn* and ordered home to await orders.

BACKUS, J. W., Assistant Surgeon. Detached from the Naval Hospital, Portsmouth, N. H., and ordered to continue duties on the *Southerly*.

BISHOP, L. W., Assistant Surgeon. Detached from the Navy Yard, New York, N. Y., and ordered to the Naval Hospital, Portsmouth, N. H., with additional duties on the *Southerly*.

FOSTER, T. G., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

FURLONG, F. M., Passed Assistant Surgeon. Detached from the *New York*, when placed out of commission, and ordered home to await orders.

NASH, F. S., Surgeon. Appointed a surgeon in the United States Navy, from February 23, 1905.

NORTON, O. D., Surgeon. Ordered to the *Olympia*.

ROTHGANGER, G., Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

SCHWEIN, L. H., Acting Assistant Surgeon. Ordered to the *Hancock*.

SMITH, G. T., Surgeon. Detached from the Naval Hospital, Norfolk, Va., and directed to await orders.

STEELE, J. M., Surgeon. Detached from the *Olympia* and ordered to the *Brooklyn*.

Births, Marriages, and Deaths.

Born.

WHALEY.—In Manila, Philippine Islands, on Monday, January 23rd, to Dr. Arthur M. Whaley, United States Army, and Mrs. Whaley, a son.

Married.

CARL—YATES.—In Kansas City, Missouri, on Tuesday, March 7th, Dr. Samuel T. Carl and Miss Alice Yates.

GALLAGHER—CALVEY.—In Cleveland, Ohio, on Tuesday, March 7th, Dr. John V. Gallagher and Miss Matilda Calvey.

NORRIS—FROTHINGHAM.—In Philadelphia, on Wednesday, March 15th, Dr. Herbert Norris and Miss Harriet Frothingham.

Died.

BRIGHT.—In Washington, D. C., on Sunday, March 12th, Dr. George A. Bright, United States Navy, in the sixty-eighth year of his age.

COMSTOCK.—In Binghamton, N. Y., on Tuesday, March 7th, Dr. James Clinton Comstock, in the forty-seventh year of his age.

CRAIG.—In Philadelphia, on Tuesday, March 14th, Dr. Albert B. Craig, in the thirty-fourth year of his age.

DOOLITTLE.—In Paris Hill, N. Y., on Thursday, March 9th, Dr. Carlos V. J. Doolittle, in the thirty-ninth year of his age.

DUNLAP.—In Cincinnati, Ohio, on Thursday, March 9th, Dr. William T. Dunlap, in the sixty-first year of his age.

EAMAN.—In Gaines, N. Y., on Saturday, March 4th, Dr. W. F. Eaman.

FRAZEE.—In Rochester, N. Y., on Saturday, March 11th, Dr. A. B. Frazee, in the forty-sixth year of his age.

GREGG.—In Boston, Massachusetts, on Tuesday, March 14th, Dr. John A. Gregg, in the fifty-seventh year of his age.

HALL.—In Rochester, N. Y., on Tuesday, March 7th, Dr. W. S. Hall, in the forty-fifth year of his age.

HOWE.—In Newark, New Jersey, on Tuesday, March 14th, Dr. Edwin J. Howe, in the fifty-sixth year of his age.

JOHNSON.—In Brockton, Massachusetts, on Thursday, March 2nd, Dr. Elizabeth Ann Johnson, in the seventy-seventh year of her age.

KEENE.—In Providence, Rhode Island, on Monday, March 13th, Dr. George F. Keene, in the fifty-third year of his age.

LOSEY.—In Rochester, N. Y., on Monday, March 13th, Dr. Charles Hamilton Losey, in the forty-third year of his age.

MEYERS.—In Philadelphia, on Saturday, March 11th, Dr. W. W. Meyers, in the sixty-first year of his age.

MOORE.—In New Haven, Connecticut, on Saturday, March 11th, Dr. James A. Moore.

MUELLER.—In Baltimore, Maryland, on Thursday, March 9th, Dr. Edward D. L. Mueller, in the seventy-second year of his age.

PRINTZ.—In St. Louis, Missouri, on Thursday, March 9th, Dr. Felix C. W. Printz, in the twenty-ninth year of his age.

RUSSELL.—In Duluth, Minnesota, on Wednesday, March 8th, Dr. Hugh Russell, in the eightieth year of his age.

SCOFIELD.—In Cincinnati, Ohio, on Tuesday, March 14th, Dr. A. W. Scofield, in the forty-sixth year of his age.

VAIL.—In St. Louis, Missouri, on Monday, March 13th, Dr. E. J. Vail, in the eighty-fifth year of his age.

WELDON.—In Paris, Tennessee, on Tuesday, March 7th, Dr. A. J. Weldon, in the seventy-fourth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

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SATURDAY, APRIL 1, 1905

WHOLE No. 1374.

Original Communications.

CONCERNING THE NEW ELECTRO-CYSTOSCOPE.

By WILLIAM K. OTIS, M. D.,

NEW YORK,

PROFESSOR OF GENITOURINARY DISEASES, NEW YORK SCHOOL OF CLINICAL MEDICINE; CONSULTING SURGEON TO CHARITY HOSPITAL, ATTENDING SURGEON TO ST. MARK'S HOSPITAL, AND TO THE WEST SIDE GERMAN DISPENSARY; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, OF THE AMERICAN ASSOCIATION OF GENITOURINARY SURGEONS, OF THE AMERICAN UROLOGICAL ASSOCIATION, ETC., ETC.

The invention of the electrocystoscope, an instrument which completely revolutionized our methods of diagnosis in vesical disorders, even extending to a determination of some of the lesions situated in the kidney itself, giving definite information regarding the existence of conditions which formerly could only be surmised, or accurate knowledge acquired by means of a serious operation, may well be considered one of the great advances of modern surgery.

The credit of this brilliant invention and the perfecting of the original idea in its minutest details belongs to Dr. Max Nitze, of Berlin, and to him alone.

It differs entirely in principle, design, and scope from any method for the ocular examination of the bladder which preceded it, while subsequent instruments have been modifications only of Nitze's original conception.

Nitze conceived the idea of the modern cystoscope as early as 1876, and in 1879 presented to the profession a working instrument which, owing principally to the difficulty of obtaining proper illumination, attracted attention only among a few specialists. It was, on account of the imperfect electrical knowledge of the time, complicated in construction, its illumination being derived from an incandescent loop of platinum wire, protected from the fluid in the bladder by a piece of quill. This quill being only translucent, cut out a very large amount of light, while the

hot platinum loop necessitated a cumbersome water cooling apparatus and delicate rheostat, to prevent burning out the wire or causing injury to the bladder wall, or burning the quill, causing it to become still more opaque.

This crude affair, however, had the telescope and embodied the principles found in the best types in present use. As this instrument was exceedingly difficult to manufacture, Nitze sought the aid of Josef Leiter, an expert instrument maker of Vienna, who undoubtedly lent him valuable assistance in the construction of the cystoscope, but in no way altered its fundamental characteristics. Had it not been for the subsequent invention of the incandescent electric lamp, by Thomas A. Edison, which permitted a brilliant illumination, with a heat so gentle that it was readily conducted away by the fluid medium in the bladder, without the necessity for the accessory water cooling apparatus, the cystoscope would never have attained the position as a practical instrument which it occupies to-day.

Although it had been suggested by von Dittel in 1883, it was not until 1887 that this method of illumination was utilized. About this time a disagreement occurred between Nitze and Leiter, resulting in the appearance of two incandescent lamp cystoscopes, differing from each other only in minor details, that of Nitze, manufactured by Paul Hartwig, of Berlin, and that of Leiter of his own make.

Over twenty-five years have passed since the invention by Nitze of the electrocystoscope, and although many modifications of it have been presented during this period *no one has succeeded in improving the ocular apparatus, and the cystoscopes of to-day are no better than those manufactured by Hartwig or Leiter in 1887.*

Some six or seven years ago it was even impossible to have disabled cystoscopes repaired in this country, and the necessity of sending them abroad for this purpose was often a decided inconvenience.

About this time I was fortunate enough to make the acquaintance of Mr. Reinhold Wappler, a most skillful electrician, who had already

acquired an enviable reputation for the manufacture of medicoelectrical instruments, and together we began a series of experiments in the attempt to develop the possibilities of the cystoscope by enlarging the field and improving the illumination.

It must be remembered that the electrocystoscope presents many difficulties in the making, for not only does the workmanship require a most experienced and skillful mechanic, but in addition one who thoroughly understands the construction of electrical instruments, and above all must he have a thorough knowledge of optics and the ability to construct and even originate a complicated ocular system.

We were confronted at the outset by the inability of obtaining suitable lenses, the principal manufacturers of microscopes refusing to aid us in this, although Messrs. Bausch and Lomb finally consented to construct some prisms of a peculiar pattern, which were never used. In this dilemma we managed to secure the services of a competent lens grinder who was willing to devote his time on Sundays and holidays to us, and from whom Mr. Wappler acquired the art of grinding lenses and soon became far more adept than his instructor. Improvements were also made in the insulation of the lamp, so that in 1900 I was able to present before the American Association of Genitourinary Surgeons, in Washington, the first electrocystoscope manufactured in this country.

In the meantime certain instruments which I had ordered in Berlin, one of them having a calibre as large as 30 French, arrived, and although they were very beautiful in construction, and gave somewhat better results than the ordinary instruments, they failed entirely to secure the advance I had expected.

It then became apparent that the difficulty in securing a larger field was due to the presence of the prism in the ocular system, *which was apparently an essential portion of the apparatus.*

From the opening of the window, or upper face of the prism, the rays of light must always travel a distance within the prism equal to its depth, so that if the angle of the lens of the telescope is widened with a view to enlarging the field, this increase will unavoidably be cut off by the sides of the prism. In other words, if you attempt to increase the size of the field by increasing the angle of the lens you simply succeed in seeing the sides of the prism. Moreover, it is necessary to have the prism proportionally so large that the telescope can have but a small lumen, compared with the outside calibre of the instrument, and

thus a large quantity of valuable light is lost. The projecting edges and flat surface of the prism also form some hindrance to its easy introduction.

After many experiments and many failures this obstacle was finally overcome by *entirely eliminating the prism and substituting in its place a hemispherical lens*, the plane surface of which is silvered, a portion of the circumference filling and closing the window in the tube of the instrument as in the case of the prism.

A glance at the diagram will show that the substitution of this hemispherical lens is equivalent to the addition of two planoconvex lenses, one to the superior face of the prism which collects the rays at a wide angle and brings them together on the hypotenuse, the other on the anterior face of the prism which corresponds to the first lens in the telescope. It is not within

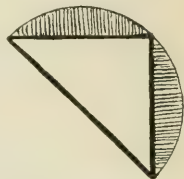


FIG. 1.—Hemispherical lens and the angle of its plane surface.

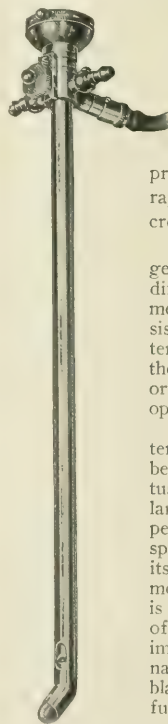


FIG. 2.—The Otis electrocystoscope, one half actual size.

the scope of this article to deal with the minute details of the optical apparatus, but the result of this manoeuvre proved eminently satisfactory, overcoming the objections pertaining to the use of the prism as a means of diverting the rays, enlarging the field, and increasing the illumination.

This instrument resembles in general the cystoscope of Nitze, but differs from it entirely in several most important features. It consists of two separate parts, the external catheter or sheath carrying the illumination, and the internal or telescope, in which the entire optical apparatus is contained.

The distal extremity of the external portion consists of a short beak (one half inch) set at an obtuse angle, containing the electric lamp in its tip. This lamp is of peculiar construction and deserves special consideration on account of its wonderful brilliancy and its almost entire freedom from heat. It is set so as to form the extreme end of the instrument; the light, unimpeded by any metal hood, illuminates the whole interior of the bladder. Its size is equal to the full external calibre of the instrument, and it is set in a metal socket or tip which screws in place after the manner of the lamp in the Nitze model, which a long experience has

demonstrated to my satisfaction to be more convenient when changing the lamp than the method of Leiter, also used in the French instrument.

One pole of the lamp is carried on the metal of the shaft itself, the other by a specially insulated wire, which does not encroach upon the internal calibre of the shaft and permits the use of a telescope several sizes of the French scale larger than that of other instruments, thus allowing the passage of a greater amount of light with a corresponding brilliancy of field.

(Note.—In order to appreciate the difference in insulation, it is necessary to know that a dissection of the Leiter instrument shows the insulation to be effected as follows: One pole of the lamp is carried on the metal of the shaft as before, then follows a thin tube of some insulating material, then a metal tube which carries the second pole of the lamp, another tube of insulating material, and again a metal tube to finish off the interior, so that we find an external calibre of 23 F. with a telescope of only 17 F.)

The shaft has a working distance of eight inches (i. e., from the centre of the window to the apex of the ocular funnel) and in the commercial instrument a calibre of 20 F. (three sizes smaller than the ordinary cystoscope). At the angle where it is joined by the beak on its superior surface, an oval window is cut through the metal to expose the lens of the telescope when in place.

On the superior surface of the proximal end is a short screw, at right angles to the shaft, on top of which a small ball is fixed, which indicates the position of the beak when the latter is in the bladder. A thumb nut on this screw serves to clamp the telescope firmly in position. On the inferior surface of the proximal end of the shaft is a metal post with an insulated core, which carries the electric terminals of the lamp and connects with the cords from the battery by a screw socket. A turn of this screw permits the lamp to be lit or extinguished at the will of the operator. For the sake of simplicity, this post has been made immovable and not working in a collar as in some instruments. Small stopcocks communicating with the internal calibre of the shaft have been placed just above the post, for the introduction of air, when it is considered desirable to use air instead of water as an examining medium.

The telescope contains the entire ocular apparatus and fits easily in the sheath. On the superior surface of its distal end is a window, cut in the form of the upper opening in a whistle, in which is set the hemispherical lens.

The proximal end consists of a funnel eyepiece with a movable metal collar at its apex, to which is fastened a small flat fork or crotch, the prongs of which pass on either side of the screw on the shaft, and serve to clamp the telescope firmly to the sheath with the thumb nut, at the same time allowing the telescope to turn on its own axis. A partial rotation of the telescope in this collar causes the lens at the end to slide from the window of the sheath, the opening then being filled by the back of the telescope, the lens facing the back of the sheath. In this way the cystoscope is introduced into the bladder, the lens being entirely protected from any contact with blood, pus,

or lubricant, which is most desirable when using a fluid medium and absolutely essential when air is employed.

After the instrument is well in the bladder the lens is brought into the window by rotating the telescope, a small knob on the ocular funnel indicating its correct position. Should the fluid in the bladder become clouded at any time on account of bleeding or the presence of pus, it is only necessary to remove the telescope, the sheath acting as a large catheter which permits the rapid withdrawal of the fluid contents of the bladder, which can be refilled, the telescope replaced, and the examination continued with but little loss of time and without removing the instrument, a much more effective method than that employed in the so called irrigation cystoscopes, all of which are necessarily feeble and ineffective.

To give a technical description of this instrument without becoming prolix and entering into tedious and uninteresting detail, is exceedingly difficult, and as it is the practical advantages which interest most surgeons I shall enumerate these as they occur in this cystoscope:

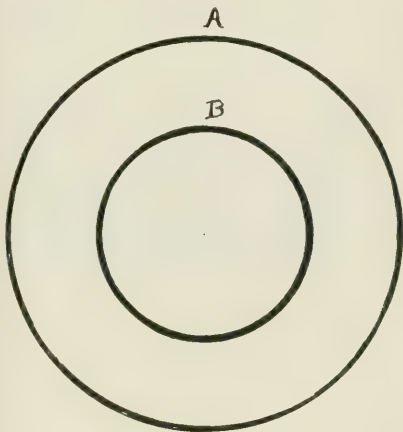


FIG. 3.—The outer circle (A) represents the field of the author's instrument at a distance of one and a half inches from the bladder wall, the inner circle (B) the field of the Nitze instrument at the same distance.

A field having an area four times as large as that of any other rectangular cystoscope, so that it is practically impossible to overlook any pathological condition in the bladder which might easily escape the smaller field of other instruments. Not only is this accomplished without loss of definition, but the field of this new instrument is rendered clearer and brighter, on account of the more powerful illumination of its lamp, the greater calibre of the telescopic tube, and the arrangement of the lens system.

After an extended practical experience with the cystoscopes of European manufacture, I do not hesitate to say that the field in none of them compares in distinctness and brilliancy with the picture as seen through this cystoscope, which cov-

ers a four times greater area. Nor have they the penetrative power or the ability to see distinctly at a distance from the object, as no matter how much the bladder may be distended, a clear image may be obtained with this instrument from any part of its interior.

Without referring to the optical formulæ by means of which these comparative areas have been arrived at, the size of the fields in the illustration (Fig. 3) were obtained by the commonplace method of clamping the instruments at a given distance from a highly illuminated sheet of paper and beginning at the extreme upper edge of the field, as seen looking through the telescope, drawing a line through the centre, from a point where a pen first came into view to a point just opposite in the circle where the pen point disappeared; the resulting line being used as the diameter of a circle representing the field of the instrument.

The instruments used for comparison were made in Berlin, Vienna, and Paris, and were found to be practically alike in area.

The arrangement and quality of the lamp and the large calibre of the telescope, rendered possible by the special device for insulating the second pole of the lamp and the elimination of the prism, give an illumination of field better than that in other cystoscopes, on the principle that more light will pass through a large tube than a small one.

The lamp has such a low ampérage that it emits very little heat so that it is practically impossible to scorch or, as has happened, seriously burn the bladder wall.

This cool, powerful lamp, together with the protection of the lens from being smeared during introduction, permits the use of air as the examining medium when this is considered advisable.

The short beak and absence of the flat top and sharp angular sides of the prism render it easy of introduction and less liable to cause bleeding.

Should the medium in the bladder become clouded, it may be rapidly withdrawn and replaced without removing the instrument.

Moreover the exquisite workmanship displayed in the construction of this instrument certainly appeals forcibly to me, and will challenge comparison with foreign cystoscopes of the first class, while Mr. Wappler assures me that it can be manufactured at a moderate cost.

5 WEST FIFTIETH STREET.

Civil Service Examinations for the New York State and County Service.—The New York State Civil Service Commission announces general examinations to be held April 8, 1905, including the following positions, for which application must be made on or before April 3rd: Assistant in clinical laboratory, Pathological Institute; pupil nurse, Erie County Hospital; physician, fourth and sixth grades, State hospitals and institutions, regular and homœopathic schools; woman physician, homœopathic school. Full particulars of the examinations and blank applications may be obtained by addressing the Chief Examiner of the Commission at Albany.

THE TREATMENT OF ACUTE TUBERCULOUS SPONDYLITIS IN INFANTS AND YOUNG CHILDREN.

By DEXTER D. ASHLEY, M. D.,

NEW YORK.

Physicians with clinical experience in the treatment of tuberculous spondylitis occurring in children from one to five years of age have frequently been disappointed in the results obtained with the generally used plaster of Paris jacket or variously modified brace. The child at this age is frequently so short and fleshy, and the pelvis so small, that it is difficult to adjust a brace so as to hold the diseased spine from progressive deformity.

In this country during the last twenty-five years, the so called "American, or ambulatory, treatment," which permits the child to be on his feet, facilitating exercise in the fresh air and sunshine with the idea of promoting digestion, has been held to be of such paramount importance that any device for the treatment of this disease which necessitates the recumbent posture has not met with general approval by the profession. In conservative Europe, where the pendulum of any movement does not swing so fast or so far, we find the old treatment by confinement still in vogue, though seldom in a manner to be commended.

Those members of our profession who are making a special study of tuberculous affections, have demonstrated by a long series of cases that such patients are benefited by limiting the amount of exercise to the minimum, while paying due regard to fresh air and easily digested and nutritious food. All admit that acute tuberculosis in any form is a disease in which the maintenance of the nutrition of the body is of primary importance, while exercise to the point of fatigue is found to produce a loss of weight and an abnormal increase of temperature. (See Report of the New York Academy of Medicine, February 5, 1903.)

We have several devices, each having its peculiar advantage, for treatment of spondylitis in horizontal confinement, such as the Sayre cuirass, the Phelps pappoose bed, the Bradford frame, the Lorenz plaster of Paris bed, etc., etc. Of all of these, the lightest, most cleanly, and efficient according to my judgment, is the modified Bradford frame, suggested by Dr. Royal Whitman. These modifications both in form and in use are so numerous as to amount to a distinct instrument, and I think it should be called the Whitman frame. For the benefit of those who are not acquainted with this frame, I shall give a description of it in this paper.

In 1900 it was my privilege to have under observation 127 cases of tuberculous spondylitis in

patients from one to five years of age, most of these with Dr. Royal Whitman in the out patient department of the Hospital for the Ruptured and Crippled. A study was carried out with the idea of ascertaining the relative benefit to be derived by these young patients from treatment by confinement upon the frame, the spine in superextension,

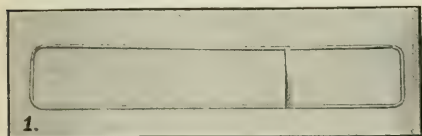


FIG. 1.—Steel or gas pipe frame with transverse bar to give rigidity.

compared with the ambulatory treatment in the plaster of Paris jacket. My departure from Europe in the early part of 1901 prevented the completion of my study in this direction. Dr. Whitman gave the results of his observations to the American Orthopædic Association at Buffalo in June, 1901, and these are recorded in the transactions of the association, Vol. 14.

About fifty of these patients were treated upon Whitman's frame. This frame is made of steel or gas pipe covered with heavy canvas, with lacings behind and canvas straps at the ends, which draw the cover tightly over the iron frame, making a firm support. It is made about three inches longer than the patient, and corresponds in width with the distance between the extreme ends of the coracoid processes, so that the ordinary child's frame is

was tops made for each frame, that one may be removed and cleansed. At the point of the kyphosis strips of saddle felt are usually so adjusted as to make pressure upon the transverse processes, and the frame is bent backward, moderately superextending the spine of the child lying upon it. This superextension is gradually increased, with an idea of separating the diseased surfaces in the bodies of the vertebrae by *gravity traction* of the parts below and above the diseased area, thereby facilitating repair and differing, I believe, in this respect, from any other plan of treatment in horizontal fixation in use in this country.

To secure rigidity, Dr. Whitman wraps bandages around the frame, under the position of the trunk, before applying the canvas cover. I have found it possible to secure greater rigidity by the introduction of a light, transverse steel bar at the point of the kyphosis, with a convexity backward,

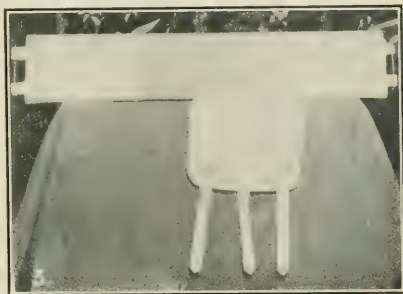


FIG. 3.—Anterior view of covered frame, showing apron and oil-cloth under region of buttocks.

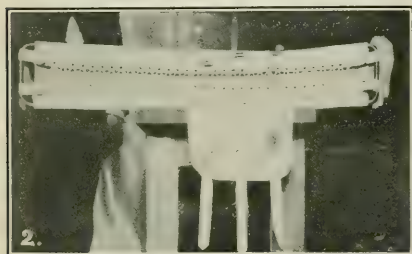


FIG. 2.—Posterior view of covered frame, showing transverse bar, apron, manner of lacing, etc.

from 33 to 38 inches long, from $5\frac{1}{2}$ to 7 inches wide, and weighs from $3\frac{1}{2}$ to $4\frac{1}{2}$ pounds. Rubber sheeting is sewed to the canvas in the position of the buttocks, and the child is secured to the frame by an apron extending from the top of the sternum to the symphysis pubis. It is well to have two can-

so that it will not come in contact with the top canvas. (See Figs. 1, 2, and 3.)

The results in the main were satisfactory in these fifty selected cases under observation on the frame. The kyphoses became less prominent, the spasms were markedly lessened or entirely subsided. The children's growth, which is so frequently impaired in this disease, proceeded normally. Their general appearance and weight were improved. The thorax was frequently, in very young children, apparently flattened anteroposteriorly, which is not an undesirable result, since, as Dr. Whitman remarks, "it is quite the reverse of the natural tendency of the deformity."

The following disadvantages are apparent:

First, treatment by this method necessitates frequent supervision by the surgeon. At least once in two weeks the patient must be seen for the adjustment of pressure pads, increase or decrease of superextension, and, most important of all, for the

supervision and instruction of the mother or nurse in the handling of the child, since it is desirable to remove the patient from the brace every day, to lay him on a pillow face downward, the back being rubbed with pure alcohol, and powdered. This handling of the child by the mother jeopardizes the advantages of this treatment, the mother failing fully to comply with the instructions, through lack of comprehension, neglect, or oversympathy for the child, thus laying this treatment open to the common criticism of any brace that is removable by the parent.

Second, the lateral motion of the spine is only imperfectly restrained.

Third, the motion of flexion at the time of changing of soiled clothing, with consequent irritation of the diseased spine, can hardly be avoided.

Fourth, patients having extensive deformity find the gravity traction exceedingly painful, if not intolerable.

During the past year I have had several very acute cases of tuberculous spondylitis, which in spite of my best efforts with the Whitman frame alone, continued to have abdominal and thoracic spasms, these spasms being apparently increased in frequency and severity during the effort to superextend the spine by gradually bending the frame. I attributed this failure to obtain beneficial results largely to the fact that the parents had not the fortitude to keep the child upon the frame until the spasm of the muscles had been overcome by the gravity traction, and farther, that the kyphosis was so sharp in some cases that the spinal muscles in spasm preventing superextension really increased the pressure upon the diseased surfaces of the vertebrae.

With an idea of relieving this spasm, and encouraged by the testimony of Robert Jones, of Liverpool,¹ and J. R. Goldthwaite,² of Boston, I gave the patient an anæsthetic (although this is not always necessary) and submitted him to a modified Calot operation.

I do not intend here to advocate the universal resort to the modified Calot for the reduction of the kyphosis in tuberculous spondylitis. My experience has been too limited to give conclusive data. Mr. Jones had reported 83 operations in 1902, in patients from 18 months to 22 years of age. He has modified Thomas's hip splint, and uses it to secure immobilization in the superextended position. He uses no plaster of Paris. Mr. Jones is inclined to approach the original Calot, sometimes operating upon extensive and long stand-

ing deformities. According to his judgment, kyphoses reducible by this method are: those occurring in the young, those in which active disease is present, and those in which the angle of deformity is changing.

Dr. Goldthwaite, as I understand it, uses the gravity traction for the reduction of the deformity, at the time of the application of the plaster of Paris jacket, and is then content with the ambulatory method.

The method which I have employed in treating these young children differs in some particulars from any procedure heretofore described.

The child is supported face downward in the horizontal position, the body at right angles to a table, the upper third of the thighs resting near



FIG. 4.—Position of patient in extension and counterextension during application of plaster. (Note position of operator's hands making pressure just as plaster hardens.)

the edge of the table. Extension is made upon the head and arms, the arms at right angle to the body, and counterextension upon the feet, always sufficient to overcome any sagging of the body in lordosis. The kyphosis is gently pressed down until nearly or quite obliterated, no considerable force being employed. (See Fig. 4.)

The child is held in this superextended position while a snugly fitting stockinet shirt is applied over a rubbing bandage. Over this is adjusted a felt pad about three inches wide, extending the length of the spine, and felt pads cover the anterior superior spines. These are secured by one layer of sheet wadding bandage, and over all is applied a light, closely fitting plaster of Paris jacket, extending from the top of the sternum to the symphysis pubis. The spine is held in superextension until the setting of the plaster, by one hand pressing down upon the region of the kyphosis, and the other pressing upward upon the upper part of the sternum, slightly flattening the thorax, if anything. I prefer this method to suspension in applying jackets to children, it being less harrowing to parents and

¹ The Immediate Obliteration of the Deformity in Pott's Disease.

² The Immediate Correction of the Deformity Resulting from Pott's Disease.

patient, and the movements of the child being more easily controlled.

The patient is then transferred to a Whitman frame, which is bent to conform to the plaster. The cast is trimmed like an ordinary jacket, except that it is left longer than usual in front, there being no

and adjusted well to the occiput, the neck being moderately superextended, and the head secured in this position by a coronal band. The plaster is then cut out, exposing the top of the head, the face, and the ears.

The patients are confined upon the frame for from six to eight months, after which they are permitted to assume a semisitting position by elevating the head of the frame. The plaster is changed at intervals of from three to four months, the skin being kept clean in the mean time by the rubbing cloth.

If on changing the plaster a distinct spasm of the muscles of the back is found, which would indicate the continuance of the acute stage, it is best to continue the gravity traction. We are apt to err in the direction of too short confinement rather than too long. If the kyphosis was large, and considerable



FIG. 5.—Position upon frame in gravity traction, showing abdominal fenestra, the stocknet rolled up on corset at upper end.

intention that the child shall assume the sitting position. After the jacket is well hardened, usually on the day following its application, an oblong fenestra is cut out in front, extending from the centre of the gladiolus to from $1\frac{1}{2}$ to 2 inches below the umbilicus. In case any considerable kyphosis has been reduced, a small fenestra is cut out at the back over the knuckle, this cutting being facilitated by the one layer of cotton. (See Figs. 5, 6, and 7.)

The child is confined to the frame by the usual

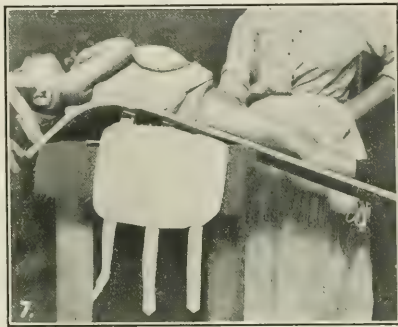


FIG. 7.—Child with paraplegia due to cervical spondylitis, with head in superextension, immobilization, and gravity traction.

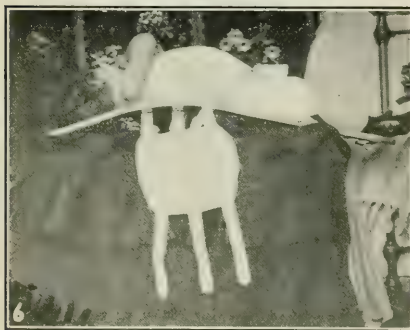


FIG. 6.—Stocknet everted, covering fenestra.

apron. If the point of disease is in the lumbar or lower dorsal region, one or both limbs are included by a short spica in order to secure immobilization of the diseased part. (See Fig. 8.) If high dorsal or cervical, the plaster is extended to the head,

force was used at the time of operation, a longer period of fixation in recumbency is necessary than if the kyphosis was small and little force was employed.

In one case a psoas abscess presented in four months after the operation, which so far as I could discover had no relation to that procedure. There being no constitutional symptoms, it was permitted to gravitate downward, somewhat below Poupart's ligament. Later there appeared signs of spontaneous evacuation in the inguinal region. To prevent this an incision was made some two inches below and external to the anterior superior spine, through the fascia lata, and upward and inward through the healthy tissue to the site of the abscess, which was thoroughly drained, flushed, and gently wiped out, after which strong compression was made over its lower course, and the incision sewed up to prevent mixed infection. Much to my satisfaction, after eighteen months no reappearance has

occurred. If it should do so, I should again evacuate and sew up.

If the jacket is properly applied, the flexion deformity having been reduced and the spine placed



FIG. 8.—Lumbar Pott's as treated by Vulpius. Picture taken in Heidelberg.

in superextension with a felt pad extending the entire length of the spine, there should be relief from pain. I have found that there was some fault in my technique when this condition was not attained, and have always reapplied my jacket if the pains did not subside within a short time. The apparently prevailing idea that a plaster of paris jacket may be applied by any one is fallacious. In my work, while exercising the greatest care in application, I find that each jacket varies in efficiency of support, as proved by the comfort or discomfort of the child, by the prevention or correction of the deformity, or the permission of greater deformity. A jacket may be applied smoothly, and yet be entirely inefficient, or even injurious. It is not enough to wind a plaster bandage upon a deformity. With no more skill the variously modified brace is frequently bent to conform to the deformity which it is supposed to arrest or support. The spine should be placed in a position tending to correction, and the jacket so adjusted as to maintain that position. Only a minute knowledge and attention to detail can bring these patients through their disease without a hideous deformity. The time should be past when the general practitioner will essay to apply a plaster of paris jacket by the aid of a nurse and swing borrowed from an instrument maker, to the inevitable detriment of the patient. With quite as much reason might the same general practitioner, without special surgical preparation, attempt an operation for appendicitis.

Patients confined upon the Whitman frame should have careful attention to prevent any disturbance of digestion. The child must have the advantages of fresh air and sunshine. These may be obtained even in the crowded districts by the utilization of the fire escape or the house top. Even

the street is better than a dark room. The frame should be adjusted to a baby carriage, and the child kept in the fresh air all day in pleasant weather.

The diet should be confined to nutritious and easily digested food, consisting especially of raw milk, fresh eggs, raw, rare or partially cooked beef well salted, oysters, clams, breakfast food with plenty of milk and cream, stale bread with plenty of butter or olive oil, potatoes sparingly and only boiled or baked, plenty of fresh, succulent vegetables such as string beans, peas, and cauliflower. Baked apples and stewed prunes may be given, and oranges and bananas sparingly. The diet may be varied along these lines.

I cannot urge too strongly the advantage of the use of appropriate fats in the diet of these cases. For this purpose the forced milk feeding, combined with cod liver oil emulsion, is to be highly recommended. In this combination, it will be well to administer castor oil daily, sufficient to induce two copious stools, and small doses of calomel (from one tenth to one fourth of a grain) with soda, every week or ten days, followed by oil, or citrate of magnesia, with occasional flushing of the colon with warm soapy water. Digestion may be further aided by administering light massage to the abdomen through the fenestra. Above all, give the child plenty of water to drink.

To aid constructive metamorphosis, I occasionally advise the administration of the triple phosphates, the syrup of the iodide of iron, beef, wine, and iron, and other forms of iron, especially for anæmic patients. The chief dependence, however,

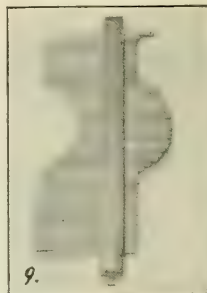


FIG. 9.—DR. E. B. Young's device for measuring the antero-posterior deformity.

should be placed upon fresh air, diet, and immobilization in superextension.

I have never found it necessary to use opium in any form for abdominal spasms, and think that its use is to be condemned.

One of the most important considerations in caring for a patient suffering with this disease, in order

to judge the efficacy of the treatment, is the making of accurate tracings at regular intervals, and recording the same so that they may be carefully compared. I have found that the generally used lead tape is so easily bent while lifting it from the child's back to the tracing paper, that one may be deceived by his own tracing. I have been using for five years the device invented by Dr. E. B. Young, of Boston. (See Fig. 9.) This is better than the lead tape, and has the advantage that it may be quickly adjusted to the deformity. Mistakes may be made with this instrument, however, in tracing the irregular slots' surface. With a docile patient, the most accurate measure may be obtained by the use of the plaster

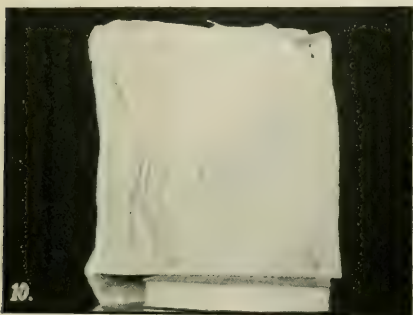


FIG. 10.—Tracings showing deformity, and after-tracings for two years, showing correction and growth of patient: A, March, 1903; B, June, 1903; C, July, 1904; D, February, 1905.

of paris bandage. To secure uniformity of posture at the time of measurement, place the patient in the prone position, upon a firm, flat surface, arms at right angles to the body, hands under the forehead. Smear the surface to be covered with glycerin, thus preventing the adhesion of the plaster. This may be easily removed by warm water, being superior in this respect to vaseline. Apply the bandage over the spinous processes from the occiput to the dip of the sacrum, the bandage being folded upon itself and smoothed down neatly, and retained until the plaster is set. If S. S. White's quick setting dental plaster is used, this will take but a moment. If we use a three inch bandage, we shall have a record of the lateral curvature as well, which the other devices do not record. The dried strip, bearing the date and name, may be preserved, or cut or sawed down through the center at the point of touching the spines of the vertebrae, when from either half we may make an accurate tracing of the deformity in the record book. (See Fig. 10.)

In addition to the advantages obtained by the use of the Whitman frame, I claim the following advantages for the use of the plaster of paris jacket

and the modified Calot procedure in the cases under consideration:

First, the deformity and spasm are immediately overcome, and the spine is at once placed in the position which is most conducive to the healing process.

Second, the spine is securely held in this position, the pressure pads are adjusted by the surgeon, and remain in the desired relation.

Third, no lateral motion of the spine is permitted, nor any undue flattening of the pelvis.

Fourth, the necessary handling of the child is done with the least possible disturbance to the spine. The skin may be kept clean by means of the rubbing cloth.

Fifth, it conserves the labors of the surgeon and permits the treatment of patients from a distance, where frequent observation is impossible, it being sufficient after the treatment is well established, to see them once in from one to three months.

Sixth, by the modified Calot procedure we increase the capacity of the thorax, relieving pressure upon vital organs.

Seventh, paraplegia, with hardly an exception, becomes less or entirely disappears. Sometimes the improvement may be seen within a few hours.

Eighth, in marked deformity, where the angle of flexion is so great as to render the supine position almost intolerable, the reduction of the kyphosis makes this position at once comfortable.

It is quite evident that if we keep the spine from tipping forward above the point of disease until partial ankylosis has taken place, it will then be much easier to control the deformity otherwise caused by the dropping forward of the superincumbent portion of the body. After the pelvis has developed sufficiently to support a jacket, and when the absence of spasm of the muscles of the back indicates that the healing process is proceeding satisfactorily, the child may gradually assume the erect position with appropriate support.

337 LEXINGTON AVENUE.

Magazine Note.—The *Century* has in its April issue the first of two articles by Anita Newcomb McGee, M. D., on The American Nurses in Japan. Dr. McGee was acting assistant surgeon in the United States Army during the Spanish War, the Philippine insurrection, and the Boxer campaign, serving directly under Surgeon General Sternberg. At the head of a band of American Red Cross nurses, Dr. McGee worked for six months last year in the hospitals of Japan, services recognized by the Mikado and honored by the entire nation. Dr. McGee is the wife of Dr. W. J. McGee, the anthropologist and geologist, and daughter of Professor Simon Newcomb, United States Navy, retired, the eminent astronomer,

RECENT ADVANCES IN ELECTROTHERAPEUTICS.*

By WILLIAM JAMES MORTON, M. D.,

NEW YORK.

My first thought this year in attempting to portray for the third time before the association at our annual meeting, recent advances in electrotherapeutics, is, that in general, a great and almost revolutionary advance has recently been attained, by leaps and bounds, so to speak, in the domain of physics. This advance consists in the dethronement of the atom as an ultimate concept of our knowledge of small things. Ordinarily, the physician has not been expected to know much about general physics. His studies have been more particularly confined to botany, inclusive within recent years of bacteria, to chemistry, and to zoology. But to-day the importance of general physics with the medical man holds its own fairly with the importance of the special physics of chemistry, his principal physical pursuit up to the present time. The revolutionary advance in physics which I refer to, is, of course, familiar to you all in connection with the new theories of our conceptions of the constitution of matter, and so far as the science of medicine is concerned, this revolution redounds almost exclusively to the glory of electrotherapeutics, for it is precisely these new doctrines that have enlarged the possibility of the treatment of disease by agencies now admitted to be fundamentally electric, and yet how different to the electricity referred to in our older works of electrotherapeutic lore.

In general the trend of the new order of thought is somewhat as follows: It has long been an established doctrine that electricity exhibits energy under the form either of strain or of motion, affording in the former case an instance of "charge," and in the latter an instance of "current." But this does not define what electricity is. The new provisional thesis promulgated by Sir Oliver Lodge with his usual brilliancy is no more nor less than this, that matter itself consists of electricity, not of an ill defined, mysterious, pervasive, and subtle something, but of actual particles, corpuscles or electrons, capable in their grouping, of correlation to the well known laws of chemical affinity and of explaining the production of the radiation or vibrational phenomena like light and x radiations. According to Dr. Lodge, positive electricity exists as small particles, the size of an ordinary atom of mat-

ter. Negative electricity exists in still more minute particles termed electrons. Such an electron is a unit of electricity and not a material particle plus an electric charge. Each electron has a mass which is about $\frac{1}{800}$ of that of an atom of hydrogen. This fact, namely, that masses actually smaller than atoms exist, has been experimentally demonstrated by Professor J. J. Thompson. That, at least negative electricity, in its ultimate analysis, is a small charge or a small charged body, is now a doctrine definitely accepted. It would, for instance, require 800 hydrogen negative electrons to make up a mass weighing as much as an atom of hydrogen. Each substance known, however, has its own specific number and arrangement of electrons, and therefore, each kind of atom as at present conceived of in ordinary chemistry may hold a diverse number of these electrons. Uranium and radium, for instance, since they are very heavy chemical atoms may contain as many as 200,000 electrons. From these heavy atoms some electrons fly off and thus we have radioactivity as discovered by Becquerel and demonstrated by the Curies in the case of radium.

In the differing number of electrons to each chemical substance we have an exact correlation to the atomic weights. For if, quoting Lodge, a substance has twenty-three times as many electrons as hydrogen has, we call it sodium, and if it has two hundred times as many as hydrogen, we call it lead or mercury, and if it has still more it exhibits instability, and the substance exhibits what is termed radioactivity as in the instance of uranium and radium.

Corpuscles or electrons as described, may, on occasion, fly off at nearly the speed of light from the positive mass. Flying off from the negative terminal of a vacuum tube and striking a massive target (anticathode) they set up an ethereal pulsation which we call x rays, while equally owing to their smallness they themselves penetrate other forms of matter. Likewise, the same particles fly off from unstable elements like radium and by impingement upon each other set up again ethereal pulsations (gamma rays). Such radiations are of the same nature as light.

Metallic conduction is believed to be the permeation of these little particles through the substance of metallic conductors, each particle as Lodge describes it being handed on from one atom of the metal to the next. In liquid or electrolytic conduction, on the other hand, the particle and the atom travel on together and at the same rate of speed; by reason of the junction of the two, the speed of travel is slow. In rarefied

* Read before the annual meeting, American Therapeutic Society.

gases, on the other hand, the speed approaches that of light.

These opinions relating to our fundamental conceptions of the nature of matter and of electricity as composing matter, while astounding to physicists and in a sense tentative, reflect at the same time a new light and a new interest upon electrotherapeutics. For if matter may break up into corpuscles or electrons, which are particles of electricity, then also the same corpuscles or particles of electricity, must have once formed into matter. This leaves us in the position of claiming that electricity in one of its forms constitutes matter. If it should turn out that the material substance of our bodies, of our tissues, of our muscles, nerves, and glands, are of electric constitution, it follows according to the laws of action and reaction, that the extraneous and applied electricity common to electrotherapeutics must exert upon these tissues a most natural reaction and constitute at the same time a most natural, scientific, and explicable form of therapeutics.

We may roughly tabulate some of the new order of facts relating to radiations as follows:

RAY.	SOURCES.	THERAPEUTICAL EFFECTS.
Hertzian waves.....	Electrostatic.....	Physiological
Dark heat and u rays.....	Heated substances, etc.....	Physiological.
Radiant heat.....	Incandescence, etc.....	Physiological and inflammatory.
Visible spectrum.....	Arc lamp.....	Physiological and inflammatory.
Ultra violet.....	Arc lamp.....	Bactericidal, etc.
Alpha (emanations).....	Radium.....	Chemical, physiological, cal, bactericidal, inflammatory, electroscopie, photographic.
Beta (corpuscles).....		
Gamma (ether pulses).....		
Cathode rays.....	Crookes's tube.....	Chemical.
X rays.....	Crookes's tube.....	Chemical, electroscopie, bactericidal, physiological, inflammatory, photographic.

This new electrotherapeutics includes the application of radiations in medicine. The entire gamut of radiations is called upon, running from the longer Hertzian waves onward through the dark heat waves, the heat, ultra red, red, and visible spectrum rays, the ultra violet and to the x ray, and back of the radiations themselves, is the disintegration of the atom with its corpuscular bombardment of alpha and gamma rays, as demonstrable in the instance of radium and other allied substances.

We may also mention specifically the high potential, high frequency current, not only as a part of the above enumeration, but by itself, as being at the present moment a specially attractive method of procedure. We do this to point out that there is great danger of confusing a mere brush discharge with a true high frequency current. As first pointed out by myself in 1881 and 1891, the true high frequency current is to be derived from what I named at that time the static

induced current, a terminology admitted to-day by highest authority to be accurately descriptive of the phenomena involved. There is a tendency at the present time to sacrifice to the more spectacular effluve or brush discharge the true physiological effects which really only belong to the real high frequency, high potential current, or, if we prefer the term, to the static induced current.

In connection with the high frequency current referred to, Sir Oliver Lodge, in a recent lecture to physicians, speaks as follows: "Very small electric oscillations can be made to run to 50 millions a second. The Leyden jars we shall have next time will give a frequency of 30 to 100 millions." In this connection, I may be pardoned if I point out that in 1891, long before the distinguished physicists, Tesla or d'Arsonval, had written a word upon this subject of oscillatory discharges, I used the following language: that "computing the spark interruption to be at least two hundred a second and the oscillations of each spark to be one hundred millions a second, we have a current giving twenty billion alternations a second (remarking at the same time, in regard to the nature of the physiological results produced, that 'in the great rapidity of the alternating (oscillating) currents of the spark discharge, particularly in the rapid series . . . we find the reason despite smallness in the quantity, for accomplishing work in producing nerve and muscle stimulation. . . . The conditions may be compared to a bullet shot from a rifle, or the same bullet gently rolled across the floor.'" ¹

Dr. Lodge also points out that "the brush discharge is often spoken of as the high frequency current, though it is often not of a high frequency at all." It is evident many solenoids now in such common use in connection with my original high potential, high frequency current called the static induced current, must act as "choke coils," and serve to dampen out the oscillations or frequency. Many of our recent and modern high frequency apparatus could more properly be called *potential raisers*.

The recent advances in the use of the high frequency currents appertain mostly to the very greatly increased use of these currents, and to an attempt to decide upon their effects in the treatment of disease. In the main the early contentions of myself and of d'Arsonval as to these physiological effects have been sustained. Dr. Chisholm Williams, of England, has applied high frequency currents with great benefit in the treatment of tuberculosis and is continuing his stud-

¹ Medical Record, January 24, 1901.

ies along that and other lines. Dr. Horace Manders is also carefully investigating the high frequency treatment, as are many others in England, in our country, and elsewhere.

So far as apparatus goes, the writer has published an account of his new solenoid-condensor-resonator. (*Second Report of the Committee on Current Classification and Nomenclature*, American Therapeutic Association, September 24, 1903.)

Röntgen Ray.—It would be interesting to review the historical growth of radiations in their relation to medical practice. Suffice it to say that the Röntgen ray was the first to be used in electrotherapeutics, and the experience thus gained most naturally led to the use of radium in the same manner.

Of the continued use of the x ray in the treatment of cancer and of lupus, it can, in the opinion of the writer, be very truly said that the x ray has considerably increased the percentage of cure in cancer. The cure of the rodent ulcer is generally admitted. Similarly, some cases of deeper epithelioma and of carcinoma of the breast can be cured by the x ray, when it is doubtful if this could be done by excision. As to deeply seated cancer of internal organs, it cannot be said that much can be accomplished. But if a carcinoma of the stomach is of a superficial type there is little doubt but that some cases are cured. The same statement holds true also of some cases in the upper air passage. Some cases also of cancer of the uterus have been cured and many retarded in their progress.

Dr. Leopold Freund has published a classical work upon radiography, bringing the subject up to date, while Dr. Carl Beck in our country, has embodied his own brilliant original work in a volume of great value. To Dr. Beck radiography in its applications to surgical diagnosis owes much of present high position.

Radium.—The use of radium from a therapeutic standpoint has been most interesting, and an entirely complete method of procedure has not yet been agreed upon. The first applications were of radium salts in glass tubes, but it was quickly pointed out that only the gamma rays, which resemble Röntgen rays, could escape through the glass. Aluminum tubes were then substituted. These allow of the escape of the beta rays, corresponding to the cathode rays, and greater effects were produced. But perhaps about ninety-five per cent. of the corpuscular projection of radium consists of alpha rays, which are positively charged atoms of electricity and possess little penetrating power. In fact, these alpha rays behave as do gases, and may be col-

lected in receptacles, or become attached to other substances, and may also in their turn give forth radiations. This quickly suggested the capture of these gases in solution in fluids, and led to the use of radioactive water. It has often been denied that water can be rendered radioactive, but in some tests which Professor Pegram and Professor Halleck, of Columbia University, were kind enough to make for me of some water which I had prepared, it was perfectly evident that the water was strongly radioactive. The radioactivity of the water, according to Professor Pegram's data, kindly secured for me at my request, was about one half that of uranium oxide.

Radium exerts, as does the x ray, a decided effect in retarding growth in some cases and some stages of cancer. But while neither the x ray nor radium comes up to the extravagant expectations of cure early entertained, it must nevertheless be generally conceded:

1. That both have increased the percentage of possible cure of cancer, and
2. As an outcome of their success, all cases will be treated in any event by radiation after operation.
3. Or that, as I have always advocated, a combined or composite plan of treatment will be adopted, in accordance with which the patient will be treated by the x ray or by radium, both *before and after* a possible operation.

Artificial Fluorescence of Living Tissue.—Among the recent advances in electrotherapeutics, I may mention the plan proposed by myself of saturating the living human body with harmless fluorescent substances, like quinine, fluorescin, eosin, etc., and then subjecting the body thus saturated, to the x ray or to radium, whereupon these fluorescent substances are excited to give off their characteristic fluorescent light. We thus treat the patient, or some part of the patient, or any part of the patient desired, with *interior light*. This method means that light is developed within the very tissues themselves in among the cells and fibres and cavities, and there effects its specific result. Whatever has been found to be true in greater or lesser degree in phototherapy of the external applications of light is here produced internally, and in intimate relation to parts, like the liver, spleen, lungs, etc., to which light has not hitherto been caused to penetrate. In such a combined treatment the x radiation and the radium radiations lose their identity, because they become absorbed in the act of producing fluorescence. The x ray and the radium are merely exciting causes, while the effective agency is the light.

This treatment is giving excellent results in my hands, and has been followed by others very successfully. I am happy to note that my idea has been adapted to the purpose of illuminating the cavity of the stomach, by filling this organ with an innocent fluorescent fluid, and then swallowing the usual stomach lamp.

Among substances which give fluorescence to light are quinine, æsculin, rhodamin, eosin, petroleum jelly, or vaseline, petroleum in general, paraffin, tumeric indigo, stramonium, naphthalin red, litmus, henbane, gentian, fluorescent copper, potassium chromate, fluorescent cochineal, etc. I have found by experiment, however, that some of these substances which are beautifully fluorescent to light, are not correspondingly fluorescent to the x ray and radium, while on the other hand, substances which are not fluorescent to light are highly fluorescent to the x ray and radium. For instance, benzoate of sodium is fluorescent to the x ray and not fluorescent to light. Among fluorescent substances, there is one I have lately discovered, which I believed to be æsculin of silica. Certain it is that a sodium glass test tube in which æsculin in solution has been retained for one or two weeks produces a shadow picture upon a photographic plate quite equal to that produced by a quarter of an inch of lead. It would seem here as if a new law of Röntgen skiagraphy could be expressed in these terms, namely, that contour shadows may be caused upon photographic plates due to fluorescent absorption, rather than to the arrest of the x ray by the density of the intervening material. Many other experiments prove beyond question that this law holds good of fluorescent substances at least in their dry state and probably also in liquid form.

My principal therapeutical treatments have been with quinine, æsculin, and fluorescein. Fluorescein is particularly desirable on account of its non-toxic properties.

The special application that I am now making of this method is in tuberculosis, in the treatment of lupus, of tuberculous glands, or other tuberculous deposits. My cases of lupus are now healing with greater rapidity than I have ever seen before, and my cases of tuberculous glands get well quicker than before. Cases of tuberculous lungs are making really remarkable progress with diminution of cough, cessation of night sweats, gain in flesh, diminution of the bacilli discovered in sputa, etc. I expect at an early date to make a specific report of these cases.

Cases of chronic malaria under this treatment, under the use of fluorescein and not quinine, have recovered. In a recent case of *amœba coli* in which

two abscesses had been opened and in which to stem the progress of disease, it had been proposed to open the colon and to inject ice water, the parasites have been absolutely destroyed. This case was recently reported by Dr. Stieglitz. (N. B. Subsequently, however, a relapse occurred.)

On the whole, the prospects for this new method seem to be most brilliant and we may note a distinct advance, namely, an advance where light is developed in the interior of the body instead of as previously, from the exterior.

The method of the production of light in the interior of tissues possesses two practical applications, which may in conclusion be mentioned here.

If we administer to a patient twenty drops of an aqueous solution of fluorescein, one part of fluorescein to thirty of water, and, say, forty minutes later on make an x ray exposure to a photographic plate, we obtain a radiograph of superior contrast and definition. In a similar manner, fluorescopic examination of this patient, particularly of the thorax in tuberculosis of the lungs, is greatly aided.

An advance which should not pass without notice here has been made by Professor Stephan Leduc, of Nantes, France, who has shown in the most scientific and conclusive manner that a profound general insensibility to pain, namely, general anæsthesia, may be produced by electricity alone and safely also, that is to say, that the animals experimented upon come out from the anæsthetic state without any impairment of their functions. Dr. Leduc employs the usual battery currents, namely, currents of low voltage and high current strength, interrupted slowly. Prior to falling into the anæsthetical sleep, animals experience a series of epileptiform and convulsive seizures, which soon cease. It yet remains to apply this practice successfully to general anæsthesia in human beings, but the possibility remains that this may be done. Dr. Leduc's contribution to the subject is certainly one of the remarkable features of the year's progress.

19 EAST TWENTY-EIGHTH STREET.

Measles in Albany.—Albany is in the midst of an epidemic of measles, and there are scores of cases. It is not confined to any one section of the city, but is widespread. Up to the present time there have been no deaths from the disease, and it is probably not as bad as it is in some other sections of the State. There are said to be 500 cases besides 330 in the adjoining city of Troy.

TWO DIPSO MANIACS; ILLUSTRATING
TWO DIPSO MANIAC PHASES.By T. H. EVANS, M. D.,
PHILADELPHIA.

The difference between voluntary and involuntary drunken habits is the difference between simple inebriety and dipsomania. The latter is a condition growing out of some fundamental taint which expresses itself as a neurotic explosion of a peculiar character, namely, an overpowering desire to numb consciousness with the poison of alcohol, which, when arrived at, produces fear and disgust in the patient for his achievement. The attack in the end clears the sky and the storm sweeps out the toxins and waste products, with the patient to start again free, for a time, of the shadow that had intensified up to the attack.

The variations in temperament and effect are as many as the cases, so that each one is to be studied as a distinctly personal manifestation. William Lee Howard (1) suggests that many patients are of intelligence and social position; meaning, I suppose, the same as has been said, that it "takes brains to go mad." I am not ready to admit that cases cannot appear among the ignorant and originally degraded. However, with their lack of incentive and self respect the malady will not present itself in a typical light, since it is the despairing struggle of the patient that gives the picture its Dantean effect of misery and remorse; the suffering of the patient's friends is equalled only by their obtuseness to the nature of his shortcomings.

Why they continue to preach to him, to threaten him, to have him arrested, as wives do, in the daily sittings of the police court, I realize, but hope for better when the lay community is instructed as it should be. The efforts of prohibitionists fail utterly to impress a scientific and satisfactory meaning on the public. School textbooks omit important facts, in an anxiety to explain to the children the secrets of hob nail liver, cirrhotic kidney, etc. In school the useful is often replaced by the ornamental and curious; there is little time to teach the dignity of work, the value of money, the need of asking for receipts for money paid, and countless other essential things; they are taught not to know things, but only to know about them. This is bringing up the child in the way he is not to go. The defect in the public school system is the attempt to force children of divergent personality along identical paths. Little reference is held to physical or mental peculiarities, temperament, heredity, or physical adaptability; e. g., all human beings are

certainly not fitted for doing eye work, but civilization has set us all at the task. Hence, eye strain is present and real enough even if it is not just the factor some writers assert.

Backward and truant children are, perhaps, more sinned against than sinning. I think their rights of choice are to be regarded, as well as their physical and mental competency, instead of practically throwing them under the Juggernaut of education.

A survival of the idea of children inheriting the social rank of their parents crops out in efforts to educate all our children up to or above the parental standard. Plato's "iron men, silver men, and gold men" is not to be overlooked in this connection. Specialization and division of labor should make an honorable place for men of all grades of intelligence and capability. But we are mistaken in thinking education, at least of a fixed type, is a panacea for the ills of civilization; or that it is the process of running all children through the same mould to that end. Such and other similar mistaken attempts in cases of neurotic or degenerate temperament is largely at the root of the increase of morbid processes among which to-day dipsomania is prominent.

CASE I.—Mr. John D., aged 47 years. Born near Glasgow, Scotland; married, having four children.

Is a weaver and expert at his trade. From youth has always been considered of good intelligence; he is well read and discusses questions with an unusually broad viewpoint and native logic. His father was wealthy, as wealth goes in the country districts of North Scotland. The boy grew up surrounded by the best moral, social, and intellectual influences. His mother died in his youth, and a second marriage introduced a disturbing factor in the home. He has the belief that his efforts were never valued as those of his brother; to a sensitive and bright child this was disheartening. At school and in play the unequal rivalry was continued with the result of unhappiness and disagreement.

He does not remember just how the drink habit fastened itself, for liquor was not forbidden as he grew up and the tendency came gradually. After awhile frequent indiscretions made it necessary for him to leave the father's employ, bringing his family with him to America.

Here, at first, things went better. He came under the influence of the settlement work of the sister of Dr. Kelly, of Baltimore. This noble woman devotes the best part of her time in Philadelphia to the Kensington mill district, where every effort is made to improve the living conditions and add to the morals and happiness of the workers.

For a year Mr. D. was a leader in prayer meetings, and a steady enough fellow. This was but a glimpse of better things.

Again and again he had to fight off tempta-

tion, finally to sink; and in shame he left America. He could not do better on his return to Scotland, and leaving his family there he returned to Philadelphia. They have since come over to him and he is making the fight again. Within a few months he has sworn off twice, and twice I have heard that he has taken clothing out of the house to pawn for drink. His wife has a slight income and his father sees that they do not absolutely want, but his home is a four room building on a small street, and destitute of the refinements to which he and his wife were originally accustomed, and a sad commentary on the effects of what is not a depravity, but a disease, and which is only to be controlled when so recognized.

He has been twice in jail, an event pernicious to all self respect; but his wife could not control him in the house. Twice has he been in the county hospital, whence he was dismissed after the four or five days in which his state of alcoholism subsided. Now, why was he not detained in the wards provided for mental affections; could it not be seen that this was no ordinary alcoholic case? Simply because the county must be saved expense, and patients are not looked upon as souls struggling in torment so much as wretches who may as well have their course to run, in the end to add to the supply of hob nailed livers and sclerosed stomachs in the museum jars. As a matter of fact money could be saved to the community in properly caring for its dipsomaniac cases.

His appearance, now, is that of a neurasthenic and broken spirited individual. He speaks in a high pitched drawl which tells of depression and the shame of defeat as borne in upon what was a mind of no common intelligence. His complexion is sallow. He is about 5 feet, 8 inches in height, large boned, nearly brachycephalic, uncertain in mandible, with shifting glance of eye and nervous walk. Altogether a pathetic specimen. Even under the influence of alcohol his apologetic manner is preserved.

A defect in the right eye and anisometric astigmatism add to the elements against which he has had to make his fight. He is a good workman, and when he works steadily seems better able to resist the desire for alcoholic intoxication. Three times I have seen him in the paroxysms.

I have sat up with him through the night. While his wife lay ill with erysipelas, I have kept him from stealing the clothing and furniture from the house. I have suggested to him, I have threatened him, I have argued with him, "hyoscined" him, fed him, and travelled with him.

The cry is "just one more drink, just one; then I will never touch it again." It is no use to believe him. He has been in my office, and gone straightway out to a saloon after telling me how well and strong he felt and how determined to put it out of his thought.

I discourage his talk of the matter. I believe a certain despair compels these people to assure themselves and others that they will leave it alone, comparable to a man's trying to lift himself into the air.

He calls himself a "bad boy," in his meek, apologetic way and high pitched voice, when I find him being led home from some saloon by a couple of his children—who, poor little ones, have learned some of the bitterness this world can show.

There is, before attacks, a rise of blood pressure; possibly an attempt to wash out the faulty metabolism. The patient experiences a choking up of ideas and a false sense of increased power. He is hypertonic and hyperæsthetic. Peculiar emotional values become established, so that what is extraneous and superficial excites when no deeper feelings are aroused. In this state such patients could do murder for a drink—but would not tear or soil some valued paper or book; they cannot bear to hear a discord, perhaps, or see a false color harmony. The "will to be" is exalted and powerful, the patient believes. He can do some great work. He can resist temptation. Then comes the fear of failure. He braves it off. In desperation he attacks some work to do which is beyond him. His strength is spent. Then "just one drink, to rest me; that is all."

With the narcotic comes a heavenly sense of repose; now he will be all right and take no more. But the effect passes. He must go on. For a while relief is strong, then comes nervous reaction. Let the world die, but he must go on, on. There comes no stage of complete narcosis.

He lives in a state of peculiar quiescence, and belief of action that never occurs. He plans and proposes, but accomplishes nothing. The circuit of certain ideas is clear, but execution is wanting. He comes to a sense of double personality. He pities himself. He watches himself do those things he never thought to dare do. He gambles and frequents low dens. He is at variance with all he formerly held high and honorable; but not that he is changed.

I believe at the root of the man all this evil nature lay, and under the disorganizing stimulus the cloak is thrown away to reveal actuality.

Then, as the storm increases, if life is to continue, the force spends itself sweeping clear all the unholy accumulation. His desire vanishes in a moment, and disgust seizes him. It is not exactly repentance, for he can scarcely figure to himself his diseased condition in the calm of the clearing, although he recognizes certain of the evil effects.

A well dined person can scarcely picture to himself a state of extreme hunger—the dipsomaniac, once through a paroxysm, cannot imagine the state or causes of his failure.

"That is for the last time!" He will never again do what he regrets so bitterly—but the next year, the next month, may see him just the same or worse.

In the foregoing case is seen a man of neurasthenic type and of weak initiative with a highly strung, sensitive temperament, even of a poetic rather than practical turn of mind. His disgraceful condition and broken spirit establish in him an apologetic and miserable attitude. Let us turn to

CASE II.—Mr. J. T., aged 42 years, born in Lan-

cashire, England, married, and with a large family. The wife is of a nervous enough temperament, showing the misery of the life of privation which she has been compelled to lead. One son is a confirmed cigarette fiend, and neglects his work (in which he is quite skillful) for the slightest excuse. Another son is neurasthenic and of irregular habits.

Mr. T. began to show his predisposition while yet in England where, as he tells me, his aunt used often to plead with him month after month. In spite of many earnest promises he would succumb again and again. He came to America, where he has lived chiefly through the exertions of his wife and with some help in recent years from his boys.

His house is the typical drunkard's house. Some objects of value and many bare spots. A little store that the wife tried to establish was broken up through the stealing of its furnishings on the part of the unhappy husband. He has been often in jail. But the wife says that she has given over having him arrested—"it does no good."

As soon as he is in restraint a few days he becomes a different man—polite, keen, respectable, and a good mechanic. Every one takes a liking to the man; he is released.

In a few days it is an uncertain question what he will be. He may work six months, he may, in an hour, forget his pledge and come home in a mad, vicious condition to harm the boys and wife whom he ordinarily loves and regards. A month ago after striking his wife to force her to give him money, he was arrested and took the pledge for a year—on the way home he drank so much that he dared not show himself.

Mr. T. is of a full, hearty appearance. No drinking spree tells on him if he can get the chance to sleep twenty-four hours. He is a genial companion, and when not in an attack makes friends everywhere. When narcotized he is quarrelsome and vindictive, showing a disposition to be offended and make minor points excessive issues.

His face brutalizes and his movements are heavy. Yet there is an undercurrent of nervousness as evidenced by rigid pulse and increased reflex activity. He will not give up to anything but hyoscine.

As the impulse to drink subsides he begs to be put to sleep. He thinks if he could only be put to sleep, he mastered that is, there would be some hope for him. The mind of the dipsomaniac sees clearly the need of personal control through others, yet he fights this off with a desperation in earlier stages of the attack. I do not know but that in some cases the attack is to be taken as an integral part of the life cycle, or may be made to become so. At any rate, it is a successful way of terminating life, or, of eliminating whatever malignant forces are at work for the time being.

In all cases of weakened initiative I find the cardiac muscle and the vasomotor system in general, at fault; treatment along this line combined with companionship and suggestion yields the best results.

Certain conclusions may be arrived at with the above and other cases in view:

1. A change of scene is necessary. The patient comes to associate certain changes of his physical and intellectual breakdown with his ordinary occupations. This vicious circle must be broken up by outside influences.

2. In most cases of nervous disease some changes in the state of nerve conductivity are appreciable. As a rule, hypertonic conditions precede attacks; these are to be taken as part of a neurasthenic process. Later on this feverish activity brings about exhaustion which is more or less a matter of systemic concern. In any event, the plus condition is factitious and not a positive gain.

In the cerebral organism undoubtedly certain psychic circuits become established—those of the moral and higher intellectual values. Alcohol and other narcotics tend to break down this evolution. On the other hand, it is conceivable that an inordinate associative power may create an overplus of such higher intellectual values. The continuity of protoplasmic organism makes for tissue; psychic continuity is thought. In certain morbid processes excessive and improper tissue organization occurs. In neurotic individuals, instead of a diminished psychic activity, we may notice an actual excess of ideation. This may be along lines of ordinary or extraordinary correlation.

3. But, while certain extremes of environment are prejudicial to tissue continuity, so certain adventitious elements or excessive psychic activity may not make for the clearest consciousness. It may be asserted safely that attention and apprehension are elements of the higher consciousness and are the result of more or less perfect balance and superior coordination of psychic circuits. In neurotic individuals—epileptics, neurasthenics, dipsomaniacs, and the alienated in general—we might expect to find pathological circuits established in the intellect whereby certain reflex currents may be set in action, appreciable to the self or reflective consciousness, but out of its ordinary control. Dreams and the subconscious mental activity may be borderland effects of a similar exhibition.

4. In looking about for the reasons of these changes we must lay hold of either vasomotor and vascular modifications or essential nervous pathological processes.

In protoplasm there are four facultative aspects, namely, contractility, irritability, nutrition, and reproduction. In all the higher organized tissues these four are fundamental. Essential changes must be due to modifications of these

factors. A great many causes, intrinsic and extrinsic, are to be looked for as modifying influences. The effect on the individual of the four fundamental protoplasmic faculties may be summed up throughout his tissues as (a) the initiative reflex, (b) the temperamental reflex, (c) the nutritive reflex, and (d) the sexual reflex, respectively. These work out their influences according to the special nature of the tissues involved. It may be just as well when we can extend our knowledge of the influence of nutritive and therapeutic values to include their effects on the primitive protoplasmic powers and the organic reflexes therefrom.

5. It is our duty, in the matter of dipsomaniacs, as well as of other borderland cases of alienation, to educate public sentiment and to secure for them adequate places of treatment and opportunities of protected environment. Seclusion in a lunatic asylum is not the thing. The dipsomaniac has to sustain enough loss of self respect without having that pressure added too. Cases of transient mental affection ought by no means be associated with chronic or disagreeable manifestations of intellectual or nervous disease. I believe that relapses in melancholic cases may justly be attributed to the regimen or associations with which they have been made to feel the disgrace of such sickness. A certain attitude toward mental cases is very keenly appreciated by them, even if they are "insane." I have been able to verify this in confidential experience.

The dipsomaniac may be, and usually is, of enough intelligence to feel his situation deeply, and I believe that the open disgrace of alcoholism, and his belief in the impossibility of taking it from the memory of others, let alone himself, increases the chance of recidivism.

6. In treatment nothing equals the expulsive power of a new affection. Find the patient something safe, honorable, and interesting to do—something that is suitable for a patient of intelligence, but of neurasthenic trend.

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Cincinnati Academy of Medicine.—The following officers of the Cincinnati Academy of Medicine have been elected: President, Dr. Magnus A. Tate; first vice-president, Dr. Robert Carothers; second vice-president, Dr. Alfred Gaither; secretary, Dr. Stephen E. Cone; treasurer, Dr. A. G. Drury; trustee for three years, Dr. Arch I. Carson; and censor, Dr. Gustave E. Zinke.

THE MANAGEMENT OF PNEUMONIA IN INFANTS AND CHILDREN.*

By CHARLES GILMORE KERLEY, M. D.,

NEW YORK.

The child in health conforms within fairly definite lines to fixed habits of life. He is fed at certain intervals on food suitable for his age and physical condition. He is clad in seasonable clothing; baths, airing, a time for play and a time for rest comprise a general outline of his daily life. For every child there is a daily routine of living, depending, in its completeness, on the social position and intelligence of the parents, and on the physician's appreciation of the duty he owes to his charge.

Our first step in the treatment of an acute disease, such as pneumonia, in a baby is to change this régime of living as experience proves is required by the changed condition of the infant. Our first thought in the management of such a case is to establish a *sick room* régime. The surgeon, with much elaborateness, prepares his patient for the operation; and the postoperative management is characterized by the most careful detail. The physician may learn from the surgeon. In pneumonia we must prepare and place the patient in the best possible position to withstand the ordeal which we know must follow. In pneumonia we are dealing with an acute infectious disease which we cannot cure. Our efforts to relieve the patient must rest entirely in placing him so as to best resist, to wear out the infection and its effects upon the organism. Every child in health possesses a definite number of units of vitality, and these we must guard most jealously. Bearing in mind the thought of the preservation of the vital powers, I have found that one of the chief aids to this end is to keep the child comfortable. The infant which is made restless and irritable and sleepless by a hot room, overclothing, overattention, unsuitable feeding and unsuitable medication is greatly handicapped in the struggle for life.

My preparation or placing of an infant or young child ill with pneumonia is as follows:

The best available room in the dwelling is selected. If possible two rooms are used, one for the day and one for the night occupancy. The room should be kept at a moderate temperature—from 65° to 70° F.; it should be ventilated by a suitably protected window or windows. I have yet to experience any special benefit from the very low temperature. Reasonably warm air, at 65° F., can be just as fresh, just as pure as air at a temperature of 40° or 50° F.—in fact, it is my observation that I succeed best with sick infants when I avoid extreme measures. It is directed that the patient

* Read, by invitation, before the Harlem Medical Society.

shall be kept in bed the greater part of the time, and with but one attendant at a time in the room. Two women in a room invariably talk most of the time, and disturb the patient. It is also directed that the bed clothing and the clothing worn by the child be of the same weight and character of goods that he has been accustomed to in health. Oiled silk or cotton jackets are no longer used. One cleansing sponge bath is given daily. It is ordered that the food strength be reduced for the reason that the digestive capacity of a sick baby is always considerably diminished. One of the most frequent and dangerous complications of pneumonia in a young child is intestinal infection. The resulting toxæmia gives the child so much the more to bear, and the tympanites often seriously interferes with respiration. Children of the "run about" age, two to four years old, are allowed 50 per cent. milk (one half milk and one half water), broths, gruels, zwieback, toast, orange juice, prune juice, and thin stewed apple. Four feedings are given in the twenty-four hours, at four hour intervals. In the bottle fed it is my experience that the digestive capacity for milk is reduced at least one half. For the first few days of the illness the milk is reduced 50 to 75 per cent. by the addition of boiled water or thin gruels. It is desirable to feed the child to his full digestive capacity; well digested stools and the absence of tympanites must be our indications for increasing the food strength. For the breast fed the milk strength is reduced by giving a cereal water or a low percentage milk sugar water, one to three ounces, by spoon or bottle, before the nursing. There must be at least one bowel evacuation in the twenty-four hours; the urine is examined every third day.

Concerning the active treatment of pneumonia, I have no specific to offer, no special line of medication. The temperature of the patient should be taken by rectum every three or four hours. The indication for interference in the event of high temperature is not the degree registered by the thermometer, but the effect of the temperature on the patient. A temperature of 105° F. requires no interference if the child is quiet, with a regular, even pulse, and with the respirations under 50. A temperature of 103° F. with a restless, tossing child, with rapid respiration—50 or more, and a rapid pulse of from 150 to 180, may necessitate interference. Time and again the heart beats have been reduced 20 to 40 a minute, and the respirations 10 to 20 a minute by a properly applied pack—a means which I have found to be a most useful antipyretic measure. Now, mind you, I do not say a *cold* pack, or even a *cool* pack; but simply a *pack*. The pack is prepared as follows:

Over a rubber sheet is placed a pad or a thick

flannel blanket; on this the child rests. He is stripped, and the trunk is wrapped in a thick bath towel which has been moistened with water at 90° F. The legs and arms remain free, the patient is covered with suitable blankets. The result of this procedure is almost always gratifying—it produces no fright, no shock. The temperature is taken in half an hour. If no reduction has taken place the towel is moistened, without removing the child, with water from 5° to 10° cooler—with no other disturbance, or manipulation, then turning him first on one side and then on the other. The temperature of the pack may be in this way gradually reduced as indicated by taking the temperature every half hour. An intelligent nurse or mother will soon learn the degree of cold required to produce the desired result. In the majority of cases the fever will be reduced and the patient greatly benefited with the water at a temperature of not less than 80° F.; it is unusual that a degree of cold lower than 70° F. will be necessary. If the patient's temperature is reduced to 101° the pack is removed, and reapplied when the conditions require it. I have used this method in a great many cases and have yet to see it do anything but good. It adds greatly to the child's comfort—he sleeps better, the heart's action becomes stronger, the respirations diminish, and thus we preserve the vital forces. Cool spongings are sometimes useful; they require manipulation, however, and are apt to disturb the patient; they are ineffective if there is a high range of temperature. Cold enemata have not been of use in my hands.

If by the use of the pack I can reduce the heart beats 20 or 30 a minute I know that I am doing the patient a great service. In the management of pneumonia in infants the heart must be kept under close observation; in this connection drugs are invaluable. In giving drugs to pneumonia patients, however, it is to be remembered that the stomach, the receptacle into which the drug enters, is a most important organ; and drugs having a tendency to interfere with the digestion of food and derange the stomach are to be avoided. For this reason I rarely give digitalis or the ammonium salts, and never give the heavy, so called expectorant syrups. Strychnine and strophanthus as cardiac stimulants have answered my purpose well. From the standpoint of the stomach, and because of their effectiveness as heart stimulants, they have proved more useful than any other form of stimulant medication. As has been mentioned, we are not required to interfere with the temperature simply because the child has pneumonia. In like manner heart stimulants should not be brought into use merely because the child has pneumonia; to do so is a very common error.

The indication for heart stimulation is heart weakness. For the rapid, high tension pulse strophanthus is employed. For the irregular, soft, oft times intermittent pulse, with weakened first heart sound, strychnine is the remedy. It is usually given in too small doses. To be of any great service in extreme cases it must be given to the point of producing slight physiological effects. In alcohol we have a most valuable heart stimulant which is usually abused. It should never be given early in the disease except in the few cases that are grave from the outset. The continued administration of alcohol for several days in any form to babies is very sure to diminish both the desire for food and the digestive capacity. Furthermore, it is a cardiac stimulant which can invariably be relied upon to serve us for a short time. I like to hold it in reserve, to be used in time of great stress; so that when other means of stimulation fail, in the delayed crisis in the lobar type, for example, when there is intense prostration of all the vital forces, then alcohol may be used, and used in large amount, with signally beneficial results. In many severe cases strychnine and strophanthus are best given hypodermically. During the periods of great prostration the powers of absorption of the stomach are oftentimes nil. Nitroglycerin may be combined with any of the above stimulants when there are cyanosis and a tendency to cold extremities. The value of oxygen from the tank has to my mind been exaggerated. If more attention were given to allowing the oxygen to enter by the windows there would be much less occasion for the manufactured product. Given intermittently, as it often is, one minute, or two minutes, or five minutes, every half hour, it is of no service whatever. It is used with the best results when a constant, slow stream is allowed to play near the baby's face.

In many very severe cases proper feeding by the usual means is impossible. In such instances completely peptonized milk and other forms of nutrition and stimulation are given by gavage, using the ordinary stomach washing tube. Nutrient thus given is not repeated oftener than once in six hours. Useful often also, and frequently used, is the colon flushing with the normal salt solution. In a child taking but little fluid it is surprising to observe how much normal salt solution at a temperature of 100° to 105° F. will be drunk by the thirsty colon. I have repeatedly noted that the pulse and respiration improved and the stupor lessened as a result of colon flushings; this is to be explained probably, in that we increase the volume of the circulating medium, and thus lessen its toxicity upon the nerve centres. Completely peptonized skimmed milk and other nutrient substances are sometimes added to the salt solution. The nutrient

enemata or plain salt solution should be landed high in the colon by the means of a small rectal tube. The patient should rest on its right side, with the buttocks elevated while receiving the flushing, and remain in this position for a half hour thereafter. The fluid will be best retained if given warm; from 105° to 110° F.

Up to this time practically no reference has been made, no distinction, as to whether bronchopneumonia or lobar pneumonia was under consideration, for the reason that, concerning the management, thus far it is practically the same for the two common types, lobar and bronchopneumonia. In lobar pneumonia we have a self limited disease. We prepare the way and place the patient in the best position to resist, to take care of the infection. We endeavor to preserve his vital powers; and Nature, if she is kind, brings about a favorable termination. In bronchopneumonia we must perform all of these offices and more. Bronchopneumonia in babies does not possess the characteristic of self limitation. In this type in babies there are measures which directly assist in controlling the progress of the disease. Remedial measures which are of value in bronchopneumonia are steam inhalations, counterirritation, and to a lesser degree expectorants. For the usual case with teasing cough, rapid respiration, obstruction of the bronchi, and bronchial spasm I know of no more satisfactory means of relief than creosote steam inhalations. In using the steam inhalations the patient is placed in his crib, which is covered and draped with sheets so as to make a fairly tight, enclosed space. The apparatus necessary is an ordinary croup kettle. Ten drops of creosote are added to one quart of water and placed in the kettle. The nozzle of the kettle is introduced between the sheets at a safe distance from the child's face and hands, the steaming being carried on for thirty minutes every one, two, or three hours, depending upon the severity of the case and the relief afforded. The sheet should be parted slightly every ten minutes, so as to allow a renewal of the air. The inhalations are to be given both when the child is asleep and awake. As the patient improves the inhalations may be given at less frequent intervals than were found necessary at first.

The application of counterirritants to the skin over the thorax is a means of much service in cases in which there is evidence of much bronchial congestion and bronchial spasm; which covers most cases in the very young. In order that counterirritation may be of use a decidedly red blush must be produced on the skin. The old fashioned, home made, mustard plaster answers best as a counterirritant in my hands. Written directions are given as to its preparation and application. The thorax

is wrapped in it; and the application is repeated every six hours, usually for the first forty-eight hours. After this time it is used less frequently, or discontinued. With the combined use of steam inhalation and counterirritation I have in hundreds of cases given the child signal relief in relieving the dyspnoea, in relieving cough, in diminishing the bronchial spasm, and in lessening the rapidity of the respirations.

The use of the so called expectorant drugs in bronchopneumonia in infants is exceedingly limited; and a great deal of harm is often done to young children by the thoughtless use of drugs. Oftentimes, I fear, in our endeavors to assist the patient we harm him. In pneumonia in an infant we treat a disease in which the resisting powers count for everything. In young children the digestive function is very easily put out of order even in health. In illness, with fever and the nervous exhaustion attendant upon the illness, the stomach is easily disturbed; the child is not properly nourished, and the ability to resist the disease is lessened. Expectorant drugs, which may be of service if there is much bronchial catarrh, should be given with great care, and when used should be prescribed in tablet or powder form. The practice of using heavy syrups of wild cherry, tolu, and the like, with considerable doses of the ammonium salts, only adds to the burden of the patient. For a child one year of age, with the above condition, I occasionally give $\frac{1}{100}$ grain of tartar emetic and $\frac{1}{40}$ grain of ipecac after the feeding. In case the cough is very severe and teasing, and not relieved by the steam inhalations, a small quantity, $\frac{1}{4}$ to $\frac{1}{2}$ grain, of Dover's powder may be added to each dose.

Conclusion.—In the treatment of pneumonia in the young, the degree of our success is measured in large part by our ability to adapt the child to the unusual conditions caused by the presence of the disease.

A Floating Sanitarium.—The steamship *Fuerst Bismarck*, launched on March 22nd at Glasgow, has the distinction of being the first ocean liner designed especially as a floating sanitarium. She is a twin screw of 8,600 tons and is built for the Hamburg-American line. She will start on her first cruise on July 6th, covering 3,773 miles, stopping for a time at Guernsey, Bantry Bay, Stornoway, Leith, the Shetlands, Trondhjem, and Bergen. Dr. Schweninger, who was physician to Prince Bismarck, will personally supervise the cruises. He will be assisted by a corps of physicians, who will care for the health seekers free of charge. The cruises will be chiefly for convalescents and those in need of rest and recreation. The ship will have a gymnasium, electric baths, massage rooms, and all other equipments of a stationary sanitarium.

THE INFLUENCE OF INFECTED MILK IN THE DIET OF THE SICK—PARTICULARLY IN ACUTE INFECTIOUS DISEASES. WITH A REPORT OF A SERIES OF CASES OF MILK INFECTIONS IN TYPHOID FEVER PATIENTS.

By DAVID L. EDSALL, M. D.,

PHILADELPHIA.

(Concluded from page 582.)

The next most important possibility in controlling this danger is to have at least all milk used in the diet of the sick Pasteurized at the dairies where it is produced, or directly after its reception at the hospitals or homes in which it is to be used. This measure would in large degree obviate the evil effects of that portion of the milk which is bad, but there are a number of objections to Pasteurization. The first of these is somewhat theoretical, but is, I believe, based upon right reason; and also upon experimental observations, to some of which I have referred elsewhere. This objection is that milk is served raw by nature, and that in normal circumstances it is taken raw. It is known that heating milk causes many changes in it; and it is at least possible, I think, indeed, probable, that heating it even moderately may unfavorably alter its nutritive quality as well as its digestibility. I have seen scurvy develop in an infant soon after Pasteurization of its milk had been ordered, the milk having previously been unheated. I do not know that Pasteurizing the milk produced the scurvy, but I am quite willing to consider such a possibility, although the Pasteurizing was properly done by an intelligent mother. Similar observations, although uncommon when the milk is not heated to a high temperature, have been made by others. This objection applies chiefly to these cases in which milk must be used for a long time, but if it is a real objection it is also applicable to other cases and to adults as well as to infants and young children.

A second and more practical objection to Pasteurization is that many patients dislike or soon grow to dislike milk that shows by its taste that it has been heated. It is true that milk may be rendered harmless, or nearly so, from the standpoint of infection, by being subjected to a temperature lower than that necessary to alter its taste; but in carrying this out one goes very near the danger line, and it can be done safely only by an intelligent and conscientious person or with the aid of special apparatus.

Another objection is that Pasteurization is al-

ways bothersome, and it is difficult to get persons to carry it out carefully. Still another is that in any circumstances it needs care as to cleanliness, temperature, etc.; and, unless this care is devoted to it, Pasteurization may make a good milk bad, and may even make a bad milk worse.

A final and very important point, perhaps the most important of all, is that while Pasteurization protects against infection, it does not destroy the poisonous products of bacteria that may develop before the Pasteurizing is carried out; and these toxic substances may produce more or less grave symptoms. In this connection, it is of much interest to note that while, as I have stated, persistent diarrhoea and other severe abdominal symptoms almost entirely disappeared from my wards after Pasteurizing had been instituted, I have the records of ten cases during this period in which transitory, but sharp attacks of diarrhoea, lasting from a few hours to a day, developed in patients who both before and afterward had moderate constipation and who received Pasteurized milk. No other cause for this having been evident, it seems to me highly probable that it was the result either of poor Pasteurizing on these days, or of the presence of toxic bacterial products. The Pasteurizing had, I think, been satisfactory, and I believe that the other explanation is the correct one.

In the present state of the general milk supply, Pasteurizing is the best way out of the difficulty in case a thoroughly reliable milk cannot be secured, but the objections to Pasteurization that I have mentioned are real and important. It is almost unnecessary to say that the most certain way to protect patients is to see that, as far as possible, they receive milk that is produced, transported, and delivered under hygienic conditions. It is worth while to make this rather hackneyed statement only because it is even yet so little the general custom to appreciate this point and to insist upon it firmly. When dealing with young children, it is now considered the essence of carelessness to neglect it; with adults, on the contrary, both physicians and surgeons frequently still consider that the source of the milk is purely a domestic problem.

When one is treating the poor outside hospitals, circumstances justify this action or lack of action to a certain extent; for it is difficult for the poor to secure good milk, and almost equally difficult for them to keep it properly. It is, however, often surprisingly easy to convince those who are not quite paupers of the necessity of securing good milk for special purposes and of keeping it iced, even at relatively great expense.

With private patients of the well-to-do classes, the problem is simple in some of our large cities; for the patient can, and, at the word of the physician, usually does, secure milk whose reliability is certified to by a representative body of physicians. In much the greater proportion of our cities and large towns, however, the public spirit of the profession has not yet provided the safeguard of certified milk; and the consumer can determine which milk is likely to be good and which bad, only in case he or his medical attendant has acquired special knowledge concerning individual local milk dealers. Were the satisfaction that comes from having at hand certified milk that can be relied upon once generally appreciated by medical men in large towns and cities, I think that the energy and effort necessary to bring such milk into the local markets would soon be forthcoming in many places. When one has come to the habit of using such milk, one shrinks from permitting the use of unknown milk with the same feeling that one would shrink from ordering that a clean wound be dressed with a poultice. If, however, such milks are not at hand, it is certainly part of the rational duty of the physician to take pains, as a few doctors now do, to acquaint himself with milk dealers that make an earnest and well directed effort to furnish clean and properly kept milk; and also to see to it, as far as possible, that such milks become known to their patients and are used by them, during sickness, at least.

This statement applies with equal force to physicians practising in the country. There is a traditional belief that country milk is essentially superior to city milk; but—a paradox produced by the circumstances of civilization—it is, as a matter of fact, easier in most large cities, if a little effort be used, to secure a reliable milk, free from infection, than it is in most country places. A large proportion of country practitioners will find it difficult to discover nearby a satisfactorily clean and well managed dairy.

In hospital work the conditions are easier in some respects than in private practice, and in others more difficult. They are easier because the whole group of patients in an institution is under entire control, and if proper action is taken, it insures good milk for all without attention to individual cases. The conditions are, on the other hand, more difficult because it is always somewhat more expensive to secure good milk and keep it in proper condition than it is to pay a low market price to the most convenient bidder and keep the milk in the least troublesome and least expensive way possible; and administrative

officers of institutions naturally hesitate to go to what, in bulk, seems a very large expense, unless they can be convinced that it is important.

That this conviction has not yet been by any means generally reached by managers of institutions is evident from the fact that two years ago the "Committee on Milk" of the Keystone Veterinary Medical Association in an investigation of the milk supplies of over a hundred institutions in Philadelphia found that but an insignificant fraction of these institutions had any real knowledge as to the character or source of the milk that they used, the others accepting blindly what was furnished them. Dr. Leonard Pearson has kindly given me the summary of the results of this investigation so far as they relate to fifty hospitals. The questions investigated were the number of patients; the number of children usually in the institution; the number of quarts of milk used daily; and, in regard to this milk, whether its source was actually known, or it was merely bought from a dealer without determining what farms it came from; whether the source was inspected and the conditions existing there determined; whether it was customary to subject the milk to any form of test or examination; and whether the dealer was required to conform to any specific conditions other than the rather simple conditions required by our local laws. The results were extremely important, but extremely shocking. Of the fifty hospitals, two owned their source of supply. One other hospital knew the source, had it inspected, had the milk regularly examined, and required certain specific conditions of the dealer who furnished the milk. Ten other hospitals knew the source of the milk. Thirty-seven out of fifty institutions actually knew nothing about the milk that they received, except the man who sold it to them, and forty-seven out of fifty did not know the condition of the farms where the milk was produced, nor did they know the condition of the milk when it was delivered or when used by the patients, and no special requirements were imposed upon the dealer delivering the milk. Expressed in another form, in fifty hospitals 5,607 sick persons were on the average being treated each day, and 4,331 of them got milk of entirely unknown character as to cleanliness and safety; of these persons, 2,032 were children, of whom 1,917 got milk of wholly uncertain quality. In these institutions 3,443 quarts of milk were, on an average, consumed daily, and of this amount 2,313 quarts were of a wholly undetermined degree of cleanliness or uncleanliness, and over 500 quarts more were of very doubtful quality. Some of the farms from

which the milk came were investigated by the committee, and in a number of instances it was found that the milk was produced in some of the dirtiest and most unhygienic dairies in the eastern part of Pennsylvania. In one instance I investigated the chemical condition of the milk supply of a hospital in which most of the inmates are children. The chemical conditions that I found together with the bacteriological conditions that Dr. Evans kindly found for me, made it appear extremely probable that the milk supplied this institution was merely a mixture made up by the dealer from his old cream and separated milk. The bacteriological conditions in this instance were wretched, there being regularly many millions of bacteria, while the chemical conditions were utterly abnormal, the chief peculiarity being extremely low proteid (about two per cent.), and extremely high fat (eight to ten per cent.); and yet the administrative officers of this institution held that the children were getting an excellent milk because they "knew that the dealer was an honest man."

This rather appalling state of affairs I frequently hear attributed to the narrowness or rigid conservatism of hospital administrators. It is rather due ordinarily to the inaction of the attending staffs of the hospitals. The facts that I have given suffice to show that in typhoid fever—and if in typhoid fever, in other diseases also—infected milk may greatly endanger the lives of those to whom it is given, and may actually take life without even producing any clearly recognized specific disease. I am convinced that most hospital managers will appreciate this point if it is urged upon them with faith and energy by those whom they properly consider responsible for the welfare of the patients. Managers of hospitals have with great reasonableness told me in connection with this matter that they cannot be uniformly prepared to act on technical matters unless the necessity for action and the proper course to be pursued have been indicated to them. Together with most others of the educated lay public, they have been thoroughly convinced of the necessity of expensive measures to prevent surgical sepsis and of the dangers of narrow economy in such matters; and it requires only earnestness and determination to make it clear to any intelligent person that wound infection and gastrointestinal infection are not essentially different in their nature or results and may be of equal importance. Since the above mentioned investigation by the committee of veterinarians, the Hospital Association of Philadelphia, an organization composed of the chief administrative officers of

many of the hospitals of the city; has, largely as a result of the cheerful labor of Dr. Lawrence Flick, interested itself in securing improvement in the milk supply of the hospitals. It is in large part due to this action following upon the investigation by the veterinarians that some of the individual institutions that did not previously do so, now exercise chemical and bacteriological control of the quality of the milk instead of accepting it on faith. They also in some instances demand and determine that the dairies from which their milk comes shall be conducted with proper cleanliness and care, and that the milk shall be delivered immediately under good conditions as to temperature and cleanliness. Far more than this is necessary before the conditions in most of the hospitals can be considered to be anywhere near satisfactory, but the evil has at least been demonstrated and it is now readily possible to take effectual action if those in control desire to accept the opportunity.

At the Episcopal Hospital energetic action preceded any general movement. Previous to the observation of the conditions that I have described, the milk was merely obtained from a dealer supposed to be entirely reliable. It was not subjected to frequent bacteriological or chemical examinations, but it was not thought to have caused any trouble up to the period that I have mentioned. At this time the observations made by Dr. Miller and myself were brought to the attention of the managers, who immediately interested themselves in the matter; and we now have a supply from an approved source, the milk being produced and handled under satisfactory conditions as to general cleanliness and care of the utensils and of the cattle, and kept properly cooled. It is not allowed to stand indefinitely on the station platform upon its arrival in the city, but is immediately delivered at the hospital. When it arrives there it is at once placed in a central distributing station, where it is kept at a temperature running almost always from 43° to 45° F., and never going above 48° F., the temperature of the milk upon its arrival having always been previously taken and recorded. A graduate nurse is in charge of the central station, and is responsible for it in all ways; for its cleanliness, the temperature of the milk, the distribution of the milk to the wards, the care of the vessels, etc. When the milk is received in each ward, it is put into special vessels which are tightly closed. In each ward one nurse is responsible for keeping the milk properly cooled and clean. Bacteriological and chemical tests are frequently made, and their results recorded. The chemical tests have

always been entirely satisfactory, while the bacteriological have been most excellent. For months past the milk has been delivered at a temperature that was almost regularly below 50° F., in a few rare instances going as high as 52°; and since the regulations in regard to the temperature at delivery have been carefully complied with the bacterial counts have been very low, almost always, indeed, within the requirements of the New York certified milk.

This milk costs a cent a quart more than that previously in use. When one realizes what an enormous amount of milk is used in a large hospital, one cannot overlook the fact that an advance of more than twenty per cent. in the price is a considerable item in the yearly expense account. One can hardly doubt the advisability of undertaking such an expense, however, when one considers that in a hospital, milk is the chief food article; that it, especially, is the main food of the patients that are seriously ill; and that it is, at the same time, much more likely to be contaminated with pathogenic organisms and to become a flourishing bacterial culture than is any other food as foods are generally handled. When the last mentioned facts are looked at fairly, there can, of course, be no question that good milk should be secured, if any is to be had, even if this necessitates retrenchment in other directions. The price that I have mentioned shows, however, that good milk can be obtained at a relatively small advance upon the price of uncertain or bad milk if some trouble is taken, in the first place, to determine that the dairy and the methods in use there as well as the subsequent handling of the milk are satisfactory, and if these points, as well as the chemical and, particularly, the bacteriological condition of the milk are kept under supervision, in order to determine that the dealer is carrying out his contract with honesty and intelligent care.

I have insisted upon the importance of hospital action in this matter because the public is accustomed to look to hospitals to lead in hygienic advances and the hospitals cannot afford to shirk their duty.

The road to a general sanitary milk supply does "lead up hill all the way," and the way is a very long one, but many of the rough places would be smoothed away at once, if the administrative officers and the attending staffs of a large proportion of hospitals took definite and determined action. The courage that this would lend to the general cause; the immediate warning that it would give to all sensible milk dealers that they must look to their methods with care, or soon be

left in the rear; and the ultimate benefit to sanitation; all these would be of an extent and importance that cannot be over valued.

Together with the hospitals, physicians, and veterinarians in country regions have a most valuable opportunity to act as leaders in this cause. A good deal of the evil that now exists is due to the ignorance of most farmers as to the fact that there are evils and as to the methods by which conditions may be improved without great expense. Doctors of medicine and of veterinary medicine who practise in the country could, by quiet suggestion, do much to increase the knowledge of the producers concerning these points.

I have made no special reference to the literature concerning the epidemics of disease that have resulted from milk infection, or to that discussing the differences between sanitary and insanitary milk and the practical methods of producing the former. References to the most accessible and valuable articles on these questions may readily be found in Freeman's tables;¹ in the recent excellent collection of literature by Plaut,² as well as in articles in the same publication by Glage, Sieveking, Rosatzin, and others; and in the extremely striking monograph by Kober.³ The latter contains, besides Dr. Kober's important article, a valuable description, by Mr. R. A. Pearson, of the essentials in the production of good milk.

Tuberculosis in Boston.—At a meeting of the Brookline, Mass., Medical Society last month, Dr. Edward O. Otis said there were more than three thousand persons in Boston suffering from pronounced tuberculosis in its various stages. The deaths from the disease in 1903 numbered 1,227, and in 1904, 11½ per cent. of all the deaths in Boston were caused by tuberculosis. Most of the hospitals closed their doors to the sufferers from this disease, and consequently provision for the care and treatment of consumptives was totally inadequate, notwithstanding that special provision was made for them by the pauper and penal institutions of the city and that a few patients were received in the private hospitals.

A Denial by Dr. Councilman.—Dr. William T. Councilman, of the Harvard Medical School, it is stated, has said that there is no truth in the report from Baltimore that he had been chosen to succeed Dr. William Osler at Johns Hopkins University. He said that Dr. William Welsh, of Johns Hopkins, called on him recently, but nothing was said with regard to Dr. Councilman going to Baltimore. In any event, said Dr. Councilman, he could not be chosen as Dr. Osler's successor, as he is a specialist in a different field.

SOME CLINICAL DEDUCTIONS FROM THE PERFORMANCE OF NINETY ALEXANDER OPERATIONS WITH ABBÉ'S MODIFICATION.

By H. B. EPSTEIN, M. D.,

NEWARK, N. J.

In the months of November and December, 1890, the writer was called to attend two women in labor; the first, Mrs. S. W., had a ventrofixation performed when single. The second, Mrs. L. E., had the same operation performed after the birth of her fourth child. Both of these cases were attended with severe post partum hæmorrhage which in each case required the almost continuous attendance for twelve hours of a physician and nurse until the uterus was thoroughly contracted. In both cases there were extensive adhesions which interfered with the uterine contractions.

About that time Duhrsen, Mackenrodt, and other surgeons who had performed some 2,500 ventrofixations, commenced to report complications and fatalities resulting from this operation, with the result of abandoning that procedure for vesicouterine fixation and the Alexander operation.

On October 14, 1896, Abbé read his paper before the New York Surgical Society, recommending his technics in preference to the original one of Mr. Alexander, of Liverpool, England, and the writer especially desires to call attention to the Abbé technics which has given such satisfaction in this series of ninety cases.

Let us now consider the various phases of retroversion and prolapse of the uterus.

First, we have descent and backward displacements in the nulliparous female, uncomplicated, unless by an endometritis; then those in the multipara; this condition associated with cervical ectropion and erosions; cystocele, rectocele, hæmorrhoids, and occasionally incarcerations of the fundus in the hollow of the sacrum.

It is in this group of cases that we have the particular indications for the above named operation after the plastic work has been performed.

On the other hand, we have retrodisplacement or prolapse of the uterus, attended with the formation of adhesions, diseases of the ovaries, Fallopian tubes, the vermiform appendix; the large subinvolved uterus following sepsis, chronic metritis, and tumors which contraindicate its performance.

Of the series of ninety cases the writer has delivered eighteen women without a relapse in any case. In seventy-six cases he has had the oppor-

¹ Medical Record, March 28, 1896.

² "Die Milch und ihre Bedeutung für Volkswirtschaft und Volksgesundheit," Borsen, Hamburg, 1903.

³ U. S. Senate Document No. 441, Milk in Its Relation to Public Health.

tunity of seeing his patients for other illnesses or they have reported for examinations and in no case has relapse occurred.

In forty-two cases the operation was performed for simple retroversion; curettage was supplemented for the attendant endometritis.

In twenty cases retroversions were accompanied by prolapse, in which, in addition to curettage, anterior and posterior colporrhaphy was added; in eight cases excision of hæmorrhoids was performed and four divulsions for fissure in ano were done.

In the last eight years other modifications have been suggested: those of Dudley, Montgomery, Baldy, Guillian, and others. In these operations the whole ligament is either folded, tucked, or drawn through other tissues in the most complicated manner and all have been declared faulty, owing to the fact that the ligaments have weakened and attenuated through prolonged overstretching; again, they deal with the whole ligament, whereas the uterine end for obvious reasons is the only portion which should be made to hold up the uterus.

Many of these modifications necessitate the performance of laparotomy, whereas the Abbé modification is an operation attended by no risk, is not followed by peritoneal adhesions or hernia, and may be called a minor operation. One must of course be prepared to meet surprises in this as in all other surgical proceedings. For instance, in the thirty-fourth case, while isolating the right ligament, we encountered considerable hæmorrhagic ooze from the inguinal canal. The source of the bleeding was traced to a varicose condition of the veins anastomosing with the pampiniform plexus, but by stripping back the funicular process the injured vein could be, and was, ligated. During these manipulations, a very small subserous fibroid was located on the lateral side of the uterine fundus, so the funicular process of the peritonæum was incised and the fibroid evulsed by means of a small forceps. Rarely a varicose condition of the pampiniform plexus exists, and may be met with by this means, and this case shows that one is not necessarily obliged to do a laparotomy in the classical way, every time a complication is encountered.

In four cases considerable annoyance was caused by pain in the scars; two cases required the dissection of the genital branch of the genitocrural nerve, owing to its inclusion in the cicatrix. The other two responded to mild galvanism.

The technics is essentially the same as Abbé's.

Preparing the patient with the same care as for cœliotomy, an incision is made starting at the pubic spine upward and obliquely outward one half inch, above and parallel with Poupart's ligament. The skin, fat, and superficial fascia are divided and each layer is separated on each side for one and one half inches; the aponeurosis of the external oblique muscle is incised. The external abdominal ring should now be located one half to three quarters of an inch above and outside of the pubic spine. This is the most important landmark. At this point a lump of fat presents. Now, by hooking a director underneath the aponeurosis the round ligament will be found. If any difficulty is experienced, the fingers in the wound plus the counter pressure over the site of the ligaments will present a cord-like feel, which is the ligament. The ligament should be lifted out of its bed in the inguinal canal and further identified by the funicular process of the peritonæum which invests it.

This process is stripped back as far as the internal inguinal ring. This being done, a piece of gauze is slipped underneath and the same procedure performed on the opposite side. The writer has often found a large, thick ligament on one side and a thin, thready one on the opposite side.

The ligaments now being isolated are now cut off at the distal end and the cornua of the uterus pulled up taut, then an interrupted suture is passed through the internal oblique, the ligament, and Poupart's. This ligature is drawn tight, while the ligament is being pulled upon.

A Cleveland ligature is made to pierce the internal oblique and passed below Poupart's ligament in the same manner as sutures are inserted in a herniotomy, with the exception that the round ligament is used as a continuous suture (see *Annals of Surgery*, Vol. XXIV, page 702). Thus the inguinal canal is closed, using the round ligament as a continuous suture. Each puncture through the internal oblique is fixed with a medium catgut suture. The aponeurosis and fascia are sewed separately with continuous fine catgut. The skin is sewed with silk worm gut.

There is hardly a condition from which women suffer which is so amenable to treatment as retrodisplacement and prolapse, and that with practically no danger. The writer therefore heartily endorses this method which has given such satisfaction, and he believes that after an impartial trial of the Abbé method, it would soon displace all the other methods.

CEREBROSPINAL MENINGITIS IN
CATTLE.By PAUL SHEKWANA,
IOWA CITY, IA.,

BACTERIOLOGIST OF THE IOWA STATE BOARD OF HEALTH.

The object of this article is to draw the attention of the medical profession as to the possible sources from which cerebrospinal meningitis may spread. Until very recently it was believed by all that this disease occurred only in man. Later, however, a few cases have been recorded by the Minnesota State Board of Health which show that it occurs in cattle also.

On February 20, 1905, Dr. H. E. Talbot, of Des Moines, submitted the brains of two cattle to be examined at the laboratory of the Iowa State Board of Health in Iowa City. This gentleman stated that a number of cattle had been dying in the neighborhood of Colfax of an epidemic of a perplexing disease, which he thought to be some form of meningitis. He wanted to know if it was infectious or contagious. Professor H. Albert, the director of the laboratory, and the writer inoculated a rabbit under the dura mater with 1 c.c. of an emulsion made from the two brains. The animal died after thirty-six hours, showing before death and at the post mortem examination all the signs and symptoms of cerebrospinal meningitis, retraction of the head, thrombosis of the blood vessels, softening of the brain, and exudate about the meninges, etc. The microscopical and cultural examinations also proved it to be the disease in question. The slide preparations from both the original brains and from the brain of the rabbit inoculated by us showed a great number of *diplococcus intracellularis meningitidis*, some within and some outside the cells.

From this case and those examined by the Minnesota Board of Health, it is evident that the disease is much more widely distributed than it was at first supposed to be. Therefore it becomes a subject of the greatest importance and interest to all medical men as well as to the public in general to know the sources from which the disease may spread and thus to guard against infection from it.

We know for certain that cerebrospinal meningitis is an infectious disease, occurring generally in epidemics in man; but now we have reasons to believe that it occurs in cattle as well. Whether man infects cattle, or cattle infect man, it cannot be definitely said, but certain it is that the disease attacks both animals. From this fact it can be reasonably inferred that one mammal infects the other and vice versa.

The question then arises: Is it not quite possible that cattle have been the source of infection in some of the epidemics occurring in man? In cerebrospinal meningitis there is usually a discharge from the nose, and this discharge contains *diplococcus intracellularis meningitidis*, and thus becomes the principal source of infection. On account of this great danger, care should therefore be taken by all those who come in contact with cattle suffering from the disease.

Cerebrospinal meningitis, then, must be considered to be a malady which not only affects man, but cattle as well. The disease probably affects other lower animals, too, though in regard to this point we have at present no definite knowledge.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

Adrenalin Gauze.—The remarkable capillary contracting action of adrenalin has been utilized by a firm of antiseptic dressing manufacturers in Chemnitz, who are introducing surgical bandages impregnated with the substance, the whole being sterilized.

Aganin is the name given by an apothecary in Krems, Germany, to a syrup of potassium sulphoguaicolate.

Aqua ρ is described as a distillation product of radium chloride solution.

Astmol (Dr. Elswirth's asthma compound) is now put up in the forms of fumigating powders and cigarettes.

Bismuth ρ is a radioactive bismuth subnitrate obtained by the action of radium bromide on the first-named salt.

Bromoil, in a dry powdered form, is made by emulsification (of bromine?) with condensed milk and drying in a current of air.

Calomelosalbe (Unguentum Heyden) is a soft ointment of a grayish color containing 30 per cent. of calomelol (colloidal calomel) and 2 per cent. of mercury. It is used in the treatment of syphilis.

Candol is the name given to a dried malt extract of high diastatic power.

Capsolin, which is recommended as a substitute for mustard papers, is said to consist of a mixture of oleoresin of camphor, the oils of turpentine, cajuput, croton, with an ointment base, made and marketed by Parke, Davis & Co., Detroit.

Capsules Dartois have the size of an ordinary pill and each capsule contains 0.05 gm. beechwood creosote and 0.2 gm. of cod liver oil.

Cardiolo is an alcoholic extract of squill, lobelia, strophanthus, and nux vomica, with guaia-col.

Cephalopin is an oily extract prepared from

fresh nerve substance. It is supposed to contain myelin, lecithin, and such other constituents of the nerve substance as are soluble in oil. It has been suggested for use as an antidote to strychnine, and is administered hypodermically in the treatment of neurasthenia, hysteria, neuralgia, etc.

Cetiacol (or **Palmiacol**) is the subject of a patent issued to L. H. Cress, of Fremont, O., in which it is described chemically as "cetyl guaiacyl." It is probably pyrocatechin-methyl-cetyl-ester. It is insoluble in water, but dissolves readily in alcohol, ether, and chloroform. It is credited with properties similar to those of guaiacol, and is recommended as a specific in tuberculosis.

Chinolio is the name applied to an oleaginous powder composed of 80 per cent. of quinine sulphate and 20 per cent. of a mass composed principally of olive oil. The powder is miscible with wine and syrup and is given in 0.3 gramme doses every three or four hours in grippe, myalgia, and feverish conditions.

Chloræthoform is a chloroform containing 0.25 per cent. of ethyl chloride, which has been recommended as a safer and more certain anæsthetic than the plain chloroform.

Cholelithmin is a weak alcoholic solution of the fresh bile of animals which have been fed with recent biliary secretion. It is stated to be practically a dilute alcoholic solution of salts of the bile acids and of albuminoids, and is recommended in the treatment of biliary colic.

Citon tablets, recommended as purgatives, are put up in two forms, white and brown, the white consisting of 0.1 gramme paraptalein (? phenolphthalein), 0.5 gramme sugar and 0.01 gramme menthol, and the brown, paraptalein (? phenolphthalein), 0.1 gramme; sugar, 0.5 gramme; vanillin, 0.002 gramme, and chocolate, 0.1 gramme.

Citronal pills contain in 100 0.5 gramme quinine hydrochloride, 10 grammes citric acid, 6 grammes extract frangula, and 4 grammes extract of whortleberry leaf. Recommended in gout, rheumatism, etc.

Citramine oxyphenylate is said to be a mixture of equal parts of hetralin (resorcin-hexamethylene-tetramine) and helmitol (anhydro-methylene-citric acid-hexamethylene-tetramine).

Codliver oil substitutes are made according to a patent taken out by K. F. Tollner, Bremen, Germany, by the following process: Certain kinds of marine algaecious plants—i. e., seaweeds and the like, such as *Laminaria digitata*, *Laminaria saccharina*, *Fucus serratus*, *Fucus vesiculosus*, which are rich in iodine, are dried, and, after cutting them into pieces, roasted. They are then finely pulverized and the powder immediately mixed with a suitable fatty oil or oils, preferably sesame oil, peanut oil, or their equivalents. After about a week, during which period the mixture is repeatedly shaken, the liquid parts of the mixture are separated from the solid by filtration or otherwise. The resulting oil is again filtered and is then ready for use. The proportions are one part by weight of algaecious plants to nine parts

by weight of oil. Where the structure of the plants is somewhat close it is of advantage to first mix the powder with alcohol—preferably equal in weight to the weight of said powder—and to add the oil after the expiration of some days. The alcohol may be removed from the oil afterward by slightly heating.

Colalin, which is described as the active principle of bile, is an amorphous white powder of intensely bitter taste. It is said to be insoluble in the acid contents of the stomach, but soluble in the alkaline contents of the upper intestines. It is recommended in the treatment of jaundice, gall stones, etc.

Convulsin consists of a specially prepared fluid extract of eucalyptus mixed with syrup of vanilla, which is recommended in the treatment of coughs and diseases of the respiratory tract.

Copper aseptol is another name for copper sulphocarbonate.

Corticin is announced as a new name for the caffeine-quinine compound known as basicin.

Cotargit is a double salt of cotarnine hydrochloride and ferric chloride which forms ruby red crystals having a melting point of 104° to 105° C. It possesses strong hæmostatic properties and is used to check hæmorrhage.

Creosotina represents a beechwood creosote that has been subjected to repeated purifying processes and combined with carbonic and benzoic acids. It has a pleasant aromatic odor and is easily borne by the stomach. It is said to possess all the antiseptic properties of creosote without its disadvantages.

Curaril is represented to be a stable, very active liquid preparation of curare which has been found efficacious in tetanus. It is a very powerful solution, and is administered hypodermically in doses of 2.4 c.c. If, after half an hour, no effect is obtained, the dose is repeated with an increase of 0.20 c.c. of the remedy (1 c.c. of which can kill 50 mice) every two or three hours until relief is obtained. It is marketed by the Dr. Heinrich Byk Chemical Works, Berlin. [It may be noted that doubt has been expressed regarding the real composition of this liquid, R. Boehm (*Therap. der Gegenwart*, November, 1904) describing it as a ½ per cent. solution of the weak calebassic acid.]

Curbitin chocolate, a new worm lozenge for children, consists of a mixture of powdered pumpkin seeds and chocolate.

Damholid is a preparation of hæmoglobin intended for the treatment of anæmia in cattle. It comes in three forms, from the laboratory of Felix Wecker, Jr., Rostock, Germany, viz.: Damholid liquid, containing 40 per cent. of pure hæmoglobin; Damholid I, a dark brown, granular, odorless powder, readily soluble in 8 parts of cold water; Damholid II, a fine, brownish red powder, equally as soluble in water as the preceding. The remedy is given in anæmia of steers in the following doses: Of the liquid, 26 Cc.; of Damholid I and II, 50 Cc. of a 20 to 25 per cent. solution.

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JOURNALISTIC HYSTERIA.

It is well known in the offices of medical journals that the business managers of the various publications are perpetually striving to get the better of each other. Their doings in this endeavor are frequently the subject of talk in the offices, but they are not dwelt upon to any noteworthy extent. We have always thought that it would answer no good purpose to refer to them in print, and our observation has been to the effect that our contemporaries were of the same opinion. But the *Journal of the American Medical Association* has broken away from this dignified position. In its issue for March 25th there is contained a vicious and scurrilous attack on the president of the company that owns and publishes this journal, Mr. A. R. Elliott, and incidentally on the journal itself and on its editor. The article is based on a letter sent by Mr. Elliott, as president of our publishing company, to certain manufacturing pharmacists, inviting them to give their views concerning the American Medical Association's recently promulgated rules for estimating the ethical status of proprietary medicinal preparations. The article published in the *Journal of the American Medical Association* is so undignified and so hysterical that we cannot account for its appearance except on the supposition that our Chicago contemporary felt itself to have been hard hit by Mr. Elliott's letter, and that, we think, will be the

interpretation put upon it by the great majority of readers. Not only has our contemporary's equanimity been ruffled, but it seems to have feared that its veracity might be called in question, for, instead of simply quoting the text of Mr. Elliott's letter, it gives up nearly an entire page of its valuable space to a full sized fac simile reproduction of the letter—a "yellow" procedure to which it would hardly have resorted save under the pressure of such fear. The excuse given for this reproduction is that the letter is "so unique."

The writer of the article assumes that in issuing the letter Mr. Elliott temporarily usurped the function of the editor of this journal, and that he is in the habit of doing so, for the writer goes on to say: "There was a time when the *New York Medical Journal* held a high position among medical journals of this country. It stood for the ideal in medicine and for the profession it represented. But that was when it was owned by the Appletons, when Dr. Frank P. Foster was editor in fact, and who, as such, would not have advocated in its editorial pages secrecy in medicine."

As regards the case in point, correspondence with manufacturers, either to ascertain their views or for any other purpose, we do not look upon as the editor's function; therefore, there would not have been in any event a usurpation of that function in the issue of the letter. As a matter of fact, however, the editor was consulted before the letter was sent out, and he entirely approved of it. The proposition to devote some space to manufacturers' expressions of opinion seemed to him unobjectionable, particularly in view of the fact that such space was not to be included in the reading pages of the journal, a fact that was to be clearly indicated. As regards the general implication that the editor of this journal is no longer the "editor in fact," we wish to say emphatically that he is absolutely untrammelled by the publishers. If during the time that this journal has been owned by the A. R. Elliott Publishing Company it had failed in any respect to live up to its former reputation as an exponent of the true interests of the medical profession, its failure would not have been due to any shortcomings on the part of the publishing company. But there has not been any such failure. On the contrary, it holds in the esteem of the profession a higher position than it ever held before. This we

are justified in saying on the strength of the frequency with which the leading physicians of the country, including many of the American Medical Association's foremost members, contribute to its columns, and on the strength of its greatly increased circulation, which, in spite of the *Journal of the American Medical Association's* innuendo, is larger than that of any other weekly American medical journal that has not its following largely ready made for it by membership in some organization. Moreover, our present publishers have so added to our resources as to enable us to increase the number of reading pages very decidedly.

The *Journal of the American Medical Association* sneers at the president of our publishing company because he is primarily an advertising agent, as if that fact disqualified him as a publisher, and again it descends to the "yellow" methods by giving a fac simile reproduction of one of his letter heads. We understand that Mr. Rockefeller is prominent in the affairs of the Standard Oil Company. Does anybody imagine that that fact taints the Rockefeller Institute for Medical Research? But we have said enough of the "nasty" article in our Chicago contemporary; it is merely an exhibition of journalistic hysteria.

QUACKS AND NEWSPAPERS IN CRIMINAL ALLIANCE.

Mr. Champe S. Andrews, the counsel of the Medical Society of the County of New York, delivered before that society a few weeks ago a very illuminating address entitled *A Century's Criminal Alliance between Quacks and Some Newspapers*. There can be little doubt that, as regards some of the newspapers, Mr. Andrews is quite justified in using the expression "criminal alliance," for he explains that they charge more than their ordinary rate for printing the advertisements of certain classes of quacks, which they would not be likely to do, we suppose, except with some notion of salving their own consciences by mulcting the quacks, whom they must know to be downright swindlers. Besides their own swindling, who can tell to what extent the quacks tempt their victims to acts of dishonesty committed for the sake of obtaining the money necessary to satisfy the quacks' rapacity?

The struggle against quackery is not very hopeful, and the fault does not lie with the county

society, in spite of the newspapers' insisting that it does, for the most dangerous of the quacks either are qualified practitioners, and consequently cannot be prosecuted for violating the medical practice law, or else deal with a class of victims who for very shame cannot be induced to appear in court against the swindlers. Newspaper advertising is the chief means by which the quack secures his victims, and something might be done, as Mr. Andrews tells us has been done in Michigan, by making certain forms of quack advertising a penal offense. We hope, therefore, that Mr. Andrews's address will meet with due consideration at the hands of our legislators.

WOMEN'S SUCCESS IN STATE EXAMINATIONS.

Widespread comment has recently been made in lay journals regarding the remarkable achievements of women in State examinations for the license to practise medicine. As a matter of fact, women do usually rank very high in such tests. From this isolated fact, however, we are not justified in attributing a superior intellectuality to the girl students. State license examinations are almost invariably of such a character as to call into play only the lowest of all the mental faculties—the memory. There is nothing in such an examination on any subject to prevent a bright boy of seventeen years or younger from making a brilliant showing when his knowledge of the subjects discussed might be based on mere book learning and be of no practical value whatever.

A retentive memory is often characteristic of people with very low powers of generalization. The distinguished Lord Macaulay is the only brilliantly clever man we can instantly recall as being noted for his marvellous memory. Porson, the Greek scholar, was noted for nothing else. The blindfolded chess players whose mnemonic feats seem so extraordinary are seldom persons of any intellectual force. On the other hand, we know many gifted men in various walks of life, whose judgment and mental precision are highly valued, who are obliged to note down the small essentials of their calling and to have such notes ready for immediate reference. We must not be considered as being so ungallant as to deny intellectual equality in women with men, but we must emphasize the fact that the possession of a retentive memory alone is not an argument in

their favor. The well known frequent failures of gold medallists in after life illustrates our point; as long as memory is the only factor in success, they shine. When, however, initiative, judgment, the power to deduce from accumulated experience, and the other faculties of a well balanced mind are drawn upon, they fall by the wayside, much to the wonder, generally, of their unobservant friends. Memory is a primitive quality and is best developed in primitive characters; with the invention of writing it began to decline, and it has been much crushed by the printing press. Much higher qualities are needed to win the battles of modern civilization.

PARÆSTHETIC MERALGIA.

The history of paræsthetic meralgia is most curious, because it shows, in spite of the extraordinary activity of neurologists, that it is still possible to discover a new disease, and what is still more singular is the fact that this recently described affection had never been brought to light until the nearly simultaneous writings of Roth and Bernhardt, in 1895. Since this time a number of cases have been recorded, so that it would appear that the disease is by no means uncommon. When paræsthetic meralgia occurs in its typical form the patient is aware of an abnormal sensation at the antero-external aspect of the thigh, and this is present whether the subject is standing, walking, or in repose. Under certain influences this sensation may be transformed into pain, occurring in paroxysms and more or less intense.

The characters of the paræsthesia vary. In some cases there is a malaise which is difficult to describe, while other patients feel a deep twitching which they liken to muscular retraction. Still others have the sensation of dead skin, a piece of wood, or a paste-board cast laid in the integuments of the thigh. Frequently there is a constant numbness present, accompanied or not by prickling or stinging sensations. The paroxysms of pain become grafted upon the common ground, which is the paræsthesia. The action of a particular causative factor is necessary for the production of pain, and this cause, which intervenes in keeping up and especially in producing the recurrence of the paroxysms, may in itself prolong the affection. The exciting causes of the attacks are slow or rapid, long continued walking, standing

for some time, or going up stairs. Slight or strong pressure on the thigh produces the paroxysms, and in some cases even the friction produced by a bunch of keys in the trousers pocket or by the bed-clothes may be enough.

The paroxysm may consist of a mere exaggeration of the paræsthesia or there may be subjective symptoms added to it, but more frequently pain appears, which is compared to a sensation of burning, the intensity of which may be so great as to cause the patient to cry out or to limp. The seat of these painful phenomena corresponds to the area of paræsthesia. The subject is frequently obliged to stop in his walk and to sit down when he is standing and rest the limb for a little time in order to quiet the intense pain. The attack may sometimes be stopped by lying down, but, on the other hand, it may persist during repose. The dorsal decubitus has been known to cause the pain to come on, especially if the thigh is extended, but this may occur in the erect position. On the contrary, rapid flexion of the thigh may put an end to the pain, as well as to that produced by walking, in some instances. In one case reported by Sabrazès and Cabannes the patient inclined his body forward and flexed the leg on the thigh to relieve himself of the paroxysm, and they make the remark that a medium amount of flexion, combined with outward rotation, was the easiest position for the patient to assume. Exceptionally the paroxysms are wanting, and in these cases a more or less acute paræsthesia may alone exist or be accompanied by objective disturbances of the sensibility. Very rare are those instances in which paræsthesia is absent with only objective disturbances present.

In all reported cases paræsthetic meralgia has been seated in the anteroexternal aspect of the thigh; in thirty-eight it was on the left side and on the right in thirty-seven. The disease began in both thighs in nine cases and became bilateral secondarily in eight others, under which circumstances the paræsthesia predominated, both in intensity, and in extent, in the thigh first involved. In twelve reported cases the side involved is not mentioned. Hypothermia of the involved area has been noted twice, the first time in 1898, by Joncheray, but without any thermometric record, while the second instance was observed by Sabrazès and Cabannes, who found a difference of about 5° F. in favor of

the healthy thigh. The area of paræsthesia extends from the anterior superior iliac spine or the great trochanter to the external condyle of the femur. Anteriorly it is limited by the middle line of the thigh, and posteriorly by the sciatic nerve.

The abnormal sensations become more marked as the centre of the area is approached, and are greatly attenuated at its borders. There are exceptions to this rule, and cases are on record in which the paræsthesia was quite as intense at the borders as in the centre of the area. In others it was the lower and median portion of the thigh where it was most marked. The paræsthetic area is not always so large as has been described, and one may meet with cases in which circumscribed zones are found, but these will be invariably within the area already referred to. These small zones are isolated from each other and their borders are irregular. They were found in five cases at the upper part of the thigh, at the middle in three, and seven times at the lower part. In contour they are round or oval, and vary in size from that of the palm of the hand to that of a silver dollar. When two plaques are present, one is usually larger than the other.

In exploring the region to ascertain the objective disturbances, it will be noted that they exactly occupy the same area as the paræsthesia, but in one case points of analgesia were found scattered here and there. Partial hypæsthesia was present in fifty cases, while in twenty-seven others it was evident to the touch or on pricking. In nineteen instances tactile hypæsthesia and hypalgesia were equal. In five cases a tardy perception of contact or pricking was found. Tactile hyperæsthesia is mentioned in eleven cases, and in five digital pressure on the centre of the paræsthetic area produced a paroxysm of pain. Friction of the skin or picking it up caused an intense burning sensation in thirteen patients. Besides these sensory disturbances, which may be the only ones present, changes of the thermic sensation may occur. Cold may alone be less distinctly felt by the patient, or heat, on the other hand, is perhaps the sensation lost. Occasionally the various temperatures are not defined, but the loss of thermic sensibility rarely exists alone. In five of the recorded cases it was normal and in many others it is not mentioned.

If a faradaic current is passed over the cutaneous surface, or if static electricity is used, the patient

may have a burning sensation, while in thirteen cases there was a diminution of electric sensibility. The objective sensory disturbances are very rarely absent, and Pitres has shown that by slight friction it is possible to cause sensibility to reappear in the anæsthetic areas. Erb's sensory reflex was found diminished in two cases and absent in another. Compression of the femorocutaneous nerve exercised over the innominate foramen showed that it was tender in eight cases, while in ten others it was not productive of any disagreeable sensation. In one case reported by Roth the trophic and vasomotor functions were involved, because the skin of the region comprised in the process was smooth, white, and deprived of papillary projections. The surface remained pale when the patient was in a hot bath, while the remainder became red. In a case reported by Sabrazès and Cabannes the injection of pilocarpine into the diseased area and into the corresponding normal one on the other side showed the presence of trophic and vasomotor disturbances in the paræsthetic area. On the affected side, in an hour after the injection there was only slight redness, with no papillary erection or sweating. The pilomotor reflex has been found absent in two cases. On the other hand, in Lop's case the skin was of a dark red, hot, and wrinkled. The muscles underlying the paræsthetic area are usually normal, although in Joncheray's case their electric excitability was diminished, without, however, presenting the reaction of degeneration. Meralgia is ordinarily a local disease, but it has been mentioned in connection with locomotor ataxia in four cases and once in diabetes. It frequently coexists with varicose veins, hæmorrhoids, gout, or obesity. At the beginning the affection is temporary and quite limited in extent, but later, after successive attacks, it extends.

Brisard insists on the surgical treatment of this disease by resection of the affected nerve, for it must be admitted that medical treatment is of little avail. Except in slight cases the affection resists all treatment, but as the pain is not intense, the patient can get along with his infirmity. But if the pain becomes severe, resection of the nerve should be resorted to, as has been done by Chipault in two cases and in one by Mauclair. In all three the result was favorable.

In spite of the very thorough researches that have been made, it does not seem as if the ætiology of

this neuralgia, so singular in its localization, had been well demonstrated. Traumatism, cold, intoxications, etc., have been held responsible, and when these factors were lacking in the patient's history, the condition has been attributed to "arthritis" for the want of something better. For the present, however, it must be admitted that its causes are most obscure.

CHARLES GREENE CUMSTON.

THE POSSIBLE FAILURE OF THE AMERICAN MEDICAL ASSOCIATION'S INQUISITION CONCERNING PROPRIETARIES.

At this early period, in its issue for March 25th, the *Journal of the American Medical Association* contemplates the possibility of failure of the association's scheme for separating the sheep from the goats among advertisers of proprietary preparations. "On the other hand," it says, "if it all ends in a failure, we will [sic] be no worse off than we were before, and we will [sic] be richer by experience." We should like to feel that in case of failure the association would be richer in something else than experience.

A NASAL TOOTH.

An example of this curious anomaly is reported by Hecht, of Munich (*Archiv. für Laryngologie*, xvii, 1; *Berliner klinische Wochenschrift*, March 6th), in the case of a man who consulted him for a furuncle of the nostril. The tooth was distant rather more than an inch from the anterior extremity of the inferior nasal passage, and it was firmly implanted. On the opposite side there was a corresponding supernumerary tooth set obliquely in the jaw.

THE MEDICAL CORPS OF THE NAVY.

The number of newly appointed assistant surgeons who recently completed a course in the Naval Medical School seems to augur favorably as to the filling of the corps with suitable men, and the words spoken to the class by the President of the United States cannot have failed to imbue the young men with a becoming pride in their two professions, that of medicine and that of arms.

PREPUTIAL SEBACEOUS GLANDS.

Dr. Ernst Delbanco, of Hamburg (*Monatshfte für praktische Dermatologie*, xxxviii, 11; *Berliner klinische Wochenschrift*, March 6th), thinks it not uncommon to find sebaceous glands on the inner surface of the prepuce. The glands are numerous and are aggregated in the form of fine yellow grains.

News Items.

Society Meetings for the Coming Week:

MONDAY, April 3rd.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association (annual); Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society (annual).

TUESDAY, April 4th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, April 5th.—New York Academy of Medicine (Section in Public Health); New York Genitourinary Society; Harlem Medical Association of the City of New York; Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, April 6th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medicopsychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis.

FRIDAY, April 7th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Clinical Society, New York.

SATURDAY, April 8th.—Obstetrical Society of Boston (private).

Change of Address.—Dr. Jean F. Chauveau, to 64 West Seventy-seventh Street, New York.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending March 25, 1905:

	March 25.		March 18.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	379	9	383	9
Diphtheria and croup	294	38	321	34
Scarlet fever	258	13	249	25
Smallpox	...	...	1	1
Chickenpox	180	...	149	...
Tuberculosis	576	198	505	198
Typhoid fever	19	6	31	7
Cerebrospinal meningitis	167	85	135	72
	1,873	349	1,774	346

Ambulance Station for Harlem Hospital.—Plans have been filed for the erection of a three story ambulance station for the new Harlem Hospital, to be built in One Hundred and Thirty-seventh Street, east of Lenox Avenue, and for a three story and basement power station, 148 feet front and 43 feet deep, to be erected on an adjoining lot. The power station will have a hospital morgue annex.

Bequests to New York Charities.—William Vogel, the clothier, who died recently, left \$5,000 to the Mount Sinai Hospital in memory of his deceased wife, Hannah Vogel; \$1,000 to the Home for Aged and Infirm Hebrews; \$1,000 to the

Montefiore Home for Chronic Invalids; \$1,000 to Lebanon Hospital; \$1,000 to the Sanitarium for Hebrew Children, and \$1,000 to the Hebrew Benevolent Orphan Asylum Society. Mr. Vogel left a very large fortune.

House Staff Wanted at Hudson Street Hospital.—On the afternoons of April 17th and 18th there will be held a competitive examination at the Hudson Street Hospital of applicants for positions on the house staff. The term of interne extends over a period of eighteen months, and is equally divided between surgical and medical work. There will be two vacancies on July 1, 1905, and two on January 1, 1906. The opportunities to study emergency surgery are especially good at this hospital.

German Poliklinik in Need.—The German Poliklinik, 78 Seventh Street, is preparing to extend its facilities for the free treatment of the sick poor. The managers desire to acquire the building of the German Dispensary, and to meet the cost they have appealed to patrons and outside friends for funds. In a recent report it was stated that since the founding of the institution, in 1883, 1,014,682 patients have been treated, and 723,355 prescriptions have been filled by the drug store attached to the Poliklinik.

Society of the Medical Inspectors of the City of New York.—A stated meeting of this society will be held on Tuesday, April 4, 1905, at 8.30 p. m. sharp, at the Chemist's Club, 108 West Fifty-fifth Street. Order of business: Executive Session; addresses by the honorary members of the society: Dr. Thomas Darlington, Commissioner of Health; Dr. Herman M. Biggs, Medical Officer; Dr. Walter Bense, Assistant Sanitary Superintendent; Dr. John J. Cronin, Assistant Chief Inspector. Augustine C. McGuire, M. D., president; Edward M. Thompson, M. D., secretary, 315 West Fifty-eighth Street.

A Hospital for Coney Island.—The progress of this popular resort is shown by the fact that it is to have a new modern hospital that will be open the year round. The Emergency Hospital is open during the summer months, but there are many workmen employed at the different amusement enterprises during the winter, and in the case of a serious accident it is necessary that they be taken to the Norwegian Hospital, a distance of at least three miles. The Board of Estimate has authorized the condemnation of a plot of land bounded by Ocean Parkway, Coney Island Avenue, East Sixth Street, and Avenue Y for the site of the new hospital.

New Manhattan Eye and Ear Hospital.—Ground was broken for the new Manhattan Eye, Ear, and Throat Hospital building on March 23rd on the south side of Sixty-fourth Street, between Second and Third Avenues. Mrs. C. R. Agnew turned the first shovelful of earth. John Sinclair, president of the hospital, presided. Dr. Andrew H. Smith delivered an address, in which he reviewed the history of the hospital. Prayer was offered by the Reverend Dr. Stephenson, of the Fifth Avenue Presbyterian Church. The hospital is now at Park Avenue and Forty-first Street.

The new building will cover a lot from Sixty-third to Sixty-fourth Street.

Growth of the Charity Organization Society.—The growth of a new line of charitable activity is shown in the addition of a chapter to the 1905 edition of the *Charities Directory*, published by the Charity Organization Society. This new chapter gives information of organizations which send nurses to the homes of needy persons, as distinct from the nursing of the poor in hospitals, convalescent homes, fresh air cottages, and other institutions. There are 25 titles in the chapter, showing a wide variety of societies which send visiting nurses into the tenements. A large number of them are religious in character, but some of the large general societies have added visiting nurses to their staff of employees, and the department of health is sending nurses to the homes of consumptives to care for them and teach them means for preventing the spread of the disease to their families and neighbors. The Charity Organization Society movement shows a steady growth. Since the 1904 directory was published about 20 new societies have been added to the roster of such organizations in the United States, making 190 in all, and the relief societies listed in Europe and Australia now total 210. Canada has seven. The directory contains 2,000 names of societies, institutions, and other charitable organizations in Manhattan Borough, about half as many in Brooklyn, and nearly one hundred in Queens. The entries include a brief description of the work of the organization named, how and where and from whom to secure its services, and the names of officers and executive employees. The book contains 675 pages. Published by the Charity Organization Society, 105 East Twenty-second Street, New York, in cloth, at \$1.00, postpaid.

PHILADELPHIA.

Charitable Bequests.—By the will of Ann M. Sharpless, the Children's Seaside Home, at Atlantic City, N. J., receives \$2,000, and the Mercer Memorial Home, also at Atlantic City, receives \$2,500.

Baltimore Ophthalmological Society.—Dr. William Campbell Posey, of Philadelphia, read a paper before the Baltimore Ophthalmological Society on Friday night, March 24th, on Some Ophthalmological Phases of Diseases of the Accessory Sinuses of the Nose.

Changes in the Philadelphia General Hospital Staff.—Dr. Charles A. Hatfield has resigned as assistant physician, department for tuberculosis. Dr. Ward Brinton has been appointed assistant physician, department for tuberculosis. Dr. Samuel Rhodes has been appointed registrar of the department for tuberculosis.

Scientific Society Meetings for the Week Ending April 8, 1905.—Monday, April 3rd, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, April 4th, Academy of Natural Sciences. Wednesday, April 5th, College of Physicians; Association of Clin-

ical Assistants of Wills's Hospital. Thursday, April 6th, Obstetrical Society; Medical Society of the Southern Dispensary. Friday, April 7th, American Philosophical Society.

Philadelphia Polyclinic.—The following is a report of the work at the Philadelphia Polyclinic and College for Graduates in Medicine for February, 1905: Patients admitted to house, 102; patients discharged, 93; new patients treated in dispensary, 1,539; total visits to dispensary, 7,642; accident ward, 527.

Deaths.—Dr. Samuel B. Hoppin died on March 21, 1905, at his home, 247 South Forty-fourth Street, aged 86 years. Dr. Hoppin was born in Providence, R. I., in 1818, and graduated from the Jefferson Medical College in 1852. He was a surgeon in the navy during the civil war, and about thirty years ago was made registration physician in the prothonotary's office.

Dr. William C. Detwiler died at Easton, Pa., on March 23rd. He was the oldest practising dentist in Easton.

Pharmaceutical Matters.—At the meeting of the Pharmaceutical Association, held March 21st, Dr. Joseph P. Remington announced that the Governor of Pennsylvania would in all probability sign the bill for further regulating the practice of pharmacy. The bill provides that all persons applying for certificates of registration as competent pharmacists must be graduates of a reputable college of pharmacy. Professor Henry P. Hynson, of the University of Maryland, spoke upon Ethical Pharmaceutical Practice and Its Recompense. Dr. William C. Alpers spoke on Professionalism *versus* Commercialism in Pharmacy. Mr. George M. Beringer spoke on The Evolution of Nostrum Vending and Its Relation to the Practice of Medicine and Pharmacy.

Bill to Permit the Castration of Hopeless Imbeciles.—The legislature of the State of Pennsylvania passed a bill on March 21st, by 105 yeas to 28 noes, providing that it shall be compulsory for institutions in the State, interested exclusively or especially with the care of idiots and imbecile children, to appoint upon their staffs at least one skilled neurologist and one skilled surgeon of recognized ability, whose duty it shall be, in conjunction with the chief physician of the institution, to examine the mental and physical condition of the inmates. If in their judgment deemed advisable, it shall be lawful for the surgeon to perform such operation as shall be decided safest and most effective to prevent procreation. The operation shall not be performed except in cases that have been pronounced non-improvable after one year's residence in the institution.

Bulletin of the Ayer Laboratory.—The second number of the bulletin of the Ayer Clinical Laboratory of the Pennsylvania Hospital has just been received. It contains the following contributions: A Study of the Bone Marrow in Typhoid Fever and Other Autoinfections, by Dr. Warfield T. Longcope; Studies on the Basophilic Granulations of the Erythrocytes in Lead Poisoning and Other Conditions, with Special Reference

to the Relation Which They Bear to the Nuclei of the Red Blood Corpuscles, by Dr. Williams B. Cadwallader; The Relation Between Congenital Malformations of the Heart and Acute Endocarditis, with Report of Two Cases, by Dr. G. Canby Robinson; The Report of a Case of Malignant Tumor of the Testicle Resembling Chorioepithelioma, with Metastases, by Dr. J. A. Scott and Dr. Warfield T. Longcope. The fasciculus contains some excellent illustrations.

Vaccination in Parochial Schools.—As a result of a conference between the bureau of health and the authorities of the Roman Catholic Church in Philadelphia, Archbishop Ryan agreed to place the parochial schools of Philadelphia under the jurisdiction of the bureau of health, in so far as relates to the matter of vaccination. In future no child who has not been successfully vaccinated will be admitted to the parochial schools, and all unprotected children found by the medical inspectors in those schools will be excluded until the operation has been performed. Since the beginning of the inspection of these schools 1,775 children have been discovered who either never have been vaccinated or whose vaccination scars were of doubtful protective value. These children have all been vaccinated and permitted to return to school.

The Health of the City.—During the week ending March 18, 1905, the following cases of transmissible diseases were reported to the bureau of health:

	Cases.	Deaths.
Typhoid fever.....	247	19
Scarlet fever.....	49	2
Chickenpox.....	50	0
Diphtheria.....	60	11
Cerebrospinal meningitis.....	5	2
Measles.....	27	2
Whooping cough.....	6	0
Tuberculosis of the lungs.....	66	68
Pneumonia.....	70	75
Erysipelas.....	9	1
Tetanus.....	1	0

The total mortality was 589, in an estimated population of 1,438,318, corresponding to an annual death rate of 21.39 per 1,000 population. The total infant mortality was 142; 120 under one year, 22 between one and two years. There were 41 still births; 26 males and 15 females. The following deaths from other transmissible diseases were recorded: Tuberculosis, other than tuberculosis of the lungs, 7; puerperal fever, 5; dysentery, 1; diarrhoea and enteritis under two years, 30. The weather has been mild with no rain. The increase in the number of cases of typhoid is marked; 247 this week against 178 for the week ending March 11th. The great increase comes from the nineteenth, twenty-fifth, thirty-first, and thirty-third wards, none of which is supplied with filtered water. These four wards furnished 155 of the new cases. From the districts wholly (twenty-first and twenty-second wards), or partially (twenty-fourth and twenty-seventh wards) supplied with filtered water, only ten cases were reported.

Smallpox in Philadelphia.—We copy the following facts about smallpox from the bulletin of the bureau of health for March 4, 1905: The last case of smallpox was reported on December 17, 1904. During the past four years about 1,000

medical students, 100 nurses, 60 physicians, and over 100 servants were freely exposed to smallpox in the wards of the Municipal Hospital. Of this group only one contracted the disease. This individual, a medical student, descended from an antivaccination family, through purposeful deception gained access to the smallpox wards, contracted the disease and was seriously ill. During the year, of the unvaccinated patients treated in the wards of this institution, 32.73 per cent. died; of those vaccinated in infancy, but who had one good mark, 3.81 per cent. died; of those vaccinated in infancy who had one fair mark, 8.13 per cent. died; and of those vaccinated in infancy who had one poor mark, 11.25 per cent. died.

Section in Medical History, College of Physicians.—The section in medical history of the College of Physicians of Philadelphia has been organized, its officers elected, its executive committee appointed by the president of the college, and its first meeting arranged for April 24th, which is the fourth Monday of the month. Meetings will be held regularly, at which papers will be read; interesting books and manuscripts will be shown; lantern slide lectures will be held; distinguished medical historians will be invited from other cities to address the section, and it is hoped and expected that in Philadelphia, the richest city in medical historical material in the country, there can be aroused an interest which will lead to the production of a great deal of exceedingly important writing and interesting discussion on such matters.

The following are the officers of the newly organized section: Chairman, Dr. R. G. Curtin; clerk, Dr. William Pepper; executive committee, Dr. F. R. Packard, Dr. C. A. Oliver, and Dr. S. McC. Hamill.

GENERAL.

Yale College, Chungsha, China.—Dr. Edward H. Hume, a graduate of the medical school of the Johns Hopkins University, Baltimore, has been appointed head of the medical department of the new Yale College in Chungsha, China.

The Louisville Medical and Surgical Society held its annual banquet and election of officers at the Galt House, Louisville, Ky., on March 20th. Dr. W. H. Coleman was elected president; Dr. C. W. Hibbitt, vice-president; Dr. J. K. Norris, secretary; and Dr. Dunning S. Wilson, treasurer.

Chelsea, Mass., Naval Hospital.—Medical Director Howard Wells, United States Navy, who, since October 2, 1903, has been in charge of the Naval Hospital at Narragansett Bay, R. I., has taken charge of the United States Naval Hospital at Chelsea. He relieves Medical Director Dwight Dickinson, who has been in charge since October 15, 1901, and who goes to Portsmouth to serve in the same capacity.

Bequest to Bloomington, Ill., Hospital.—The uncertainty that has marked the division of the vast estate of Abram Brokaw, the eccentric millionaire, is cleared up partially by the announcement that he has left the Brokaw Hospital in this city \$100,000, farms worth \$50,000, and had re-

leased it from debts amounting to \$15,000, bringing his total donation to this institution up to \$200,000.

A Nurse Justly Rewarded.—It is reported that Mrs. Alida Gray, a young nurse at the Middletown, N. Y., State Hospital, has received a legacy of \$40,000 from a former patient of the hospital who felt grateful for the care and attention given. Neither Mrs. Gray nor the benefactor's attorney will divulge the name of the testator.

Kentucky Physician Nominated for the Hall of Fame.—The Henderson County, Ky., Medical Society, at a meeting recently held, determined to present the name of Dr. Ephraim McDowell, one of Kentucky's illustrious sons and one of the most famous of American physicians, for one of the statues in the National Hall of Fame. It was determined to request the State Medical Society and the *Kentucky Medical Journal* to use their influence toward the desired end.

A Testimonial to Dr. Matas, of New Orleans.—An event of unusual interest was celebrated at the residence of Dr. Rudolph Matas, No. 2255 St. Charles Avenue, New Orleans, on the evening of March 19th, when a body of physicians, professors, and students and intimate friends called at the Matas home and presented him with a beautiful silver service, consisting of some 125 pieces, and a handsome silver loving cup. These tokens of honor and esteem were presented to Dr. Matas on the twenty-fifth anniversary of his graduation from Tulane Medical School and his entering upon the active practice of medicine. The affair was a complete surprise. Dr. Matas was spending a quiet Sunday evening at home, when at 8 o'clock the bell rang, and a host of friends walked in. Dr. Stanford E. Chaille, Dean of the Medical College, made the presentation. Dr. I. L. Leucht, Rabbi of Touro Synagogue, seconded the presentation of Dr. Chaille, and Dr. Matas responded in words of tenderest appreciation. He was so overcome that he spoke with difficulty at the beginning of his remarks. The large chest of silver rested on a table under the folding doors of the parlor while the presentation was being made. The loving cup, also of a most beautiful design and creation, rested on a stand several inches high.

The Milk Question in Chicago.—The milk situation is very satisfactory at an unsatisfactory season. Of the 820 samples of milk and cream analyzed in the laboratory during the week only 14 of milk and 30 of cream were found below grade, a proportion of 5.8 per cent. This is 1 per cent. better than the yearly average of 1904 and at the most unfavorable season of the year. The director of the laboratory reports that the solitary dairy inspector notified the department that a number of shippers at Hinsdale, Downer's Grove, and Lisle, Ill., were feeding wet malt and refused to comply with the department's regulations. As a result of this notification inspectors were sent to the railway receiving platforms with orders to return all slop and malt fed milk to the shipper. They returned 89 cans in one day to the

stations named. These shippers then sent their milk to a creamery in Lisle and upon learning this the department rejected all milk and cream from this creamery until every shipper who supplied the creamery with milk had placed his affidavit on file in the laboratory that he would not feed malt or brewery slops to his milch cows. As a result of this action the creamery and the department have arrived at an agreement with the railroad, by which the company agrees not to ship any more malt to these towns. Wet malt and brewery slops milk will soon be unknown in Chicago.

Statement of Mortality in Chicago for the Week Ending March 25, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Mar. 25, 1905.	Mar. 18, 1905.	Mar. 26, 1904.
Total deaths, all causes.....	581	557	626
Annual death rate per 1,000.....	15.21	14.57	16.93
By sexes—			
Males.....	322	324	382
Females.....	259	233	244
By ages—			
Under 1 year.....	126	133	107
Between 1 and 5 years.....	58	51	39
Over 60 years.....	109	98	138
Important causes of death—			
Acute intestinal diseases.....	24	27	31
Apoplexy.....	12	15	17
Bright's disease.....	37	34	42
Bronchitis.....	22	31	18
Consumption.....	81	63	76
Cancer.....	27	22	25
Convulsions.....	16	14	10
Diphtheria.....	4	11	9
Heart disease.....	37	42	50
Influenza.....	6	2	4
Measles.....	2	8	1
Nervous diseases.....	22	17	22
Pneumonia.....	106	103	156
Scarlet fever.....	0	2	1
Smallpox.....	2	3	0
Suicide.....	7	11	11
Typhoid fever.....	5	4	8
Violence (other than suicide).....	25	20	25
Whooping cough.....	9	11	0
All other causes.....	132	108	120

Smallpox continues to pick out the non-vaccinated with unerring certainty. Of the 22 new cases sent to the Isolation Hospital during the week none had ever been revaccinated since early childhood and 17 had never been vaccinated at all. Of the 5 who had been once vaccinated in childhood the youngest was 26 years old; four of the non-vaccinated were children under the school age of 6 years. Since the beginning of the year 232 cases of the disease have been discovered and removed to a hospital; of these, 34, or 14.6 per cent., died; 108 were discharged, recovered; 90 remain under treatment. The record is a sad commentary upon the criminal folly of those who neglect vaccination.

The Osteopathic Bill Favorably Reported by the Senate Committee on Judiciary at Albany.—Objections to this bill have been summarized as follows:

First. Osteopathy, so called, is an agent or method used in the treatment of disease, and is included in the general practice of medicine.

Second. Osteopathy should not be made a special branch of medicine, by an act of the legislature, but should come under the present State laws, which govern all the special branches as well as the general practice of medicine. Any licensed physician has now the right to practice osteopathy as a specialty.

Third. The legislature should protect the public by denying the endorsement of the State to any person, as being capable of treating the diseases of the human body, unless such person can make a diagnosis of the condition of the human body, to do which requires a full knowledge of the science of medicine as taught in the medical colleges of this State, including the use of drugs and other valuable therapeutic agents.

Fourth. If the so called osteopathic bill becomes a law all candidates who fail to pass the Regents' examinations to obtain a license to practice medicine in this State may in this State treat all diseases of the human body by holding a diploma from any regular osteopathic college in the United States, a privilege which would lower the standing of this State in the educational world.

And finally it would be more reasonable for the legislature to separate the special branches of criminal, corporation, and real estate law from the general practice of law and establish for each of them a special examining board, so as to make it easier for the candidates for admission to the bar who desired to practice as specialists, than it would be for the legislature to select one special therapeutic agent used in the treatment of disease and separate it from the general practice of medicine as a panacea for all diseases at the request of those enthusiasts who now ask for a special osteopathic examining board.

Appointment at the Government Hospital for the Insane.—The United States Civil Service Commission announces an examination on April 26 and 27, 1905, to secure eligibles from which to make certification to fill a vacancy in the position of physician (female) in the Government Hospital for the Insane, Washington, D. C., at \$1,500 per annum and quarters, and vacancies as they may occur in any branch of the service requiring similar qualifications. Only unmarried women will be admitted to this examination. The examination will consist of the subjects mentioned below, weighted as indicated:

Subjects.	Weights.
1. Letter writing (a letter of not less than 150 words on one of two subjects given).....	5
2. Anatomy and physiology.....	5
3. Chemistry, materia medica, and therapeutics.....	10
4. Bacteriology and hygiene.....	10
5. Surgery and surgical pathology.....	15
6. Obstetrics and gynecology.....	15
7. Mental diseases.....	20
8. Experience (rated on application).....	20
Total.....	100

Applications will be received from graduates of recognized medical schools. Credit will be given for experience obtained in a professional capacity in institutions for the care of mental diseases, in general hospitals, and in the actual performance of surgical operations and the care of operative cases. Two days will be required for this examination. Age limit, 25 to 40 years on the date of the examination. This examination is open to all citizens of the United States who comply with the requirements. Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application Form 1312. No application will be accepted unless properly executed and filed with the commission at Washington. As examination papers are shipped direct from the commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The commission will, therefore, arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

Pith of Current Literature

PRESSE MEDICALE.

February 25, 1905.

1. Radium and Radiotherapy, By P. DESFOSSES.
2. General Results Obtained by Bronchoœsophagoscopy; Advance Gained by This Method, By J. GUISEZ.

1. **Radium and Radiotherapy.**—Desfosses says of the radium rays that they propagate themselves in straight lines and cannot be reflected, refracted, or polarized. He describes them as of a much more complex nature than the Röntgen rays. The apparatus employed in their use is described, its faults are pointed out and the present state of our knowledge as to its therapy is considered.

2. **Bronchoœsophagoscopy.**—Guisez presents illustrations of the instruments employed in this work, describes the technics of their use, and indicates the unquestionable advantages of this method of diagnosis in certain classes of cases.

March 1, 1905.

1. The Bacillus of Koch and the Blood of the Tuberculous, By ANDRÉ BERGERON.
2. Abscess of the Abdominal Wall Due to Migration of Entozoa, By PIERRE SIKORA.

1. **Koch's Bacillus and the Blood of the Tuberculous.**—Bergeron finds as the result of a number of experiments that the bacillus of Koch does not habitually sojourn or proliferate in the blood, but that the bacilli when introduced directly into the circulation quickly fix themselves in the tissues and disappear from the blood.

2. **Abscess of the Abdominal Wall.**—Sikora relates the case of a woman, 63 years old, who had suffered long from lumbrici. A soft, round, reducible tumor appeared in the median line of the abdomen above the umbilicus. It was not very tender on pressure and was diagnosed as hernia. The general health began to fail and four months later the tumor was found to be very large, fluctuating, and irreducible, with the superjacent skin reddened. The abscess was opened and found to contain many lumbrici.

SEMAINE MEDICALE.

February 22, 1905.

Ascending Neuritis Following Appendicitis,

By F. RAYMOND and G. GUILLAIN.

Ascending Neuritis Following Appendicitis.

Raymond and Guillaïn report the case of a man who was attacked by appendicitis in May, 1903, and confined to bed for three or four weeks. Five or six hours after the commencement of the appendicitis the patient began to suffer violent pain in the right thigh. This pain continued with paroxysmal exacerbations and presented the characteristics of a crural neuralgia. The neuralgia improved along with the appendicitis, but intermittent pains persisted in the crural region until September, when a second attack of appendicitis was accompanied by an attack of sciatic neuralgia. All of the symptoms again improved. A third attack of appendicitis in February, 1904, was accompanied by an extension of the neuralgic pain to the calf of the leg and a sensation of ting-

ling in the foot. After recovery from this attack the patient had some difficulty in lifting the foot and walked with some lameness. Another attack of appendicitis in August was accompanied by an exacerbation of the pains in the regions supplied by the right crural and sciatic nerves and the extension of the pain to the region supplied by the left sciatic nerve. The appendix was removed September 19th. It was in a retrocæcal position, bound down by adhesions. After the operation the pains in the lower limbs continued and the paresis of the extensor muscles increased until the final condition was one of paralysis and muscular atrophy with the right foot in a state of pes equinus. The writers think that all this was the result of an ascending neuritis which was started by the inflammation of the appendix.

ZENTRALBLATT FUER INNERE MEDIZIN.

January 28, 1905.

1. Metaphenyldiamin in Diarrhœa, By B. BOYE.

1. **Metaphenyldiamin.**—Boye says that this drug, known as lentin, is valuable in the diarrhœas of infants and of older nurslings. The dose for children is one tenth of a grain one or more times daily, for adults one and one half to four and one half grains three times daily. The author has observed that patients with diarrhœa taking the drug have darkened urine, but healthy persons do not show this reaction.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 13, 1905.

1. Abuse of Tendon Transplantation, By H. OPPENHEIM.
2. Disinfectant Action of Griserin (*To be concluded*), By E. FRIEDBERGER and W. OETTINGER.
3. A Case of Keratomycosis Aspergillina, By OSTERHOIT.
4. Palpation of the Appendix and Larvate Appendicitis, By T. HAUSMANN.
5. Osteomyelitis in Nurslings, By H. MOHR.
6. Physical Methods of Cardiac Diagnosis, By DE LA CAMP.

1. **Abuse of Tendon Transplantation.**—Oppenheim reports in detail three cases seen by him after operation in which tendon transplantation had been done in the hope of improving paresis of muscles. The patients suffered respectively from progressive muscular atrophy, chronic anterior poliomyelitis and compression of the lumbosacral cord by a tumor. Oppenheim urges that the operation be restricted to its proper field and be not employed in progressive diseases of this character.

4. **Palpation of the Appendix.**—Hausmann says that in some individuals the vermiform appendix can be most easily palpated by having the patient raise the right leg in an extended position, thus putting the psoas on the stretch. The author thinks it important that to palpate the appendix accurately, the other portions of the intestinal canal be correctly mapped out. He gives full details as to the accomplishment of this purpose. He speaks of sixteen cases of larvate appendicitis which he has diagnosed. Hausmann says he is not yet fully convinced of the diagnostic value of sensitive-ness over McBurney's point.

5. **Osteomyelitis Among Nurslings.**—Mohr

describes two such cases, giving minute accounts of the etiology, the incidence and the clinical course of the disease. In his first case there was a sclerotic osteomyelitis which was cured without functional disturbance. In the second case the functional result was good also, although the disease involved the hip joint and the epiphysal line of the femur.

6. Cardiac Diagnosis.—De La Camp says the exact determination of the size of the heart is indispensable to a conclusion as to its function. He speaks of the newer methods of palpation and percussion for the determination of relative heart dulness. In some cases, orthodiagraphic pictures proved serviceable.

FORTSCHRITTE DER MEDIZIN.

February 1, 1905

Cryoscopy of Transudates and Exudates.

By SCHOENBORN.

Cryoscopy of Transudates and Exudates.—Schoenborn's investigations included the study by this method of 20 cases of pleural and abdominal transudates and exudates, none of them being purulent. The cases were under observation for months, before and after the fluid was withdrawn by puncture. Control experiments were performed by radioscopy in many of the cases of pleural deposit. The following conclusions were reached: 1. If the effusion was hypotonic, that is less concentrated than the blood serum, spontaneous absorption resulted in three fifths of the cases; 2, in isotonic effusions the same result occurred; 3, in hypertonic effusion there was absorption in only one fifth of the cases; 4, no particular difference was observed between transudates and exudates as to the degree of their concentration.

February 20, 1905.

1. The Results of Attempts to Produce Immunity from Insanity by Pasteur's Method, By BEINSTEIN.
2. The Early Diagnosis of Pregnancy, By PISKACEK.
3. Tubal Pregnancy with Coexisting Pyosalpinx,

By HITSCHMANN.

2. The Early Diagnosis of Pregnancy.—Piskacek observes that the signs of pregnancy which pertain to the fetus, the fetal heart sounds, the bruit of the umbilical cord, the determination of the various parts of the fetus, and the fetal movements are available only after pregnancy is far advanced. The signs which indicate the probability of pregnancy, the cessation of the menses, the enlargement of the uterus, the violet color of the mucous membrane of the vulva and vagina, the changes in the breasts, and the changes in the general condition; these signs, when taken individually, do not infallibly indicate that condition, or even when they are combined, though in the latter instance the probability is very near to certainty. These facts lend additional interest and importance to the early diagnosis of pregnancy, and the signs of that condition which relate to the sense of touch acquire especial significance. Hegar's sign is first cited, which consists in a softness and compressibility of the lower uterine segment, and can be demonstrated in about half the cases of pregnancy. Landau's sign, compressibility of the uterus at the tubouterine junction,

is less frequently demonstrable. Another sign described by Hegar is the fold in the anterior uterine wall, caused by the contraction of the uterine muscle. This sign should not be too persistently sought, as it may be the means of effecting an abortion. Several writers have described as an early change in the uterus an asymmetrical form of the organ which is most conspicuous at the uterotubal junction. It is most frequently observed in primipare, on both anterior and posterior uterine walls, and with it is associated a decided softness of the organ. Braun has observed at the border of the organ a furrow which is analogous to the compressibility described by Hegar. In the asymmetrical pregnant uterus there are usually pain and sensitiveness at the asymmetrical portion. Most of these conditions which are determined by touch are discoverable at the fifth week; they are seldom present at an earlier period. After the fourth lunar month the uterus assumes an ovoid form and thenceforward develops symmetrically. If these signs which have been specified are absent pregnancy can be excluded almost with certainty.

3. Tubal Pregnancy and Coexistent Pyosalpinx.—Hitschmann observes that it has long been recognized that there is a relationship between chronic inflammatory processes and tubal pregnancy, but it has been generally supposed that acute purulent inflammations would effectually prevent the nidation of the ovum in the tube. A careful serial examination of a pregnant tube showed, however, that suppurative inflammation in the latter neither prevented nidation nor the subsequent nourishment of the ovum. Such a condition must be rare, however, for there is in connection with gonorrhœal inflammation of the tube a toxic element which would usually be destructive of the life of the ovum. The course which the spermatozoa would take in the presence of an acute suppurative inflammation of the tube has not yet been determined. The genesis of tubal pregnancy, according to this author, is to be referred rather to the nature of the ovum than to the conditions of the maternal tissue. Recent studies have shown that the ovum follows a definite course in a definite time, and that it can become implanted in one of the furrows of the tubal mucous membrane only at a particular stage of its development. If this condition fails it passes on to the uterus, and is there implanted, or passes out from the organ.

ROUSSKY VRATCH.

February 12, 1905.

1. On the Surgical Treatment of Affections of the Biliary Ducts (*To be concluded*), By M. M. KOZNETSOFF.
2. A Case of Ankylostomiasis, By A. A. KARSHINE.
3. Local Anæsthesia by Means of Cocaine and Adrenalin, By I. S. PILETSKI.
4. The Treatment of Morphine Habitués, Alcoholics, and Smokers by Means of Hypnotism (*To be concluded*), By M. I. BEREZNIISKI.

2. Ankylostomiasis.—Karshine's case occurred in a boy aged eleven years, who had lived at Port Arthur until the war broke out, when he was taken to Irkutsk (Siberia). The boy was accustomed to

play in the sand at Port Arthur. His blood showed a marked eosinophilia, and the presence of parasites in the intestines was suspected. *Tænia saginata* was then found in his feces, and he improved after this parasite had been removed with the aid of the usual anthelmintics. The anæmia, however, did not abate, and ankylostoma was finally found. The treatment consisted chiefly in the use of thymol in repeated doses. The author thinks that the infection in this case came from a Japanese, Chinese, or Korean source, and fears that the Russian troops will be infected in the course of their campaigns which involve a great deal of digging. These soldiers, he thinks, may carry the infection to European Russia, where the disease is very rare indeed.

3. Cocaine and Adrenalin Anæsthesia.—Piletski recommends the use of a one half per cent. solution of cocaine for local anæsthesia, with the addition of two drops of the 1:1000 solution of adrenalin chloride to the c. c. of the cocaine solution. This combination acts both as an anæsthetic and a hæmostatic, and excellent results were obtained with it in a large number of cases. The adrenalin tends to counteract the depressant effects of the cocaine. Comparatively large amounts of the solution can be used, as the strength of it is not great, and the author thinks that it is far better to use a weak solution and a considerable amount of it in producing local anæsthesia. Both the methods of Reclus and of Schleich may be used with the mixture mentioned in this paper.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 25, 1905.

1. Some Common Errors in the Treatment of Pulmonary Tuberculosis, By NORMAN BRIDGE.
2. The Surgical Aspects of Major Neuralgia of the Trigeminal Nerve. A Report of Twenty Cases of Operation on the Gasserian Ganglion, with Anatomical and Physiological Notes on the Consequences of Its Removal (*Continued*), By HARVEY CUSHING.
3. An Improved X Ray for the Study of Bone Injuries and Foreign Bodies, By G. H. STOVER.
4. Should Inebriates be Punished for Crimes by Death? By T. D. CROTHERS.
5. The Museum in Medical Teaching, By MAUDE E. ABBOTT.
6. Diphtheria Infection in Minnesota. Recent Experiences with the Disease in School Children and in Institutional Epidemics, By F. F. WESBROOK.
7. Clinical Examination of the Urine. A Critical Study of the Commoner Methods (*Concluded*), By RICHARD C. CABOT.
8. Idiopathic Epilepsy. Observations on Its Treatment, By DANIEL R. BROWER.
9. Immunity. Chapter IX.

1. Tuberculosis.—Bridge pleads for common sense in the treatment of pulmonary tuberculosis. Cure can only come through increased body resistance, and this can only be obtained at present through good food and proper modes of life.

3. X Ray.—Stover advocates taking two x ray pictures of every injury and foreign body. These pictures should be taken from different,

but symmetrically placed, points. Then by placing the negatives or positives in a properly constructed stereoscope, an image with three dimensions will be seen and the foreign body or injury can be accurately studied. The article is illustrated.

4. See this *Journal*, Vol. LXXX, page 232.

5. Museum in Medical Teaching.—Abbott is the curator of the pathological museum at McGill. She shows: (1) The important place a museum should and can fill in medical teaching; (2) how a well organized and well classified museum evolves itself as a teaching mechanism of great value; (3) how the system she advocates has worked at McGill University.

7. Examination of the Urine.—Cabot concludes in this number a very elaborate paper. It should prove of the greatest value to all those who systematically avail themselves of laboratory methods. It will go considerably over the heads of those who are in the habit of depending on the ordinary textbooks of medicine for their knowledge of pathological states of the urine. The author concludes: " (1) There are many cases of acute glomerular nephritis which cannot be recognized by any of the methods of examination known to us. (2) In some cases of subacute and chronic glomerular nephritis, our diagnostic resources are likewise at fault, but, in the great majority of cases here studied, the condition of the urine, taken in connection with other features of the clinical picture, enabled us to anticipate the autopsy findings. Our success in the diagnosis of chronic glomerular nephritis is almost as constant as our failure in the acute cases. (3) When we face the group of chronic interstitial cases, our diagnostic resources appear to be neither as sufficient as in chronic glomerular nephritis, nor as inadequate as they were shown to be in the acute cases. In about one third of the cases the diagnosis was correctly made before death. (4) Among other conditions mistaken for nephritis, owing to the implicit reliance in the urinary findings, we find that the senile and arteriosclerotic degenerations are not infrequently the cause of mistaken diagnoses of chronic nephritis, while in conditions involving passive congestion or acute degeneration of the kidney, the urine occasionally simulates that of acute nephritis. Even in cases where no lesions are to be found at autopsy, the urine is occasionally highly albuminous and full of casts. (5) In our ordinary urinary examinations, common errors are: (a) The attempt to estimate urea without any accurate knowledge of the patient's metabolism. (b) The statement that renal cells are present when all that we know is that we have seen small mononuclear cells, perhaps belonging to the renal tubules, perhaps not. (6) Cryoscopy and other attempts to test more directly the renal permeability are not as yet capable of supplementing in clinical work the older methods of examination in the diagnosis of nephritis. The vast majority of estimations of urinary solids, including urea, are in my opinion a waste of time, since they are not, and in most

cases cannot be made, part of a general metabolism experiment. The attempt to estimate the anatomical condition of the kidney by the measurement of albumin and the search for casts is fallacious in the extreme. The most reliable data about the urine are those most simply and quickly obtained, the twenty-four hour quantity, the specific gravity, and the color.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 23, 1905.

The Treatment of Appendicitis.

(a) Can We Wait for Localization when the General Peritoneal Cavity is Involved? By C. A. PORTER.

(b) Remarks on Appendicitis,

By MAURICE H. RICHARDSON.

(c) Some Observations on Appendicitis,

By R. H. FITZ.

(d) Choice of Method of Opening the Abdomen in Appendicitis, By FRANCIS B. HARRINGTON.

(e) Subphrenic Abscess as a Complication of Appendicitis, By HERBERT L. BURRELL.

(f) Immediate Operation vs. Delay in Acute Appendicitis, By G. W. W. BREWSTER.

(g) The Bacteriology of General Peritonitis,

By THOMAS J. MANAHAN.

(h) The Results of Operative Treatment of General Peritonitis Following Appendicitis, at the Massachusetts General Hospital, during the Past Five Years,

By WILLIAM C. QUINBY.

Appendicitis.—(a) *Can We Wait for Localization?* Porter is an advocate of immediate operation in practically all cases of acute appendicitis. His paper ends with sixteen formal conclusions, some of which qualify the advice to operate at once in all cases. Part of the author's advice follows: (1) Purgatives should never be given in acute appendicitis before operation. (2) Ochsner's treatment is the best treatment to adopt from the outset of an attack and to persist in when operation is refused. (3) It is the best postoperative treatment in almost all cases. (4) Until the superiority of conservative treatment has been demonstrated beyond question the majority of surgeons will continue to advocate immediate operation in most cases of acute appendicitis. (5) Ochsner's treatment should be advised in most cases of spreading or diffuse peritonitis when a reasonably good surgeon cannot be obtained. (b) *General Remarks.* Richardson begins his paper with a brief description of his method of incision, of what he considers the indication for peritoneal drainage, and of the indications for operative intervention. The author holds that the sooner a patient is operated upon the surer he is to recover. The rule to operate at once has some exceptions: (1) Serious affections of the heart, lungs, kidneys, etc., may demand delay. (2) Cases in which the diagnosis admits of some doubt. (3) In recurring appendicitis, it is at times best to wait and do an interval operation. The paper ends with a general review of the authors' work in this line of surgery. (c) *Observations.* Fitz, being an internist, believes in operating only when an operation is called for. If this is not done a large number of unnecessary operations will be performed, since

many attacks of appendicitis end spontaneously and recurrent attacks are far from being the rule. (e) *Subphrenic Abscess.* Burrell quotes Christian's and Lehr's statistics, which show that a subphrenic abscess may be expected in from eight to ten per cent. of all fatal cases of appendicitis. Reference to nine cases in which the diagnosis was made during life are given. Six of these patients died and three recovered. (f) *Immediate Operations.* Brewster concludes: (1) Delay is indicated in mild cases in which there is no doubt about the recovery without operation. (2) Immediate operation is indicated in all other cases of acute appendicitis.

AMERICAN MEDICINE.

March 25, 1905.

1. Is the Common House Fly a Factor in the Spread of Tuberculosis? By J. O. COBB.

2. A Case of Extensive Carcinoma of Tongue and Neck, Presenting Points of Special Interest,

By WILLIAM SEAMAN BAINBRIDGE.

3. A Dissertation on Temperament, Diathesis, Dyscrasia, Predisposition, Cachexia, Susceptibility, Idiosyncrasy, and Heredity (*To be concluded*),

By HOMER WAKEFIELD.

4. Methods Employed in the Examination of Milk by City Health Authorities, By A. H. STEWART.

5. The Non Sequitur in Medicine,

By HENRY A. FAIRBAIRN.

6. The Delirium and Hallucinations of Digitalis,

By H. O. HALL.

7. Society for Experimental Biology and Medicine,

By WILLIAM J. GIES.

1. **The Spread of Tuberculosis.**—Cobb asserts that most of the great investigators believe, though they cannot prove, that tuberculosis gains entrance to the human body through the alimentary canal. He holds this view himself. It has been shown that flies are capable of carrying, not only on their feet, but in their intestinal canals, active, virulent bacilli of various kinds. Hayward and Hoffman have proved that the bowel movements of flies that have fed on tuberculous sputum contain active tubercle bacilli. The author notes the avidity with which flies eat sputum and also the ubiquity of flies in fly time. The author concludes that flies are the great spreaders of consumption.

2. **Carcinoma of the Tongue.**—Bainbridge reports the following case: Man, aged forty-nine years, suffering from carcinoma of the tongue for about one year. X ray treatment for nine weeks. No improvement. Finally operation in two stages. (1) Incision, horseshoe shaped, from tip of one mastoid to tip of the other, and extending downward as far as the thyroid. A second incision was made along the anterior border of the left sternomastoid. Through these two incisions both lingual arteries were tied, and the glands in the floor of the mouth and all those involved in the neck were extirpated. Wound healed by first intention. (2) Seventeen days later excision of the tongue. To do this the mouth was widened on the left side. The patient made a good recovery, and is well at the present time.

4. Examination of Milk.—Stewart describes a centrifuge in which twenty milk tubes can be sedimented at once. This machine is used as a matter of routine by the Philadelphia health board. The method of making tests follows: Milk is sedimented and a smear is made with the sediment. This is stained with Jenner's stain, and the number of bacteria, red blood cells, and white blood cells per cubic centimetre are estimated. If a specimen shows 100,000 or more cells per cubic centimetre it means that the cow from which the milk came has diseased udders or teats. The particular dairy from which the milk came is at once notified and the sick cow excluded. This method of guarding the purity of the milk supply is said to give very good satisfaction, both to the health authorities and to the dairymen.

6. Digitalis.—Hall for the second time calls attention to the fact that digitalis, even at times in small doses, is capable of causing delirium and hallucinations. This observation has been made in France, and in this country Babcock has endorsed the author's claims. Probably it not infrequently happens that the delirium or hallucinations of digitalis or other powerful heart stimulants is mistaken for a symptom of the disease under treatment.

MEDICAL NEWS.

March 25, 1905.

1. Roof Gardens on City Private Houses,
By W. P. NORTHRUP.
2. Fifteen Years' Experience in the Treatment of Typhoid
Fever at the Roosevelt Hospital,
By WILLIAM HANNA THOMSON.
3. Clinical Studies in Blood Pressure and Shock in Trau-
matic Surgery, By JONATHAN M. WAINWRIGHT.
4. The Purpose of Eyeglasses, By ELLICE M. ALGER.
5. The Treatment of Chronic Empyema of the Antrum,
both Simple and When Combined with Empyema
of the Ethmoid and Sphenoid,
By R. BISHOP CANFIELD.

1. Roof Gardens.—Northrup calls attention to how easy it is to convert part of the roof of a city house into a suitable playground for young children. He illustrates such a roof garden built by a friend of his. The size is twenty-four by twenty-four feet, the cost was about one hundred and fifty dollars. The physical benefit to the children for which the roof was arranged is beyond calculation. From anæmic, listless, and well behaved darlings they have developed into red cheeked and lusty little savages.

2. Typhoid Fever.—Thomson asserts that it is stated in England, by recognized authorities, that the treatment of typhoid fever has made no advances in the last fifty years, and that the present mortality of the disease is practically what it used to be, i. e., 18.5 per cent. Such a statement cannot be made of typhoid in this country. The author's total mortality for the past fifteen years has been 7.05 per cent. (total cases, 574). He holds that if patients could be placed under treatment during the first week the mortality should not exceed three per cent. The author

compares the description of a typical case of typhoid as given in Bristow's textbook of forty years ago, with the clinical history of a typical case as seen at present under good treatment. From all this, the author concludes that we have been able not only to reduce the mortality of typhoid, but also to modify the severity of its symptoms. He concludes with a detailed exposition of his method of treating typhoid fever. It does not differ materially from the routine practice of our best hospitals.

3. Blood Pressure.—Wainwright gives the pulse and blood pressure charts of a number of typical accident cases which were subjected to operation. He reviews briefly the work done by Crile, and concludes with the following (condensed) summary: (1) The sensory impulses which finally cause shock at first cause a stimulation of the vasomotor centres and a rise in pressure for a certain period before exhaustion supervenes. This is the ideal stage for operative repair of the injury: i. e., primary amputation, etc. (2) Intravenous infusions are of much service in maintaining blood pressure. (3) In many cases, after the period of shock has passed, there is an excessive reaction with a considerable rise in the blood pressure. The explanation for this is still wanting. (4) While the so called cardiac shock of Howell is as yet of questionable existence some of the observations made tend to show that the condition may exist. (5) Morphine, water by the mouth, and the visits of friends tend to increase the blood pressure. Water produces its effect by reflex stimulation and not by the mechanical effect of its absorption. (6) The observations made do not show positively what effect is produced by strychnine and digitalis in cases of shock.

MEDICAL RECORD.

March 25, 1905.

1. Manuel Garcia: Teacher, Discoverer, and Man,
By JAMES E. NEWCOMB.
2. Radiotherapy and Surgery, with a Plea for Preoperative
Radiations, By WILLIAM J. MORTON.
3. Bile Tract Adhesions, By ROBERT T. MORRIS.
4. Endotracheal Injections, By J. W. GLEITSMANN.
5. The Present Status of Blood Examinations in Surgical
Diagnosis, By FREDERIC E. SONDERN.
6. Preliminary Report on the Treatment of Chronic Dysen-
tery, by Irrigation of the Colon Through the Vermi-
form Appendix or an Opening Into the Cæcum,
By WILLIAM H. ARTHUR.
7. A Warning and a Protector for X Ray Workers,
By ARTHUR HOLDING.

2. Radiotherapy.—Morton asserts that pre-operative radiation should precede every operation for cancer. It is as imperative a procedure as asepsis and the antiseptic preparation of the skin before incision. The author claims that by radiotherapy a malignant tumor becomes a strictly local affection. The paper concludes with the following summary: (1) Radiation treatment exerts a retarding effect upon the growth of some cancers. (2) It cures some cases—the ratio to operative measures is not here discussed. (3)

Preoperative radiation will increase the ratio of cures by operation. (4) Preoperative radiation transforms some inoperable cases into operable cases. (5) Preoperative radiation is recommended as a precautionary measure, probably quite as important as preoperative antiseptic preparation for surgical operation.

3. **Bile Tract Adhesions.**—Morris has arrived at the conclusion that bile tract adhesions, "gall spiders," "are a prolific source of so called gastrointestinal disorders." "How are we to make a diagnosis of gall spiders? We are to go over the tailings from the ore mill in which we previously found gastroduodenitis, diaphragmatic pleurisy, acute cholecystitis, acute indigestion, and a group of cases without very definite diagnosis in which there was a history of epigastric tenderness, rigors, febrile reaction, and general malaise lasting for a few days at a time. In going over these cases months or years after the acute symptoms have disappeared we are to note if there is undue tenderness on pressure over the bile tract—a tenderness that is pretty persistent. It may be absent on some days, but present to a greater or lesser degree most of the time. The patient will complain of a certain degree of discomfort in the bile tract region, and at times when he is most disturbed the abdominal muscles will become rigid in order to splint the disturbed peritonæum. Having found these characteristic signs of bile tract adhesions, we are to exclude other causes for the same symptoms; and that requires diagnostic acumen, and high class consultation." The following plan of treatment is advised: "Separate the webs of adhesions and prevent their recurrence by applying one or two satisfactory resources. The best resource, I think, consists in spreading a sheet of chromicized Cargile membrane over the roughened points of peritonæum, and leaving the membrane to present a mechanical obstacle to readhesion at such points. The other resource consists in sprinkling aristol over roughened points of peritonæum, and waiting for the aristol to form a protecting lymph coagulum before the abdomen is closed." There is a most promising field for the surgeon in the author's discovery, for one "cannot look over an average audience at the theatre without seeing at least fifty people who are suffering from some degree of disturbance caused by bile tract adhesions; so there is a vista of unknown horizon newly opened up for us."

5. **The Blood Count in Surgical Affections.**—Sondern from a study of 1,400 blood counts in surgical diseases reaches the following conclusions: (1) A relative percentage of polynuclear cells below 70, with an inflammatory leucocytosis of any degree, excludes the presence of gangrene or pus, at the time the blood examination is made, and usually indicates good body resistance toward infection. (2) An increased relative percentage of polynuclear cells, with little or no inflammatory leucocytosis, is still an absolute indication of the inflammatory process, and the percentage is a direct guide to the severity of the infection. In children, where the polynuclear per-

centage is normally lower than in adults, there may be pus or gangrene with the percentage as low as 73. In adults, a purulent exudate or a gangrenous process is decidedly uncommon with less than 80 per cent. of polynuclear cells, and the probability of their presence increases with the percentage. (3) An increased relative percentage of polynuclear cells with a decided inflammatory leucocytosis is the typical picture in most cases of inflammatory lesions. In general, therefore, it may be said that a marked leucocytosis indicates a good body resistance in cases in which the polynuclear count is relatively high. That is, the percentage of polynuclear cells is an index of the degree of the inflammatory lesion and the total leucocytosis should always be studied with it in mind.

INTERNATIONAL JOURNAL OF SURGERY.

March, 1905.

1. Treatment of Retrodisplacements of the Uterus, By HAYD.
2. Cantwell's Operation for Complete Epispadias, By CANTWELL.
3. Practical Gynæcology, By SELLMAN.
4. Practical Treatment of Diseases of the Eye, By COOKE.

1. **Retrodisplacements of the Uterus.**—Hayd makes a general division of retroverted uteri into (1) the complicated, and (2) the uncomplicated.

(1) The complicated are those in which there are coexisting ovarian or tubal diseases, adhesions, or anything which interferes with the normal mobility of the uterus and so contraindicates all surgical interference of an extraperitoneal nature. (2) The uncomplicated include those in which the uterus is mobile, the tubes and ovaries normal, and the prolapsus very slightly developed if it exists at all. This condition can frequently be cured by means of tampons and pessaries. Should these fail the author is accustomed to resort to the Alexander operation. The ordinary lesions of the cervix and vagina do not contraindicate this operation. It is quite possible that the patient may not be benefited by the operation and that an intraperitoneal operation will be necessary before a cure can be obtained. The Alexander operation is always safer than the intraabdominal. All of the intraabdominal operations may be objected to for some reason, and most of them are more or less faulty. When the uterus is movable and the appendages are healthy the Alexander operation is recommended. Displacements of the uterus may present no symptoms for a long time, but are almost sure to come eventually. The Alexander operation is well adapted for the changes which occur with pregnancy. The author's failures with this operation have been fewer than five per cent.

AMERICAN JOURNAL OF OBSTETRICS

March, 1905.

1. Can Our Present Method of Utilizing the Principle of Axis Traction in Obstetric Practice Be Further Developed? By JACOBSON.
2. The Prevalence of Puerperal Septicæmia in Private Practice at the Present Time Contrasted with that of a Generation Ago, By WARREN.

3. Cæsarean Section for Dystocia following Myomectomy,
By HUBBARD.
4. Indications for Cæsarean Section. Report of Two
Cases. Recovery, By MORAN.
5. Theories of Eclampsia, By DE LEE.
6. Treatment of Eclampsia, By REED.
7. The Application of the Forceps in Contracted Pelves,
By SOTHORON.
8. Fibromyomata of the Uterus, By LEWIS.
9. The Sequelæ and Treatment of Abortion, By KEYES.

1. Axis Traction in Obstetric Practice.—

Jacobson believes that the principle of axis traction control can be extended beyond the device invented by Tarnier and has designed an instrument to be attached to axis traction forceps having its support at the edge of the table to which it may be clamped. It is somewhat too complicated to explain without a diagram, but it is claimed for it that it will multiply the power exerted by the operator fifty times. The exertion of a minimum degree of force by turning a hand wheel is so multiplied, and registered upon a dial, that traction can be accomplished with mechanical precision, and any case which is suitable for forceps delivery may be delivered with the greatest ease. The conditions which the author presupposes in the use of his apparatus are: 1. Membranes ruptured; 2. cervix fully dilated; 3. bladder and rectum empty; 4. positive diagnosis of position and posture; 5. forceps clearly indicated; 6. correct application of axis traction forceps; 7. normal diameters.

By means of this apparatus the traction can be measured and as experience accumulated it would be possible to prescribe for each case the degree of traction which would be safe and proper. The possibilities of doing harm with this instrument would be small; slipping of the forceps during traction would be unattended with danger. Of course the instrument presupposes a certain amount of intelligence in the operator.

2. Puerperal Septicæmia in Private Practice.

—Warren thinks the statistics which are at hand will not admit a full answer. The nearer the obstetrician is to his graduation the better his technique and the cleaner his record. Whether puerperal infection will ever be eliminated from obstetric practice will depend upon the character of the training which the obstetricians of the future receive both at school and at the bedside. General practitioners who are now at work will not vary much from their present habits and prejudices, and the ordinary midwife cannot be expected to do clean work. The risk of infection has been practically eliminated from public midwifery.

6. Treatment of Eclampsia.—Reed recapitulates his discussion of this subject as follows: (1) Treatment should aim to control convulsions, *a*, by chloral in large doses supplemented by chloroform; *b*, by morphine in large doses supplemented by chloroform; *c*, by veratrum viride supplemented by chloroform. (2) It should seek to eliminate toxins, *a*, by way of the bowels, flushing the colon; *b*, by way of the kidneys, cupping, fluids by mouth, salines by rectum or under breasts

and skin; *c*, by way of the skin, by hot pack, or hot air. (3) The uterus should be emptied, *a*, the cervix being dilated, by forceps or version; *b*, the cervix being closed, dilatation should be effected with the fingers or with rubber bags and delivery then accomplished; *c*, the cervix being rigid and cartilaginous, Dührssen incisions, vaginal Cæsarean section, or abdominal section should be the procedure, in the order mentioned.

9. The Sequelæ and Treatment of Abortion.—

Keyes cites cases in which abortion was produced by injections of nitric acid and of lead acetate. They were usually fatal. Several writers have reported perforation of the uterus by the curette or the dilator. Such cases have also usually been fatal. Air embolism from injections into the uterus has been reported in a number of fatal cases. Endometritis is a very common sequel of abortion, uterine abscess, endosalpingitis, abscess of the tube or ovary, metropéritonitis, hæmatocele, thrombophlebitis, sapræmia, septicæmia, and pyæmia are of less frequent occurrence. Tetanus is not an infrequent sequel; hemiplegia, hemianopsia, and malignant disease are of rare occurrence. The mortality of induced abortion varies between 50 and 65 per cent. The treatment of simple threatened abortion is mainly rest in bed with suitable regulation of the diet. The treatment of inevitable abortion may be expectant or operative. In the former rest and the vaginal tampon are indicated, while the uterus must be emptied should there be fever, chills, offensive discharge, or profuse hæmorrhage. The intrauterine tampon should be used in hæmorrhage with doubtful diagnosis, inevitable abortion, incomplete abortion, and immature labor if the placenta is retained. The vaginal tampon should be used in addition to the uterine. In the operative treatment, the patient having first been subjected to antiseptic preparation, the cervix is drawn forward, the os forcibly dilated, and the uterus being pressed downward the contents are removed, if possible with the finger. If the curette is used it must be with the full knowledge of the possible damage which may be accomplished. An intrauterine douche should be used after the contents of the organ have been entirely removed.

MEDICINE

February, 1905.

1. The Diagnosis of Perforation and the Localization of
Appendicular Abscess, By CUMSTON.
2. The Nucleides of Mercury in Syphilis, By HOLLEN.

1. **Appendicular Abscess.**—Cumston adds an interesting article to the literature of this universally attractive subject. The appendix has no fixed position in the abdominal cavity, and its size, possible fixation, and relations to the cæcum are so variable that its pathological developments may occur almost anywhere in that cavity. Perforation may take place at its base, tip, or middle. When the resulting abscess is intraperitoneal it does not usually extend far from the seat of its formation. If it is extraperitoneal it may spread to an almost unlimited extent. An abscess may develop at any point within a circle, whose centre is the ileocæcal valve.

The guiding point is the position of the abscess in relation to the cæcum in the right iliac fossa. Sonnenburg classifies this relation as (1) anterior and external, (2) posterior, (3) inward, and (4) within the true pelvis. Of course all possible locations are by no means included in this classification. If a periappendicular tumor is detected by percussion, palpation, or by inspection through an incision, and there are also redness and swelling of the skin, an abscess of greater or smaller dimensions may be diagnosed with confidence. Patients with such symptoms may apparently recover and the tumor disappear, but an abscess may remain which eludes detection, but is a constant source of danger. The temperature is not always high during the formation of an abscess, and it may drop to normal. A pulse of more than 110 in the later stages of an attack indicates sepsis, if it is not due to anæmia or general debility. The urine is dark, and contains urates, indican, and albumin. The appetite is lost, there is thirst and the bowels are usually constipated. Leucocytosis is marked, and if it does not subside when the abscess is emptied, other collections of pus are probably present.

2. **The Nucleide of Mercury in Syphilis.**—Hollen reviews the various symptoms of syphilis as they usually develop and the various forms of mercury which are in general use, together with the best methods of administering them. He thinks that mercury nucleide, which contains ten per cent. of the metal, is the most favorable form in which it can be used. It is a brownish white powder, soluble in warm water, is administered in chocolate coated tablets containing one fourth of a grain, and causes no disturbance of digestion or assimilation. It combines the specific action of its base and the antiseptic action of nucleic acid. It increases the bactericidal power of the blood by the multiplication of polynuclear and mononuclear leucocytes, and is in harmony with the metabolic processes.

March, 1905.

1. Notes on a Visit to the Laboratory and Hospital of Captain E. R. Rost, I. M. S., the Discoverer of Leprolin, By RUDOLF.
2. Epilepsy, By ESHNER.
3. The Oral and Rectal Administration of Serums, By HOLLEN.

1. **The Laboratory and Hospital of Captain E. R. Rost, I. M. S.**—Rudolf refers to the helplessness of all who have tried to heal or even help sufferers from leprosy from the earliest period. The frequency of the disease in India and the Orient always makes it a subject of the highest interest and importance. The hospital in question is located at Rangoon, Burmah. Rost uses as a culture medium a distillation from beef extract, also solid agar purified from its salts. He finds that the bacillus can be cultivated only in a medium free from chlorides. Injections of the culture fluid are made at intervals of ten days. Pain, swelling, and fever to 100° F. follow the injections, the reaction lasting three days, as a rule. The quantity of leprolin to be used for each injection is ten cubic centimetres. Perspiration

in skin which has previously been dry is the first evidence that improvement is taking place. Then follow a return of sensation, increase in strength, and loosening of the contractions of the fingers and toes. Ulcers at once begin to heal, nodules and tubercles gradually become flattened and disappear. Pain in the limbs disappears early in the treatment. The mental condition and the condition of the body in general undergo marked and rapid improvement. Sixteen patients have been discharged cured from the Rangoon hospital, and many others are apparently approaching a cure.

2. **Epilepsy.**—Eshner defines epilepsy as a paroxysmal neurosis, characterized by attacks attended with derangement of consciousness or of motor coordination, with or without convulsions. An irritant of some sort underlies the paroxysm. Major, minor, focal, and psychic types are recognized. Treatment should aim at the removal of the irritating influences, and the correction of the undue irritability or instability of the sensorimotor mechanism. The mode of living should be absolutely regular in all particulars, and should be guided by the physician. Healthful and agreeable occupation is of great importance. The medical treatment of epilepsy is essentially empirical, palliative, or symptomatic. The various drugs which have been used in its treatment are well known, and include amyl nitrite, the bromides, digitalis, antipyrin, opium, trional, sulphonal, chloralhydrate, borax, etc. A change of medication from time to time is frequently beneficial. Ligation of the vertebral arteries and division of the cervical sympathetic are sometimes effective, on account of the profound impression which they produce.

3. **Administration of Serums.**—Hollen refers to the case of Porteus (*Lancet*, March 30, 1901) as the first in which diphtheritic antitoxine was given by the mouth, the patient being a nervous and hysterical child. The patient received 2,000 units and recovered. Other patients were subsequently treated with success by the same method. Macdonald has also reported cases which show that antitoxine may be given advantageously by mouth and rectum. Various other writers have had equally satisfactory results, both in human beings and animals. Hewlett, on the other hand, concluded from a series of experiments that antitoxines were not absorbed from the gastrointestinal mucous membrane. Oppenheimer says the antitoxine is destroyed in the stomach. Other evidence of a similar nature is adduced. The question is therefore undecided. If it should be found that ingestion of serum is as efficient as its hypodermic administration, the immunization of those who are exposed to diphtheria will be simplified.

BRITISH MEDICAL JOURNAL.

March 11, 1905.

1. Myasthenia Gravis, By J. TAYLOR.
2. New Methods of Studying Affections of the Heart, By J. MACKENZIE.
3. Some Practical Aspects of Conjunctival Bacteriology, By F. FERGUS.

4. A Case of Acute Endocarditis Due to the Micrococcus Gonorrhææ, By W. HUNTER.
5. After Twenty Years, By P. WARNER.
6. Industrial Anthrax (*Milroy Lectures, I*), By T. M. LEGGE.

1. **Myasthenia Gravis.**—Taylor reports two cases and discusses the symptomatology, pathology, and treatment, of the disease known as *myasthenia gravis pseudoparalytica*. It is characterized by great muscular weakness, affecting most strikingly the muscles supplied by the medulla oblongata, and which are closely related with the maintenance of the vital functions. The muscles of the limbs and trunk are also affected, and sometimes before the others. So far no definite nervous changes have been found. The first sign of weakness usually occurs in the levatores palpebrarum, giving rise to ptosis; diplopia, due to weakness of the ocular muscles, is also present. This weakness varies greatly at different times; it may sometimes be entirely absent. Nystagmus is occasionally present, likewise difficulty in mastication and weakness of the muscles of the mouth. Dribbling may occur, swallowing is difficult, and palate weakness is frequent, giving rise to a nasal voice and inability to blow out the cheeks. The laryngeal muscles are rarely affected, but a characteristic symptom is that the voice, which when the patient begins to speak is clear and strong, becomes weak and nasal, and finally fails. The respiratory muscles are affected and the patient becomes dyspnoic on the slightest exertion. In several cases death has resulted from a crisis of acute dyspnoea. The arms and legs tire easily. Walking far is impossible, and sudden falls are common. Emotional conditions and cold markedly intensify the weakness, and the patients are usually much worse at night. The reflexes are active, but may fail when the muscles are exhausted. After repeated faradaic stimulation the muscles fail to respond; with galvanism this phenomenon is not observed. Males and females suffer with almost equal frequency, and the disease occurs in childhood and old age. Occupation seems to have no influence, and in many instances the symptoms have followed some acute illness. As stated above, no definite changes have been found in the nervous structures or in the muscles. In some cases the thymus gland has been very definitely enlarged. It would seem that the terminal parts of the lower motor neuron were the parts whose function is interfered with, possibly by some toxic substance produced by an overgrown or modified thymus or the abnormal lymphoid tissue, which is occasionally found in the muscles. The diagnosis is not difficult, the cases being confused most often with nuclear palsy, diphtheritic paralysis, chronic polioencephalitis, or hysteria. The prognosis is grave, but cases may persist for many years. The danger lies in an affection of the respiratory apparatus. Strychnine given hypodermically seems to have a good influence, but so far treatment has not resulted in any modification of the diseased condition. It is to be hoped that some form of antitoxine may be discovered to antagonize the poison formed by the thymus gland or abnormal lymphoid tissue.

2. **Affections of the Heart.**—Mackenzie has endeavored to apply some of the results of recent

experimental and clinical discoveries to the explanation of certain phenomena observed in the clinical examination of the human heart. Among the points discussed are the following: (a) The functions of the heart muscle fibres. (b) Arrhythmias due to affections of these functions. (c) Nature and functions of the muscle fibres connecting auricle and ventricle. (d) Method of estimating the condition of the conductivity. (e) The inter-systolic interval. (f) Depression of conductivity without arrhythmia. (g) Influence of rest upon conductivity. (h) Arrhythmia due to depression of conductivity. (i) Bradycardia due to depression of conductivity. (k) Independent ventricular rhythm due to heartblock.

3. **Conjunctival Bacteriology.**—Fergus states that bacteriology should be in daily use in every eye clinic: 1. It is a guide in determining the safety of any operation. 2. It is an important aid in diagnoses. 3. It materially influences treatment. There are few conjunctival sacs in which microorganisms are not found; among them are staphylococci, streptococci, pneumococci, and the bacillus pyocyaneus. These may be present without exciting inflammation. The gonococcus, Weeks's bacillus, and Morax's diplobacillus probably always cause trouble. Only by bacteriological means can it be absolutely determined in the early stages to what particular organism a given case of inflammation is due; and proper treatment depends upon such differentiation. Bacteriological investigations of the cornea should always be made prior to operative procedure. Glaucoma, where any delay is out of the question, furnishes the only exception to this rule. A contagious ophthalmia, such as that caused by Weeks's bacillus or the gonococcus, must run its natural length, just as does a case of scarlet fever. No form of treatment will cut it short. On the other hand, a staphylococcus or streptococcus inflammation may be aborted by proper treatment. The former practice of fomenting eyes should be discarded; presumably nothing more aids the development of microorganisms than moist heat. Corneal ulcers are often made worse by fomentations, and they should be used only to promote supuration in the early stages of panophthalmitis, or to relieve the pain of rheumatic iritis.

6. **Industrial Anthrax.**—Legge, in the first of the Milroy lectures, deals with the 261 cases of anthrax reported in Great Britain from 1899 to 1904. Of these 88 occurred in worsted and wool workers, and 23 proved fatal: the bulk of the cases occurred in the processes of wool sorting, combing, and spinning. Fifty-three cases occurred among workers in horsehair and bristles, 17 proving fatal; the patients were principally hair curlers and brush makers. Eighty-six cases were among workers in hides and skins, at the docks, in warehouses, and in tanyards; 21 died. The cases among wool workers are confined almost entirely to places where dangerous classes of wool are used—those from Persia, Turkey, and Switzerland. No cases have been traced to the use of Australian wool. The infected horsehair may come from China or Russia: the hides and skins from Italy or South America. The characteristic of anthrax to infect certain districts has been known for years.

LANCET.

March 11, 1905.

1. Peritonitis, a Bacteriological Study (*Erasmus Wilson Lectures, III*),

By L. S. DUDGEON and P. W. G. SARGENT.

2. Changes Produced by Inflammation in the Conjunctiva (*Hunterian Lectures, II*),

By M. S. MAYOU.

3. Toxic Mental Disorders (*Lettsomian Lectures, II*),

By G. H. SAVAGE.

4. On the Diagnosis and Treatment of Hypertrophy of the Pylorus in Infants,

By G. F. STILL.

5. Acute Ascending Paralysis in Cases of Chronic Cystitis,

By T. J. WALKER.

6. Further Notes on the After-History of Cases of Pyloroplasty,

By G. G. TURNER.

1. **Peritonitis.**—Dudgeon and Sargent, in their third lecture, state that their observations have led them to the conclusion that the staphylococcus albus exercises some sort of protective action in peritonitis and that by determining the advent of phagocytes. It, therefore, in nature, takes the place of those chemical substances which are capable of producing an artificial immunity. It is the first to arrive upon the scene, and provokes the appearance of a clear fluid exudate, which soon becomes turbid from the presence of innumerable phagocytes. Later the more virulent organism, in the majority of cases the colon bacillus, appears, and it is upon the start, so to speak, which the staphylococcus has had, and the ability to answer the call, that the prognosis to a large extent depends. Generally speaking, if the staphylococcus albus is found alone, the outlook is good. If the colon bacillus is also present the outlook is graver, and if the colon bacillus is found alone the patient will probably die. The staphylococcus albus is the last to disappear when the individual has overcome the infection, and may persist for a long while. This may explain why later attacks of appendicitis are seldom or never of an acute fulminating type. The staphylococcus albus also exerts a protective action by assisting the formation of adhesions. It seems probable that as soon as the intestine becomes distended and congested, the staphylococcus albus makes its way out at any and every point, to be followed at a later period, if the obstruction is unrelieved, by other organisms, notably the colon bacillus. A prognosis can be made from examination of films taken from a remote region of the peritonæum. If phagocytic cells are abundant and if cocci other than streptococci are present the prognosis should be favorable. But if cells are scanty and disintegrated and bacilli are alone or predominate, or if streptococci are present, then the case may be regarded as hopeless.

2. **Conjunctivitis.**—Mayou, in the second of the Hunterian lectures, states that in all the acute forms of conjunctivitis the discharge is principally made up of polymorphonuclear neutrophils with an occasional polymorphonuclear eosinophile: the latter cell may be greatly increased in numbers in pemphigus. In the chronic forms of conjunctivitis plasma cells are found in large numbers. Mast cells are found in the discharge principally in diseases of the subepithelial tissue. The cells undergo degeneration by vacuolization, due to the digestion of organisms; hypochromatosis, gradual fading due

to absorption of fluid; and pyknosis, shrinking of the protoplasm due to the loss of fluid. The writer then goes on to describe the characteristic histological changes which take place in gonorrhoeal conjunctivitis (adult form and ophthalmia neonatorum), Koch-Weeks conjunctivitis, and diplobacillary conjunctivitis.

3. **Toxic Insanity.**—Savage, in his second Lettsomian lecture, discusses the various mental and nervous disorders which depend chiefly upon toxic agents directly, or upon secondary toxins produced by the primary infections. He divides the toxic agents into those from without, as alcohol, morphine, cocaine, etc.; those which form within the body as a result of some infection, directly as from influenza, or indirectly as from syphilis; those which are the result of disordered metabolism, as in Bright's disease, myxœdema, or diabetes; those producing acute delirious mania (the acute bacillary delirium of some writers); and those due to organisms from without getting directly into the blood stream. The disorder is most commonly generalized; next comes confusion of function, followed by sensory and motor troubles; then there is loss of higher control, of self respect, and the craving for the cause, and the yielding to temptation. Defective memory is a conspicuous symptom, and the end is generally dementia.

4. **Infantile Pyloric Hypertrophy.**—Still states that no combination of symptoms is sufficient for the diagnosis of congenital hypertrophy of the pylorus in the absence of well marked visible peristalsis of the stomach associated with palpable thickening of the pylorus. On these two signs certainty depends. The majority of the cases occur in boys: the onset of the disease is almost invariably before the age of three months, and death usually results within a month. Vomiting is chronic and persistent, is very forcible, occurs in the most carefully fed children, and usually consists of more than one feeding, as shown by its large amount. Constipation may or may not be present: wasting may be the symptom which has attracted most attention. Treatment by stomach washing is the method which, apart from operation, promises to be of most value and should be given a trial in every case, as some typical cases have seemed to recover completely under its use. The stomach is washed out with a solution of sodium bicarbonate twice daily for some weeks just before feeding.

5. **Paralysis in Cystitis.**—Walker has met with three cases of long standing chronic cystitis which terminated fatally by acute ascending paralysis of a most malignant type. Assuming it to be true that Landry's paralysis is an intoxication of the nervous centres due to infection by specific microbes, the pathology of these cases is explained as follows: The specific microbes were to be found in the urinary organs, probably in the bladder; at a certain stage of the disease they were conveyed along the same course, almost certainly the nerves, by which inflammation spreads from the urinary organs in paraplegia urinaria to the cord, in which medium they developed rapidly, producing a virulent intoxication; and the tissues were weakened by the long standing cystitis.

Letters to the Editor.

LOCOMOTOR ATAXIA VERSUS BURSTITIS.

70 LENOX AVENUE,

NEW YORK, March 22, 1905.

To the Editor,

Sir: I have carefully noted in your issue of March 18th the somewhat captious and to me surprising criticisms of a case of locomotor ataxia reported in my paper on this subject, published in the *Journal* of February 18, 1905, as made by Dr. Louis Friedman. As I made no reference to the doctor in my report of the case, and would under no circumstance be guilty of any such discourtesy, I am at a loss to understand why Dr. Friedman should question the diagnosis of a case on the bare assumption that it was in a former patient of his own. In referring to the history of the case my remark was that "one young physician was quite insistent as to the necessity of removing a bursa." I am left to infer that the shoe fits the author of the criticism.

"Surely," remarks Dr. Friedman, "the doctor could not by the use of the ultraviolet ray, combined with peripheral treatment and local galvanization, applied to the lumbar region, cure and restore to function a Charcot's joint, as he reports." This single remark is conclusive evidence that Dr. Friedman either carelessly read or failed to understand my paper. To which of these charges is he willing to plead guilty?

I have received hundreds of letters from physicians in all parts of the country asking for further and more detailed information about the treatment, but not one of these many correspondents has failed to recognize the case as one of locomotor ataxia and not of mere bursitis, as assumed by my critic. On the basis of my replies to these inquiries a number of practitioners have adopted my method in this intractable and painful disease, and have reported very encouraging success.

Dr. Friedman practically admits that he is not familiar with the use of the ultraviolet ray in locomotor ataxia. Ruskin says that for a man to express an opinion of a subject which he does not understand is an impertinence. Things that are not understood are always mysterious, but it does not follow that they are valueless or untrue, because some one does not understand them. Thirty years ago ovariectomy was something of a surgical experiment and therefore, to those surgeons who had not mastered its technique, a mystery. To-day even Dr. Friedman will concede that it is a simple operation. Evidently electricity, in its many modalities, is a profound mystery to those who have not thoroughly investigated it, a class to which Dr. Friedman must belong.

Recurring briefly to the subject of locomotor ataxia, it is impossible to be too careful and guarded in examining a case and reaching a diagnosis. In fact, the nicest discrimination is required in analyzing the symptoms in each case, since some of them are always very obscure. Dr. Friedman says he failed to find any symptoms of

the same one I reported. I will not for a moment question his word or his diagnostic skill, but this, I respectfully submit, is no reason for denying that such symptoms were present in the case I reported.

In my description of the case I said there was no pain on pressure, but that the unmistakably pathognomonic "lightninglike, boring" pains, radiating from the hip to the heel, were present and were so severe that the patient could walk only by lifting the heel two inches from the floor or ground. Any tyro in pathology will not make the mistake of calling these the pains of bursitis. In my case these pains were present in both limbs. Will Dr. Friedman insist that there was therefore a double bursitis? The doctor admits that I "cured" the patient of these terrible pains—without removing a bursa. Readers of the *Journal* who have followed the case will have no hesitancy in deciding whether or not my diagnosis was correct.

I will add that not only the locomotor ataxia was radically cured, but also a condition of supposed flat foot, requiring the use of metal arch supporters, was entirely relieved, and the patient still remains able to stand on his feet, attending to his usual occupation, for from seven to nine hours per diem, and that he walks with a normal and perfect gait.

J. MONROE LIEBERMANN.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of February 8, 1905.

The President, Dr. JAMES M. ANDERS, in the Chair.

A "SYMPOSIUM" ON GASTRIC ULCER.

Ætiology and Pathology.—Dr. JOSEPH MCFARLAND, in the first paper read, concluded that two factors, one incidental and one essential, were engaged in the ætiology of gastric ulcer. The incidental factor was the gastric juice, containing the proteolytic element without which the formation of gastric ulcer was impossible. The essential factor was a loss of the natural immunity of a circumscribed portion of the gastric mucous membrane in consequence of malnutrition, resulting from thrombosis, embolism, injury, or other obstructions of the minute nutrient vessels in the gastric wall or infectious or toxic agents circulating in these vessels. The relation of anæmia to gastric ulcer was quite as probably secondary as primary. That is, instead of the anæmia being the cause of the disease, it was quite as likely to be its effect.

Incidence in Philadelphia.—Dr. ALBERT PHILIP FRANCINE analyzed the post mortem records of the Philadelphia Hospital for ten years from January 1, 1893, to December 31, 1903, inclusive, and based the following conclusions upon the result of his studies: Total number of autopsies in ten years, 2,830. Those in association with chronic nephritis, sixteen gastric

and one duodenal; with tuberculosis, miliary or of the lungs, eleven gastric and one duodenal; with both tuberculosis and nephritis, three gastric; with chronic bronchitis, one gastric; with pneumonia, one gastric; with atelectasis of the lung, one both gastric and duodenal; with carcinoma of the stomach or some other part, four gastric; with fatty heart, one both gastric and duodenal; with enterocolitis in infants, two gastric. In twenty out of forty-two cases, or 0.47 per cent., the ulcers were multiple. Mayo had said that in twenty per cent. of the cases more than one ulcer was present. The sexes in Dr. Francine's series were equally divided. The average age for males was forty-three years; for females, the same. Welch had found forty per cent. in males and sixty per cent. in females. The largest number of cases in his series occurred in males between thirty and forty years old, and in females between twenty and thirty years. In Dr. Francine's series the greatest number of cases occurred in males (five) between fifty and sixty years and in females (five) between forty and fifty years. Three of the cases were in infants, ten, twenty and thirty-six months old. Osler had mentioned a case reported by Goodhart in an infant thirty hours old. The largest ulcer in Dr. Francine's series was 9 to 10 cm. by 8 to 10 cm. He quoted Dr. Joseph Walsh, late pathologist to the Henry Phipps Institute, as saying that during his service, in 1903, there were fifty-two autopsies on those dead of tuberculosis, and that in one case he found numerous small superficial ulcers in the stomach. In the service of the following year, of fifty-five autopsies, there was no instance of gastric or duodenal ulcer.

Symptomatology and Diagnosis.—Dr. CAMPBELL P. HOWARD, of Baltimore (by invitation), read a paper upon this feature of the subject. The mode of onset in the majority of cases, he said, was gradual and insidious. In the smaller group hæmatemesis and perforation were sudden. In acute gastric ulcer blood was as a rule vomited. In the chronic form pain, vomiting, and hæmatemesis were cardinal symptoms. In every case of gastric ulcer there was some hæmorrhage, though it might not appear for months or years after the onset. The physical examination was negative in many complicated cases, except that tenderness was present. The most frequent secondary complications were hypertrophy of the pylorus, adhesions, and inverted viscera. Dilatation of the stomach in an ulcer case signified pyloric obstruction. Few diseases presented more difficulties in diagnosis.

Medical Treatment.—Dr. F. P. HENRY presented this part of the subject. That the tendency of gastric ulcer was toward recovery was proved by the frequency of characteristic cicatrices in the stomach post mortem. The object of treatment should therefore be to assist Nature, and the most important indication was rest, both general and local. The latter was best secured by rectal feeding plus bland and nutritious articles of diet. Opium and its preparations per os were conducive to rest by allaying pain and peristalsis and blunting the appetite. Hyperacidity should be counteracted by lime water and bismuth rather than by sodium bicarbonate, which, on account of the evolution of gas attendant on its administration, might distend the stomach

to a dangerous extent. Milk, raw, boiled, or peptonized, he considered the best article of diet in the early stages. Buttermilk was sometimes an excellent succedaneum. The formation of tough coagula might be prevented by mingling the milk with a little well boiled flour or arrowroot. Medicinal treatment he regarded of secondary value to dietetic, but doubtless serviceable. He recommended bismuth subnitrate in large doses suspended in barley water or mucilage. Nitrate of silver he believed to be useless, and calomel injurious and interfering with the healing processes. Carlsbad water and Carlsbad salts he had found useful as antacids and laxatives. When chlorosis was present, iron albumin, prepared extemporaneously by mingling a solution of sesquichloride of iron with "egg water," was recommended. Leube's method of treating gastric ulcer by continuous poulticing was discussed. Leube's statistics, founded on 556 cases, gave a mortality of 2.2 per cent., instead of 13, which was the percentage under ordinary methods. Dr. Henry's method was a modification of Leube's in that he used opiates, which Leube condemned, and nourished by rectal enemata during the first week of treatment.

Surgical Treatment.—Dr. WILLIAM L. RODMAN considered the surgical treatment of gastric ulcer. This, he stated, resolved itself into treatment of the ulcer itself and that of the several complications. He believed that perforation was far more common than was thought. The treatment of hæmorrhage was generally medicinal, but if it was a recurring feature, the treatment should be surgical. The treatment of stricture or hour glass stomach was a question of physics and not of chemistry, and should be generally by operation. Uncomplicated gastric ulcer in the vast majority of instances could be treated by medical means. He referred to the various surgical methods for the treatment of gastric ulcer and concluded that one should operate only after medical means had been fairly tried for at least four weeks without results. Then the abdomen should be opened, but without any positive convictions of what should be done until the stomach was examined from the pylorus to the cardia, after which the procedure best adapted to the conditions present should be carried out.

Dr. ALFRED STENGEL agreed with Dr. Howard that it was possible to distinguish between the acute and chronic forms of ulcer, but believed that this was a clinical rather than a pathological distinction. Chronic forms of ulcer impressed him as being simply of the indolent type with the same general pathological basis and nature as the acute, but with different local conditions which caused their different course. Statistics would be much clearer if all cases were based upon a pathological study after careful discrimination between the different types of ulcers and erosions, which ought not to be called ulcers.

In treatment, he agreed with Dr. Henry that gastric ulcer was a medical disease, unless resistance showed that medical treatment would not avail. After a consideration of the principal symptoms of gastric ulcer, hæmatemesis, pain, and dyspeptic disturbance, there was a considerable proportion of cases in which the diagnosis must be in doubt. He thought the frequent association of gastric ulcer

with nephritis and tuberculosis shown by Dr. Francine in the statistics of Blockley might be accounted for by the character of the patients in that hospital.

Dr. JOHN H. GIBBON regarded the subject as of particular interest on account of the complications. He believed that many persons with gastric ulcer that recovered after an operation did so because of the after treatment, and he agreed with Dr. Stengel that the patient should be fed by the bowel for three weeks. He referred to the fact that often in the presence of gastric symptoms and a palpable tumor in the abdomen there was the belief that malignancy was present, and a wrong prognosis was therefore given. In all such cases where there was the slightest question of doubt he advises exploratory operation.

Dr. LAMBERT OTT found that the administration of five grains of nitrate of silver in six ounces of water, a tablespoonful in a wineglass of water half an hour before meals, gave good results. He did not approve of boiled milk, but had accomplished the best results in using as a food milk as a basis, with broth.

Dr. JOSEPH SAILER said that the rather small percentage of gastric ulcer in this country suggested the possibility of the condition being overlooked by pathologists. He thought the most important element in the treatment was absolute rest. Reports of different men showed practically the same results whether feeding was by the mouth or by the rectum. Personally he preferred the latter method. After beginning alimentation by the mouth olive oil and some of the bland nutriment might be given without harm to the mucous membrane of the stomach. The entire disappearance of symptoms for two or three weeks, with no blood in the stools and the patient on a liberal diet, might be accepted as evidence of recovery.

New Inventions.

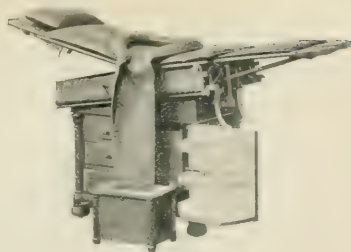
THE IMPROVED OFFICE TABLE FOR THE GENERAL PRACTITIONER.

There could be no more convincing proof of the increased demands upon the general practitioner than the improved equipment devised for his assistance.

In their table, style 36, the W. D. Allison Company have given the profession an appliance which offers not only the conveniences of automatic connection of back and leg rest, but the entire range of independent adjustment, as well as a combination which for many years seemed unattainable. Instead of sacrificing such positions as the Trendelenburg and genitourinary to the automatic leg rest, the positions are secured more easily than ever before with modifications of the highest value.

For example, in the genitourinary position, which is illustrated herewith, the operator may, if desired, swing the leg rests apart and thus separate the limbs of the patient, all the while keeping the feet elevated to insure relaxed abdominal muscles.

In such positions as the "Sims" and "drainage," the leg rests may be detached or swung



Improved office table, style 36.

outward for use as side tables for instruments, cotton, or bandages. The evident object is to save the time and strength of operator and patient, thus insuring the highest degree of efficiency in results.

Book Notices.

The Modern Mastoid Operation. By FREDERICK WHITING, A. M., M. D., Professor of Otology, Cornell University Medical College, etc. Illustrated by Twenty-five Half Tone and Twenty-three Key Plates made from Original Drawings. Philadelphia: P. Blakiston's Son & Co., 1905. (Price, \$6.)

This "little book," as the author modestly styles a sumptuous and beautifully illustrated octavo volume of some three hundred and fifty pages, is a complete guide to one of the most important procedures of modern surgery, by an otologist of wide experience and progressive tendency. An introductory chapter deals with the history of operations for the relief of acute mastoiditis, Wilde's incision, trepanation, drilling, and the Schwartze operation. The body of the work is devoted to the "complete" modern operation.

Whiting performs a flap operation, supplementing the usual incision by a horizontal cut backward at its middle. The complete removal of the mastoid tip, of the zygomatic cells, and of those overlying the sigmoid groove is recommended as a routine procedure. To each of the various operative steps a chapter is devoted, the essentials appearing in large type at the beginning of each section. The gist of the technical directions may thus be obtained rapidly, but the surgeon as well as the student will be amply repaid by a more thorough study of the work, which is full of practical instruction. The short epitome on faults of technique incidental to each step may be cited in point. The chapters on postoperative treatment and on the instrumentarium are unique in their completeness, attention to detail, and refreshing directness. Throughout the book there is an absence of generalization, and there is clear teaching on every point, from the landmarks for the sinus to the choice of a scalpel. Practical work on the operative table and at the bedside, indispensable as it is, becomes more intelligent and accurate when supplemented by such instruction.

The illustrations represent various types of mastoids and the successive stages of the operation.

The latter are reproductions of wash drawings admirably made from life.

The key plates are line drawings printed on thin paper to serve as diagrams, and to accentuate the important details of the complete picture shown opposite. They add greatly to the didactic value of the work.

Spezielle Diagnose der inneren Krankheiten. Ein Handbuch für Aerzte und Studierende nach Vorlesungen bearbeitet. Von Dr. WILHELM v. LEUBE, Professor der medizinischen Klinik und Oberarzt am Juliusospital in Würzburg. I. Band. Siebente neu bearbeitete Auflage. Mit 28 Abbildungen. Leipzig: F. C. W. Vogel, 1904. (Pp. xii-562. (Price, 13 M.)

The deserved esteem in which this important work is held in Germany is indicated by the need of this seventh edition. The sixth German edition has been translated and recently published in this country. In its present form the author states that the work is largely new, not merely revised, but rewritten to keep pace with the rapid advances which are making in internal medicine. In an introductory chapter the analytical, inductive methods of diagnosis are considered in an able manner which impresses one as the mature experience of a great teacher. The value of the training afforded by necropsies is properly emphasized. Von Leube says: "I freely admit that whatever diagnostic skill I may possess is in great measure due to my experience in pathological anatomy." In a work so generally excellent it is difficult in a brief notice to select special features for comment, and yet the chapters on the stomach and intestines, as would be expected, are certainly noteworthy. The author is here in his own special field and writes as an authority on these organs, no small part of the original work, which has so advanced and revolutionized our knowledge of diseased conditions of the digestive tract in recent times, having been contributed by him and his pupils. A commendable feature of the work is the judicious restraint shown in the use of illustration. Overillustration, a common vice in medical textbooks of to-day, usually serves little purpose other than to cover meagreness in the text.

Lectures on Diseases of Children. By ROBERT HUTCHISON, M. D., F. R. C. P., Assistant Physician to the London Hospital and to the Hospital for Sick Children, Etc. London: Edward Arnold, 1904. Pp. xii-338. (Price, 8s. 6d.)

This little book is unique in pediatric literature. It consists of a series of lectures delivered at the London Hospital, and is in no way an exhaustive treatise on the diseases of children. The author considers those common diseases as well as some of the conditions to which the term disease can scarcely be applied, which receive very little attention in the ordinary textbook and in the average college lecture. It is purely clinical in nature, though some attention is devoted to therapeutics. It deals in a simple manner with some of the subjects which receive very scant attention from most teachers and writers, and will prove especially helpful to the young practitioner. A most valuable chapter to the practitioner of any age is that on symptoms of disease in children and their diagnostic significance.

Transactions of the American Ophthalmological Society. Fortieth Annual Meeting, Atlantic City, N. J., 1904. Vol. X, Part II. Hartford: Published by the Society, 1904.

Ophthalmologists are to be congratulated that a society exists which can annually add such valuable scientific contributions to the knowledge of the eye. It would take too much space to review each article as it deserves, but the one presented by the president, Dr. C. S. Bull, on operations on the eyeball in the presence of an infected conjunctiva, should be mentioned because the practical preparation of an eye to undergo operation is thoroughly discussed. Even though every operating ophthalmic surgeon may not agree with all Dr. Bull's conclusions, the statements made and the ideas advanced deserve the careful study of every one who is likely to be called upon to operate on an eye.

Miscellany.

The Use of Proprietary Preparations.—The *Massachusetts Medical Journal* says editorially in a recent issue: In looking over some addresses delivered at the annual meetings of different medical societies, we have been struck, if not amused, by the stress laid in each one of them on the impropriety of physicians prescribing proprietary preparations. We may be very dense, but we confess that we cannot see any good reason why the man who discovers a new remedy, or even makes a new and useful combination of old remedies, should not be amply compensated for his labor; or why reputable physicians should refuse to "patronize" such remedies. The doctor who prescribes, the retail druggist who fills the prescription, the wholesale druggist, the manufacturer, each of these expects to be paid; why, then, shall we expect the man who has spent his time and money in discovering and investigating the remedy to go unrewarded? Such work often requires the highest degree of chemical and pharmaceutical skill and a large outlay of capital and labor, and to expect men to engage in such enterprises out of pure philanthropy is sentimental nonsense of the purest ray serene. It would be just as rational to demand that every inventor should make a free gift of his invention to the world. Shall the man who invented metal tips for shoe strings or a shade roller reap a fortune, and shall not the man who conferred upon humanity the boon of sulphonal, or aristol, say, do the same?

On the contrary, properly compensating the discoverer of new remedies, allowing him to take out a patent on his preparation, attracts capital and skill to this field of labor to the immense benefit of mankind. If a skillful chemist knows that he can make a fortune by devoting his attention to the chemistry of the arts and manufactures, why should he waste his time in pharmacology if this is to be a mere "thankie job"?

There are those of the "righteous overmuch" type, who affect to dispense with all proprietary medicines, and who boast that they can improvise mixtures which are "just as good." May heaven

help those unfortunate beings who have to stomach their improvisations!

This is a matter which should be settled upon plain, everyday, business principles. The world can well afford to pay inventors of new remedies well; it is not a huge eleemosynary institution, as some would have us believe; the cases where paupers languish and die for lack of highly priced drugs are very, very few.

It is, then, a matter of simple justice that the inventor of remedies should be paid as well as the inventor of air brakes. The conclusion is that no progressive physicians can afford to dispense with many of the so called proprietary remedies or preparations.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended March 24, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Dist. Columbia—Washington.....	Mar. 11-18.....	1	1
Florida—Jacksonville.....	Mar. 11-18.....	3	
Illinois—Chicago.....	Mar. 11-18.....	20	3
Kentucky—Lexington.....	Mar. 11-18.....	1	
Kentucky—Louisville.....	Mar. 8-16.....	4	
Louisiana—New Orleans.....	Mar. 11-18.....	11	
Michigan—At 65 places.....	Feb. 25-Mar. 4.....	Present.	
Missouri—St. Louis.....	Mar. 11-18.....	43	2
Nebraska—Omaha.....	Mar. 11-18.....	2	
New York—Mount Vernon.....	Mar. 11-18.....	1	
New York—New York.....	Mar. 11-18.....	1	1
Ohio—Toledo.....	Mar. 4-18.....	10	
Tennessee—Memphis.....	Mar. 11-18.....	10	
Smallpox—Foreign.			
Argentina—Buenos Ayres.....	Dec. 1-31.....	17	
Brazil—Niteroy.....	July 1-Jan. 1.....	248	
Brazil—Santos.....	Jan. 15-21.....	1	
Ecuador—Guayaquil.....	Feb. 1-28.....	3	
France—Paris.....	Feb. 25-Mar. 4.....	22	1
Germany—Bremen.....	Feb. 18-25.....	2	
Great Britain—Bradford.....	Feb. 18-25.....	5	1
Great Britain—Leeds.....	Feb. 25-Mar. 4.....	1	
Great Britain—Leith.....	Feb. 25-Mar. 4.....	2	
Great Britain—London.....	Feb. 18-Mar. 4.....	11	
Gt. Britain—Newcastle-on-Tyne.....	Feb. 25-Mar. 4.....	3	
India—Bombay.....	Feb. 14-21.....	3	164
India—Calcutta.....	Feb. 11-18.....	3	
India—Karachi.....	Feb. 12-19.....	3	
India—Madras.....	Feb. 11-17.....	1	
Italy—Lecce Provinces.....	Jan. 16-23.....	6	
Russia—Moscow.....	Feb. 18-25.....	8	1
Spain—Barcelona.....	Feb. 21-28.....	5	
Uruguay—Montevideo.....	Feb. 18.....	34	7
Yellow Fever.			
Panama—Panama.....	Jan. 1-Mar. 7.....	36	14
Cholera.			
India—Calcutta.....	Feb. 11-18.....	24	
Turkey in Asia—General.....	Jan. 14-21.....	40	12
Turkey in Asia—Van.....	Jan. 14-21.....	34	7
Plague.			
Africa. British—Kisumu.....	Jan. 5-12.....	Present.	
Arabia—Aden.....	Feb. 11-18.....	374	342
Chile—Chanaral.....	Mar. 16.....	Present.	
Chile—Iquique.....	Mar. 16.....	Present.	
China—Pisagua.....	Mar. 16.....	Epidemic.	
Egypt—Suez.....	Feb. 2-9.....	4	1
Egypt—Tukh.....	Feb. 4.....	1	
India—Bombay.....	Feb. 11-21.....	666	
India—Calcutta.....	Feb. 11-18.....	88	
India—Karachi.....	Feb. 12-19.....	59	58
India—Madras.....	Feb. 11-17.....	1	
Russia—Uralas Territory.....	Nov. 1-Jan. 16.....	343	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 22, 1905:

FRICK, JOHN, Acting Assistant Surgeon. Relieved from duty at Laredo, Texas, and directed to proceed to Tampico, Mexico, for duty in office of American Consul.

FRICKS, L. D., Passed Assistant Surgeon. Relieved from duty at the Immigration Depot, New York, and directed to proceed to Castries, St. Lucia, W. I., for duty in the office of the American Consular Agent. March 17, 1905.

GLENYAN, A. H., Assistant Surgeon-General. Granted an extension of leave of absence for three days from March 21st.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for three days from March 23rd.

KERR, J. W., Passed Assistant Surgeon. Granted leave of absence for five days from March 14, 1905, under paragraph 191 of the regulations.

KURTZ, W. E., Acting Assistant Surgeon. Granted leave of absence for seven days from March 18, 1905, under paragraph 210 of the regulations.

McLARY, A. A., Acting Assistant Surgeon. Granted leave of absence for thirty days from April 1st.

McLAUGHLIN, A. J., Assistant Surgeon. Granted leave of absence for six days from March 20th.

MATHEWSON, H. S., Passed Assistant Surgeon. Bureau letter of March 11th, granting Passed Assistant Surgeon Mathewson leave of absence for five days from March 13th, amended to read six days from March 13, 1905.

SAWTELLE, H. W., Surgeon. Granted leave of absence for two days from March 17th.

WILSON, R. L., Passed Assistant Surgeon. To proceed to Vera Cruz, Mexico, for duty in the office of the American Consul.

Board Convened.

Board convened to meet at Washington, D. C., March 18, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon General H. D. GEDDINGS. Assistant Surgeon A. J. McLAUGHLIN, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending March 25, 1905:

BARTLETT, C. J., First Lieutenant and Assistant Surgeon. Leave of absence extended twenty days.

HALL, JOHN D., Colonel and Assistant Surgeon-General. Assigned to duty as chief surgeon of the Department of California.

McCULLOCH, C. C., Jr., Major and Surgeon. Granted thirty days' leave of absence.

MEARNS, E. A., Major and Surgeon. Granted three months' sick leave of absence.

RAFFERTY, OGDEN, Major and Surgeon. Ordered to proceed to the artillery posts in District of Potomac and Baltimore, with a view to determine the requirements of the medical department at each station participating in Army and Navy exercises from June 11 to 17, 1905.

TURNBULL, WILFRID, First Lieutenant and Assistant Surgeon. Honorably discharged from the service of the United States, under the provisions of the act of Congress, approved October 1, 1890, as amended by the act approved July 27, 1892, to take effect March 17, 1905.

WINN, ROBERT N., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence, to take effect about June 1, 1905.

The following assistant surgeons have been ordered, on completion of course of instruction at the Army Medical School, Washington, D. C., to Manila, P. I., for duty in the Division of the Philippines: HOWARD H. BAILY, HENRY L. BROWN, ROBERT M. CULLER, WILLIAM R. DAVIS, PAUL L. FREEMAN, H. G. HUMPHREYS, LEARTUS J. OWEN, FRANK W. WEED, WILLIAM A. WICKLINE, and STANLEY G. ZINKE.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending March 25, 1905:

BLACKBURN, T. C., Acting Assistant Surgeon. Detached from the *Culca* and ordered to recruiting party No. 2, at Dallas, Texas.

BLACKWELL, E. M., Passed Assistant Surgeon. Detached from the *Cassine* and ordered to the Naval Station, San Juan, P. R.

BISHOP, L. W., Passed Assistant Surgeon. Commissioned a passed assistant surgeon in the United States Navy, with rank of lieutenant, from September 28, 1904.

BOGERT, E. S., Surgeon. Detached from the Naval Academy, March 25, 1905, and ordered to the *West Virginia*.

BUTLER, C. S., Passed Assistant Surgeon. Detached from the Naval Station, San Juan, P. R., and ordered to the *Castine*.

CRANDALL, R. P., Surgeon. Ordered to the *Hancock*.

DABNEY, V., Acting Assistant Surgeon. Detached from recruiting party No. 2 and ordered to the *Culcoa*.

DICKINSON, D., Medical Director. Detached from the Naval Hospital, Chelsea, Mass., and ordered to the Navy Yard, Portsmouth, N. H., and to additional duty in command of the Naval Hospital, at that place, on April 6, 1905.

DICKSON, S. K., Medical Director. Detached from the *Kearsarge* and ordered to the *Maine*.

DRAKE, N. H., Medical Director. Detached from the *Hancock* and ordered to the Navy Yard, Norfolk, Va.

FARWELL, W. G., Medical Director. Detached from the Naval Hospital, Portsmouth, N. H., and ordered home, April 4, 1905.

GROW, E. J., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

GRUNWELL, A. G., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

HENEBERGER, L. G., Medical Inspector. Ordered to duty in command of the Naval Hospital, Newport, R. I.

JANNEY, W. H., Acting Assistant Surgeon. Detached from the *Cesar*, and resignation accepted, to take effect March 22, 1905.

JOHNSON, M. K., Surgeon. Detached from the *Tacoma* and ordered to the *Maine*.

KITE, I. W., Surgeon. Detached from the *Maine* and ordered to the *Kearsarge*.

LANGHORNE, C. D., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

LUMSDEN, C. P., Surgeon. Detached from the Navy Yard, Norfolk, Va., and ordered to the *Minneapolis*.

SELLERS, F. E., Acting Assistant Surgeon. Detached from the Naval Station, Culebra, and ordered home to await orders.

SHIFFERT, H. C., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from December 26, 1903.

SHOOK, F. M., Assistant Surgeon. Appointed an assistant surgeon, with the rank of lieutenant, junior grade, from March 15, 1905.

SNYDER, J. J., Passed Assistant Surgeon. Detached from the *Kearsarge* and ordered to the *Tacoma*.

STUART, ALLAN, Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from June 7, 1904.

TOLFREE, H. M., Assistant Surgeon. Detached from the *Hancock*, April 13, 1905, and ordered to Washington, D. C., for examination for promotion, and then to await orders.

WELLS, H., Medical Director. Detached from the Naval Hospital, Newport, R. I., and ordered to duty in command of the Naval Hospital, Chelsea, Mass.

WINN, C. K., Acting Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the *Cesar*.

The following assistant surgeons were detached from duty at the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to duty as follows:

ANGWIN, W. A., Naval Academy, Annapolis.

BELKNAP, J. L., Naval Hospital, Narragansett Bay, R. I.

CHAPMAN, R. B., Naval Hospital, Mare Island, Cal.

COLE, N. W., JR., Naval Hospital, Norfolk, Va.

FARWELL, W. G., Naval Hospital, New York, N. Y.

GRAYSON, C. T., Marine Barracks, Washington, D. C.

HEINER, R. G., Navy Yard, Washington, D. C.

HULL, H. F., United States Revenue Steamer *Franklin*.

MAY, H. A., United States Revenue Steamer *Franklin*.

MCDONNELL, W. N., Naval Station, Porto Rico, and additional duty on the *Alliance*.

MCLEAN, N. T., Naval Hospital, Chelsea, Mass.

MINK, O. J., Naval Hospital, New York, N. Y.

NELSON, H. T., Naval Hospital, Washington, D. C.

OWENS, W. D., Naval Hospital, Mare Island, California.

PORTER, F. E., Naval Hospital, Norfolk, Va.

STOOPS, R. E., *Pensacola*, and additional duty at the Naval Training Station, San Francisco, Cal.

STRITE, C. E., Naval Hospital, Norfolk, Va.

VICKERY, E. A., Navy Yard, Portsmouth, N. H., and additional duty on the *Southerly*.

WHEELER, L. H., Naval Hospital, Narragansett Bay, R. I.

WICKES, G. L., United States Revenue Steamer *Lancaster*.

ZALESKY, W. J., Naval Academy, Annapolis.

Births, Marriages, and Deaths.

Married.

DUNHAM—HICKENLOOPER.—In Cincinnati, Ohio, on Wednesday, March 15th, Dr. Harry Kennon Dunham and Miss Amelia Hickenlooper.

GILMAN—MARTIN.—In Brooklyn, N. Y., on Thursday, March 9th, Dr. Ray Edward Gilman and Miss Lillie Osborn Martin.

SOUTH—TURNBULL.—In Philadelphia, on Saturday, March 18th, Lieutenant Hamilton Disston South, United States Marine Corps, and Miss Elizabeth Turnbull, daughter of Dr. and Mrs. Charles Smith Turnbull.

THOMAS—BENEDICT.—In Brooklyn, N. Y., on Wednesday, March 8th, Dr. William E. Thomas and Miss Esther L. Benedict.

Died.

BEEBE.—In Denver, Colorado, on Monday, March 13th, Dr. Carolyn Dewey Beebe, in the fortieth year of her age.

BOEBER.—In Guadalajara, Mexico, on Sunday, March 12th, Dr. E. J. Boeber, in the thirty-fifth year of his age.

BRUNDAGE.—In Brooklyn, N. Y., on Sunday, March 19th, Dr. Amos Harrison Brundage, in the seventy-seventh year of his age.

DULIN.—In Denver, Colorado, on Tuesday, March 14th, Dr. Frank Dulin, in the forty-fifth year of his age.

FENNER.—In Fredonia, N. Y., on Tuesday, March 14th, Dr. Milton M. Fenner, in the sixty-eighth year of his age.

GALE.—At sea, on Friday, March 17th, Dr. Alexander F. H. Gale, of New York, in the thirty-fifth year of his age.

GREENFIELD.—In Trinidad, Colorado, on Monday, March 13th, Dr. R. A. Greenfield, in the sixty-second year of his age.

HOPPIN.—In Philadelphia, on Tuesday, March 21st, Dr. Samuel B. Hoppin, in the eighty-seventh year of his age.

LOMBARD.—In Boston, Massachusetts, on Tuesday, March 21st, Dr. John P. Lombard, in the forty-fifth year of his age.

MACALLISTER.—In San Francisco, California, on Wednesday, March 8th, Dr. Eleanor MacAllister, in the thirty-ninth year of her age.

MCPHEETERS.—In St. Louis, Missouri, on Wednesday, March 15th, Dr. William M. McPheeters, in the ninetieth year of his age.

MEYER.—In Milwaukee, Wisconsin, on Wednesday, March 15th, Dr. William Meyer, in the fiftieth year of his age.

MURDOCH.—In Baltimore, Maryland, on Sunday, March 19th, Dr. Russell Murdoch, in the sixty-seventh year of his age.

SPRING.—In Minneapolis, Minnesota, on Wednesday, March 22nd, Dr. W. P. Spring.

TREADWELL.—In Elgin, Illinois, on Friday, March 17th, Dr. William E. Treadwell, in the fifty-fourth year of his age.

WRIGHT.—In Deland, Florida, on Tuesday, March 14th, Dr. C. Edwin Wright, of Philadelphia, in the fifty-ninth year of his age.

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Original Communications.

THE OPERATIVE TREATMENT OF CHRONIC SUPPURATIVE OTITIS.*

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ATTENDING AURAL SURGEON TO THE MANHATTAN EYE, EAR,
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BABIES' HOSPITAL; FELLOW OF THE AMERICAN
OTOLOGICAL SOCIETY; NEW YORK OTOLOGICAL
SOCIETY; NEW YORK ACADEMY OF
MEDICINE, ETC.

The specialist in otology need not apologize for bringing the subject of chronic suppurative otitis to the consideration of a general medical society, since such cases would seldom come under the care of the aural surgeon unless they were referred by men in other branches of medicine. It is only within recent years that chronic suppurative ears have been turned over to the otologist unless an acute exacerbation or some intracranial complication made it necessary. An aural discharge lasting for months, or years, without pain, or occasional slight pain, came to be regarded as of little consequence, the seriousness of the condition being measured largely by the impairment of hearing which it occasioned. Fostered by the fact that it is not unusual for the discharge to suddenly cease on the advent of a serious complication, the idea that it is dangerous to check the discharge from a suppurating ear was formerly credited by many in the profession, and is still held by a majority, perhaps, of the lay public. An occasional irrigation of the canal for the purpose of cleanliness and lessening of the foul odor was all that was considered necessary or advisable.

Of late years, however, a majority of the profession, and, as a consequence, a large percentage of the public have come to realize the significance of a purulent otitis aside from its relation to audition. This has happened, I think, from two causes: In the first place, the specialist has rec-

ognized, and pointed out more clearly to the rest of the profession, that the majority of intracranial complications of otitic origin spring from cases of chronic otorrhœa. While the percentage of intracranial complications resulting from chronic suppurative cases may not be much over one per cent., yet, when they do occur, they are of such a serious nature that it is unwarrantable to neglect any suppurating ear which might be a possible cause. In the second place, insurance companies, quick to recognize this danger when it was pointed out, have refused to take risks on the lives of any who had a suppurative otitis. The proposition, then, that *no discharging ear should be allowed to go unchecked*, will not to-day be received with such vigorous opposition as it would have been even a decade ago.

It is one thing, however, to announce that a purulent discharge should be checked, and quite another to accomplish this end. The idea that simple irrigations, instillations, and insufflations are inadequate in most instances, must have forced itself upon all who have often had occasion to try them. How, then, shall chronic otorrhœa be treated? A careful inspection of the ear after thorough cleansing will reveal the fact, in the majority of instances, that the perforation in the membrana tympani is either too small or too badly placed to drain the tympanum. As a consequence the lining membrane constantly bathed in pus has become eroded and granulations or polypi have sprung up, which still further interfere with drainage; or bands of adhesion, running across the tympanum, have prevented drainage from the attic; or obstructions in the nose or nasopharynx (ecchondroses, exostoses, nasal polypi, hypertrophied turbinate bodies, adenoid vegetations), by causing a constant congestion in the ear, have kept up a continued discharge.

If all acute cases, when first seen, were properly treated by free paracentesis (and I mean by paracentesis a free incision of the drum membrane in the proper place instead of a simple puncture); good drainage secured and maintained, and any obstructions in the nose or nasopharynx prompt-

* Read at the meeting of the Harvard Medical Society of New York February 25, 1905.

ly removed, few cases of chronic purulent otitis would ever occur. However, many cases do not come to our observation until they are many months, or years, old, and it is to the care of such that I wish particularly to draw your attention.

Such a case should be thoroughly cleaned, carefully inspected, and the tympanum felt over with a probe, as far as possible, for necrotic areas. Should no necrotic area be found, if the perforation seems inadequate for drainage, a free incision should be made in the membrana tympani, and granulation tissue in the lower part of the tympanum removed with a curette; any adhesions which can be got at divided, and any obstructions in the nose or nasopharynx removed.

The external auditory meatus and all parts of the tympanum which can be reached should then be kept constantly clean by antiseptic irrigations, and mopping with cotton pledgets. I am convinced that better drainage can be maintained by the use of gauze wicks running from the incision out into a good sized dressing over the auricle, renewed once or twice in twenty-four hours, than by frequent irrigations.

Should the discharge seem to be lessening under this treatment, it may be persisted in for some weeks, if necessary, until the tympanum is free from pus, when the incision may be allowed to close. When, under such careful treatment, no improvement takes place, or, when at the outset necrotic areas of bone are found in the ossicles or low down in the tympanic walls, the membrana tympani, together with the malleus and incus, should be removed, and any areas in the tympanic walls which can be reached, and require it, carefully curetted.

This gives an opportunity of washing out the attic and affords more perfect drainage. Should this fail, or should there be evidence at the outset of necrosis in the attic or aditus, or should the tympanum be filled with a cholesteatomatous mass, or should there be a history of one or more acute exacerbations with pain and tenderness over the mastoid process, a so called *radical operation* should be advised.

This operation has gone through many phases, and different steps in it have been named after the men who first advocated it. It would be out of place for me to burden you with the details of the technique, although in practice most careful attention to some slight detail either in the operation or after treatment often makes the difference between success and failure. Whatever method is used, the object in view is the conversion of the tympanum, aditus, and mastoid antrum into a smooth cavity, the walls of which

have been curetted free from all necrotic areas, and the malleus, incus, and membrana tympani removed. A plastic operation is then made in the auricle which allows a free inspection of all parts of this cavity.

Subsequently, dermatization of the excavation is secured as soon as possible. The time for accomplishing this is materially lessened by the introduction of Thiersch skin grafts from the thigh or arm. I show some specimens prepared to familiarize you with the anatomy of the field of operation, and to demonstrate the size and character of the excavation. As you will see (see plates 1 and 2) the close proximity of the

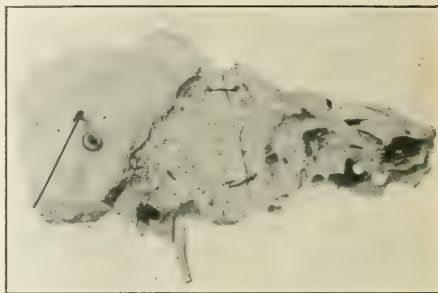


FIG. 1.—Right temporal bone: vertical section of mastoid process. 1, tympanic membrane; 2, malleus; 3, incus; 4, tensor tympani muscle; 5, Eustachian tube; 6, facial nerve; 7, oval window with stapes in place; 8, superior semicircular canal; 9, carotid canal; 10, jugular bulb; 11, mastoid antrum.

lateral sinus, the middle cerebral fossa, and external semicircular canal, and the facial nerve to the field of operation, necessitates a very accurate knowledge of the anatomy of the temporal bone if one is to attempt it. With this knowledge, however, and the exercise of great care

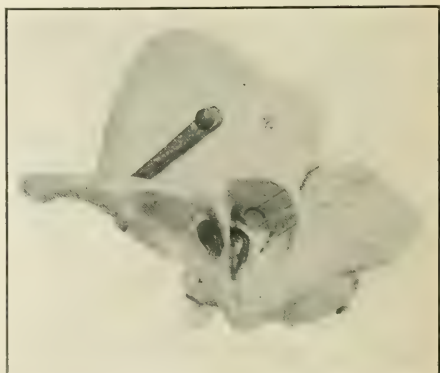


FIG. 2.—Left temporal bone: deep excavation in mastoid. 1, external auditory meatus; 2, posterior wall; 3, superior semicircular canal; 4, external semicircular canal; 5, posterior semicircular canal; 6, sigmoid sinus; 7, facial nerve.

there is little danger of serious injury to any of these structures. As will be seen from the specimens, an entirely different excavation is made

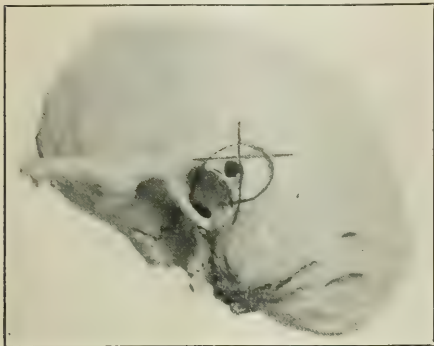


FIG. 3.—Lines drawn tangent to circumference of bony canal posteriorly and superiorly; angle of crossing marks position of safety for entering mastoid antrum; probe passes through mastoid antrum and aditus ad antrum to tympanum; black line indicates area of bone removed in radical operation.

when symptoms of acute mastoiditis supervene on a case of chronic purulent otitis. Here instead of the comparatively small excavation shown as an ideal cavity (see plate 6), all the vertical cells and the tip are removed. As a consequence the posterior bony canal wall has to be lowered, as

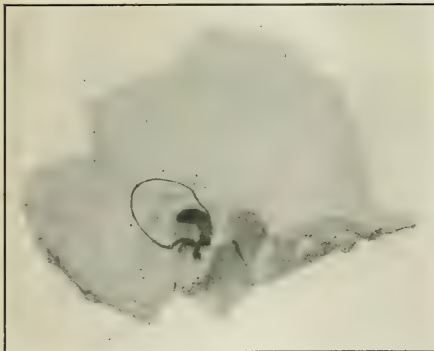


FIG. 4.—Radical operation begun on the posterosuperior canal wall at the annulus tympanicus; bone outlined by black line, still to be removed.

shown in the other specimen, in order that the skin from the plastic operation may be turned into the bottom of the wound (see plates 7 and 8). In some of these cases I have left the bottom of the postauricular wound open for drainage for a week or ten days, instead of sewing it up completely, as is done in the usual radical operation. In this way a more deforming plastic operation on the auricle is avoided. In these cases I prefer

an angular flap made by cutting along the superior and posterior border of the cavum conchae, turning the skin into the bottom of the wound (plate 8), rather than some other flaps which have been suggested. In the usual case I prefer a tongue flap (plate 9), carried up and back into the excavation. The cartilage is dissected from the skin in both cases.

I show you two cases in which the tongue flap

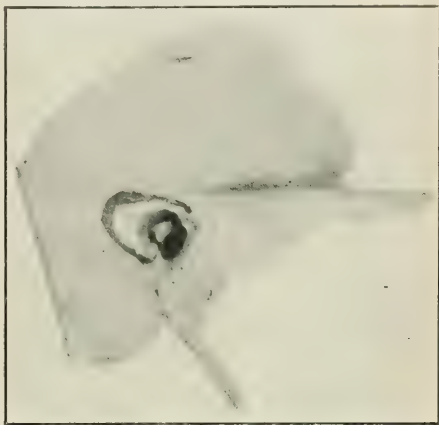


FIG. 5.—Radical operation begun by entering mastoid antrum first; the bridge of bone indicated by black lines still to be removed.

has been used, one entirely cured, the other in an earlier state. The third case is one in which an acute mastoiditis had developed on a chronic condition. It proved on opening it to be a perisinus and epidural abscess. The posterior wound was left open for two weeks, and then, when the in-

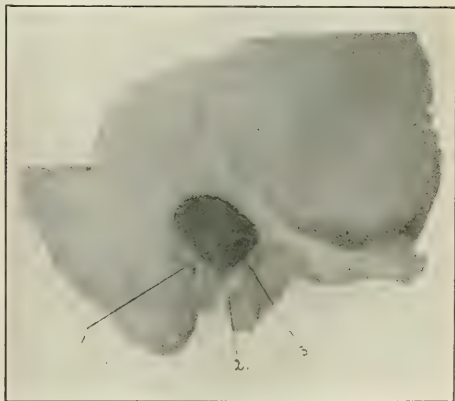


FIG. 6.—Radical operation, ideal excavation. 1, oval window; 2, round window; 3, line of facial canal; 4, external semi-circular canal.

terior of the wound was covered with healthy granulations, skin grafts were applied, and the angular flap was turned into the bottom of the wound. As you will see, although the plastic operations in such cases are sufficient to permit an inspection of the whole excavation, no defor-



FIG. 7.—Showing necessity of removing the posterior wall lower down where it has been necessary to obliterate all the cells in the mastoid process; the spur indicated by the black line must be removed to permit the skin flap to be turned into the bottom of the wound.

mity in the ear would be noticed by a casual observer.

These cases should all recover in from four to twelve weeks. Some cases may last longer than

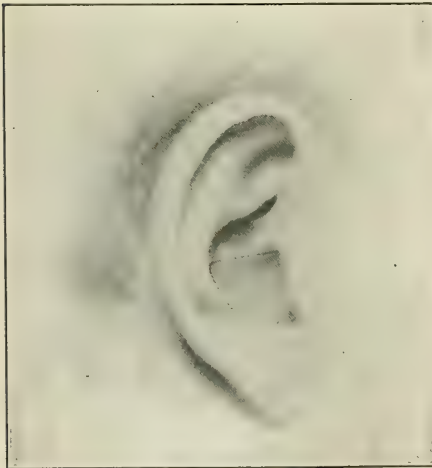


FIG. 8.—Plastic operation where the mastoid cells are all removed. An incision is made along the superior and posterior borders of the cavum conchæ, and the flap turned into the bottom of the wound.



FIG. 9.—Operation most suitable in cases where the ideal long excavation can be made; parallel incisions beginning in the cartilaginous canal and extending back to the posterior border of the cavum conchæ; the tongue flap is carried upward and backward into the excavation.

this, and may require a second or third operation; but they are exceptional, if careful attention to the technique and after-treatment is carried out, and all of them are practically free from danger of intracranial complications, after operation, even if the discharge is not stopped as quickly as anticipated.

254 MADISON AVENUE.

Fighting Tuberculosis in Cleveland.—The Cleveland Anti-Tuberculosis League is striving to find ways and means of diminishing the ravages of consumption by turning its attention to the causes of the disease among workingmen. Max Hayes, who is chairman of the dangerous trades committee, said that tuberculosis is most prevalent in those trades where fine particles of metal, stone, or lint fly about as in stone cutting, metal polishing, brick laying, cigar making, and garment manufacturing. In response to a question as to what could be done to remedy the conditions, Mr. Hayes said: "The working class need shorter hours; that this will cause a halt in the advance of the disease was shown by the cigar-makers, who reduced consumption in their ranks 50 per cent. by the reduction of the working day from ten to eight hours. Fresh air must be introduced into the shops. The blower law in metal working and stone cutting shops ought to be enforced. This law provides for a steady circulation of air which keeps down, or carries out, flying particles. In every trade some plan can be introduced to remedy conditions. It is our intention to get all the trades interested, and then make general demands."

SPONDYLOSE RHIZOMYELIQUE; A STUDY OF THE RELATIVE FREQUENCY OF SPINAL INVOLVEMENT IN RHEUMATOID ARTHRITIS, WITH AUTOPSY FINDINGS.*

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Rigidity of the spine has in the last few years attracted considerable attention from clinicians. References to this condition are found scattered through the literature of the last century, but little attention was paid to it as a separate pathological condition until v. Bechterew published his paper, in 1893. This was followed by papers by Marie, Strümpell, and Bäumlér, and in the last two years a large number of cases have been placed on record. It is very evident from a study of these cases that several different diseases, with local manifestations referred to the spinal column, have been classed under the same general heading. It will be my aim in this paper to consider rigidity of the spinal column occurring as a separate and distinct clinical and pathological entity and rigidity of the spine as a local manifestation of rheumatoid arthritis.

The disease described by v. Bechterew is localized in the spinal column without involvement of other joints. It may affect a part or the entire spine. In the latter case there is a kyphosis affecting the upper dorsal and lower cervical vertebræ. There is an absence of the anterior curve of the spine in the lumbar region. The result of this rigidity of the upper spine together with the kyphosis gives the patient an appearance as if the head was pushed down into the shoulders and at the same time a forward extension of the neck. The rigidity of the lumbar spine, with the absence of the normal curve in this region, produces a peculiar attitude and gait. He stands with the legs partly flexed at the hips and knees and with the feet and legs rotated decidedly outwards. In all movements of the trunk the spine acts as a single bone, remaining in all attitudes perfectly fixed.

To these symptoms, all of which are due to the fixation of the spinal column, there is added in many cases a group of sensory symptoms referred by v. Bechterew to the spinal roots.

Subjective disturbances of sensation are present in the extremities, especially the upper ex-

trémities, such as pain and paræsthesia. Pain referred to the abdomen is not infrequent. Increase of reflexes occurs in the lower extremities associated with cramps in the legs. Impairment of sensation is found in the lower cervical and upper dorsal distribution, and also some atrophic wasting of the muscle groups in this region. The electrical examination shows no other change than a slight quantitative diminution. As ætiological factors, trauma, probably with concussion (*Erschütterung*) of the spinal column and heredity have been suggested. The following case belongs to this type of disease, and I report it here to contrast it with the cases of rheumatoid arthritis in which the spinal column is involved:

CASE I.—C. W., aged 34 years, white, weaver by occupation (but in early adult life an acrobat), was referred to me in September, 1899, for persistent pain in the abdomen and rigidity of the spinal column. His grandfather and uncle had had paralysis for several years before they died. He had two healthy children; his wife had had two miscarriages; otherwise his family history contained nothing of importance. As a child he had the usual diseases of childhood; acute articular rheumatism with a cardiac complication at 12 years, and gonorrhœa at 20 years. He had Texas fever, with a "bloody flux," from which he recovered and remained in good health until eight years previously. At that time while descending a small flight of stairs he missed his footing and fell some distance, landing on his feet. At that time he felt considerable pain in the right hip. This disappeared in a short time and he had no further trouble until over a year later. Pain reappeared in the right hip and for the past six years he had had more or less pain in both the right and left hips and at times over the lumbar and lower dorsal spine. This pain was a dull ache; much worse after several hours' work at his trade of weaver, which necessitated more or less forward and backward movement while in an upright position. At night he stated that he could hardly straighten up. His main complaint for the previous two years had been that of a constant pain referred to the pit of the stomach; he stated that "it felt as if there was a brick in the abdomen and as if the anterior wall of the abdomen was stuck fast to the spine." For the past two years he had had frequent nocturnal seminal emissions with night sweats. His memory had been failing for the past year. He was a sparsely built man with the typical flexed attitude at the hips and knees; a sunken, forward position of the head; and a rigid, awkward gait, with the toes adducted and the legs separated and flexed. The dorsal and lumbar spine was rigid and there was present only very slight forward movement in the cervical region. There was no ankylosis or other involvement of other joints. The erector spinæ group of muscles were hard and boardlike and somewhat wasted. The scapular groups were also wasted and hugged closely

* From the William Pepper Clinical Laboratory, Phœbe A. Hearst Foundation.

the underlying structures. He swayed more with the eyes closed than would a normal person. The knee jerks were present only on reinforcement. All the reflexes of the lower extremities were diminished. The reflexes of the upper extremities were normal.

Sensation over the extremities, normal; over the trunk there was hyperæsthesia in areas, more marked over the lower part of the abdomen. He was not sensitive to pressure over the nerve trunks. The hips were freely movable and not painful on motion or to direct pressure. Percussion over the dorsal and lumbar spine produced pain.

Visceral examination revealed an old mitral regurgitant lesion with an associated enlargement of the heart in full compensation; a moderate grade of atrophic emphysema with very impaired respiratory excursion and respiration mainly abdominal in type.

We had therefore in this case symptoms almost if not entirely confined to the spinal column and its supporting muscles and to the nerve roots. There was no trace of disturbance in the extraspinal articulations and the symptoms referred to the spine developed insidiously and were progressive in character. The diminution of the leg reflexes, associated with the early subjective symptoms referred to the lower extremities, might be explained by the fact that the spinal process in this case was ascending in type and whatever damage to the roots may have taken place would more likely be further advanced in the legs than in the upper spinal distribution. The most interesting thing about this case was the long duration of what was evidently a chronic joint affection remaining limited to the spinal column. The abdominal pain and the pain in the extremities in the absence of any other lesion must be referred to the spinal roots.

If the other symptoms recorded did not occur in typical cases of rheumatoid arthritis I should have been disposed, on account of the course of the disease (extending over eight years), and its strict limitation to the spine, to class this case as a distinct clinical entity apart from rheumatoid arthritis. The following case is of considerable interest in this connection:

CASE II.—J. R., male, aged 11 years, was admitted April, 1901, suffering with acutely swollen painful joints. He had had measles at the age of 5 years, but had otherwise been healthy. The present trouble started in March, 1900, with swelling of the feet and knees, with pain and tenderness. In July the hands were affected in the same way. On admission the wrists were markedly swollen, but were not painful to ordinary pressure. Fluctuation was present in both wrist joints. Grating was likewise observed. The joints of all the fingers were similarly affected. The metatarsal articulations of both great toes were enlarged and tender. The blood count at this time showed R. B. C., 6,000,000; W. B. C., 14,000; Hg., 60 per cent. There was a systolic murmur over the aortic cartilage transmitted into the vessels of the neck. At my last examination during the past spring all the joints of the

extremities were more or less ankylosed. The spine appeared to be involved throughout its entire course. In the cervical region there was little motion left, but not complete ankylosis. The ankylosis was much more extensive in the dorsal spine and to a lesser degree in the lumbar region. There were distinct symptoms of root involvement. Wasting about the shoulder girdle and in the extremities, zonal hyperæsthesia on the trunk, and an atrophic condition of the skin in the area of the affected joints were noted.

This case was of considerable interest on account of the early age at which it developed and the sensory and reflex symptoms indicative of root and spinal involvement.

The following cases will give some idea of the frequency and extent of spinal involvement in rheumatoid arthritis:

CASE III.—J. S., male, white, aged 34 years. Occupation, fireman. All the joints were ankylosed, the patient being rigid; the entire spine was rigid and immovable. It was necessary to feed with liquid or semiliquid food.

CASE IV.—D. M., male, 35 years old; song and dance artist. The disease began with an acute attack of pain and fever ten years previously; this was followed after a year's quiescence by a progressive involvement of all the joints, beginning in the right upper extremity and extending to all the joints of the body. The maxillary joints were but little affected. The spine was rigid with marked tenderness throughout its entire extent; there was some movement present in the cervical region. A marked kyphosis affected the dorso-cervical area.

CASE V.—K. M., female, aged 53 years; housewife. An acute attack of pain and swelling began in the hands twenty-six years before, and extended to all the joints of the extremities, which later became ankylosed. The spine was almost rigid in the dorsal and lumbar areas, but quite movable in the cervical area; no curvature or tenderness.

CASE VI.—M. W., 49 years old; housewife. The disease began with an acute attack twenty-one years before, and gradually affected all four extremities, the dorsal and cervical vertebrae; lumbar spine not affected; some slight kyphosis in the upper dorsal area; cervical area and all the affected joints very tender.

CASE VII.—T. C., male, aged 31 years, occupation, brick maker. The acute attack began fourteen years before with severe pain in lower extremities. Some time after this he fell and injured his spine and has not since been able to walk. Symptoms referable to the spine became much more marked after the injury. The disease progressed in the other joints until at the present time there is practically complete ankylosis of all the joints, including the jaw joints. There is some kyphosis with tenderness and pain referred to the cervical region; marked arterial sclerosis

with a systolic murmur over the apex of the heart.

CASE VIII.—M. E., male, aged 33 years, farmer. Acute attack occurred seventeen years previously, affecting ankles and knees; joints of lower extremities markedly involved and to a lesser degree those of the upper extremities; jaws also involved; complete rigidity of the entire spine; considerable pain present with tenderness; slight lateral curvature in cervicodorsal area.

CASE IX.—M. S., female, 68 years old, housewife. Acute attack began thirty-two years before in the right shoulder and wrist; since that time all the joints had become more or less involved; vertebrae were all involved with some tenderness in the lumbar region and some slight lateral curvatures in the cervicodorsal; process most intense in the cervical area.

CASE X.—F. R., male, aged 36 years, soap worker. Acute attack began thirty-five years before with involvement of the hands; history of injury in the hand and arm first affected; main involvement found in the upper extremity; some crepitus with pain in the joints of the lower extremity; recent involvement of the cervical area of the spine; dorsal and lumbar areas completely ankylosed; an area of zonal anaesthesia corresponding to the scapula of the right side; some tenderness with a slight kyphotic curvature in the cervicodorsal area.

CASE XI.—M. W., female, aged 64 years, housewife. Acute attack occurred twelve years before after an attack of grippé. The lower extremities were at first affected. This was followed by rigidity of the spine and later of the lower extremities. The affection of the spine was confined to the cervical and upper dorsal areas. The lumbar spine was little if at all affected. There was some anaesthesia of the trunk in the middorsal distribution of the right side.

CASE XII.—M. T., male, aged 63 years, carpenter. Acute attack began fourteen years before, following grippé. The ankles were at first affected, later the joints of the lower extremity. He had had "lumbago" ever since the beginning of the disease. The main involvement of the spine was confined to the dorsolumbar area; there was considerable crepitus with comparatively little limitation of movement in the cervical area. There was an area of anaesthesia of the trunk corresponding in distribution from the sixth to the tenth dorsal spinal segments with a zone of hyperaesthesia above this area.

CASE XIII.—M. W., female, aged 49 years, housewife. The acute attack began twenty-one years before, after the birth of a stillborn baby. There was an acute painful swelling of the joints with fever affecting both upper and lower extremities. There was very marked atrophy of the muscles and also of the skin; marked deformity in all four extremities; spinal involvement confined to the cervical and upper dorsal areas, associated with distinct scoliosis and some kyphosis in the same area.

CASE XIV.—This patient had been under my care at the Home for Incurables, and was later admitted at the University Hospital, where he died and where the autopsy was performed. I am indebted to Dr. Stengel for his notes of the case and for the autopsy material.

D. M., aged 32 years, white, admitted to University Hospital January 17, 1902, service of Dr. Stengel; electrician; occupation necessitated use of right hand a great deal; used alcohol moderately; father died of pleurisy; mother and one sister living and well; no history of injury; never had any sickness except present trouble. Eight years before, patient began to have pain and stiffness in the right wrist. The fingers of the right hand were involved in a few weeks, and successively the wrist of the left hand (not as marked as the right); this was followed by an involvement of the ankles, feet, knees, hips, and spine. He had been at the Home for Incurables for the previous two and a half years. Until admission to the hospital he was able to walk with the aid of a cane, and to sit in a semierect position in a high chair.

Physical Examination: Lay in bed on back, semirecumbent, legs and thighs flexed; he asked frequently to be lifted higher on pillows; could sit on side of bed with hips partially flexed; apparent age forty-five years; gait not noted; facies, expressive of tremendous emaciation. Bony structure that of a man of moderate size and development. Skin dry, glazed, and shiny, especially over ribs; on abdomen showed superficial scaling. Brownish pigmented patches on ring and small finger of right hand, and ring finger of the left hand; slight on forehead; oedema marked in feet. No abnormal pulsations or eruptions. Temperature: local not elevated; general, 98.2° F.; superficial arteries slightly sclerosed; no lymphatic enlargement; muscles markedly wasted; strength very poor; muscles appeared to have been of moderate development; tremors slight; no contractures; nails show marked linear striation.

Joints: Right thumb and middle finger subluxated; little finger fixed; right wrist joint fixed; left wrist movable. Elbow motion good. Shoulder motion limited, could not raise arms to horizontal position; anteroposterior motion also limited; neck very rigid; spine showed impaired motion. Great toes fixed in hammer toe position; second toes fixed, remaining toes showed impaired motion. Limitation of motion in articulations of tarsus. On right side reversal of anteroposterior arch of foot, convexity downward. Right knee spindle shaped, enlarged, motion limited. Left knee, moderate motion; left hip, motion good; right hip, fixed. Head, angular in shape, size proportionate to body. Hair dry. Face showed signs of wasting, sunken eyes, hollow cheeks and temporal fossae, prominent molars, chin, and nose, thin lips. Color, slight pigmentation on forehead; pallid. Eyes, dark brown; size normal, pupils reacted to light and accommodation; conjunctivae slightly congested; sclera, pale. Ears, large, no abnormality in shape; mastoids prominent; hearing good. Jaws showed some

impairment of motion; lips thin, dry, and pale. Mouth and nose, mucous membrane pale; breath, foetid; teeth, few and carious; gums pale; tongue dry whitish coating, movements good, marked tremor. Palate, tonsils, and pharynx slightly congested; voice, slightly hoarse; vocal cords not examined; neck thin, motion restricted; carotid pulsations not marked; no thyroid enlargement; lymphatic glands not enlarged. Thorax: All normal depressions very marked from emaciation. Respiratory movements limited, breathing largely abdominal from lack of mobility of costal and spinal articulations. Apex beat fifth interspace one and one half inch within nipple line; pulsation visible in fourth interspace; no thrills; fremitus marked on both sides. Lungs: Percussion showed apex to be level with clavicle; base at sixth rib on left side; very slight descent with inspiration; percussion note not appreciably impaired. Heart: Upper border at lower edge of third rib; right border, slightly within right border of sternum; apex, one and one half inch within nipple line, fifth interspace. Auscultation sounds clear, but weak; no murmurs; cardiac action irregular. Abdomen: No thorough examination; walls very rigid. Liver enlarged, one inch below costal margin. Gastric area extends as low as umbilicus. Spleen not palpable. Nervous system: Gait not noted; coordination impaired from condition of joints, and weakness; slight tremor, largely volitional. Muscular strength impaired, equally decreased on the two sides. Reflexes: Patella, biceps, and triceps increased. Sensation: Tactile not appreciably impaired; sight, hearing, and speech normal; some mental impairment and irritability.

Blood: Hæmoglobin 38 per cent.; R. B. C., 5,130,000; W. B. C., 21,200.

Urinalysis: Urine slightly cloudy, pale yellow, neutral, no precipitates; sp. gr., 1013; albumin, distinct ring with HNO_3 ; sugar, negative; indican, distinct. Cystoscope showed urates, epithelial cells, a few leucocytes, and hyaline and granular casts.

Pathological Examination.—No gross changes were observed in the central nervous system. Microscopical examination of the brain showed a moderate grade of arteriosclerosis. The large cortical pyramidal cells of the motor cortex were the seat of senile changes, i. e., they were of somewhat smaller size with a diminution in the number of dendrites, a lessened quantity of chromatin, and a deposition of yellow pigment at one extremity of the cell. This deposition of pigment in some of the cells occupied a greater portion of the cell area. In such cases the nucleus took a somewhat eccentric position. These changes are normal to old age, and occurring at an earlier period of life in cases of marked arteriosclerosis are simply indicative of presenility. These changes occasionally occur in conditions of intense intoxication. I have observed them in a case of diabetic coma.

A microscopical examination of the spinal cord showed the same cellular changes as observed in the cortex. There was also a condi-

tion of arterial sclerosis of the vessels of the cord, with miliary aneurysms. Two miliary aneurysms, one in the area of the crossed pyramidal tract of the cervical area of the cord, the other in the anterolateral tract of the upper dorsal area, were observed. Small areas of perivascular sclerosis obtained here and there throughout the cord. The areas were not uniform around all vessels and occurred only around certain vessels, and like the miliary aneurysm formation, were in the distribution of the pial vessels, i. e., not in the distribution of the anterior spinal artery and its branches. There were small black granules scattered here and there over the entire area of cross section of the cord by the Marchi method. Inasmuch as a few sparse black granules may occur in normal conditions as a manifestation of nutritive changes within a normal limit an increase in the number of these fat granules is, I take it, merely the accentuation of the same nutritive changes in the myelin, due to the arteriosclerosis. The same condition obtained in the nerves. In the longitudinal section of the nerves these black granules were present, but not sufficiently frequent to constitute degeneration, i. e., the myelin formed a continuous entity between the nodes of Ranvier and the minute black granules which were occasionally present, never occurred as a continuous row of black dots, such as would necessarily be present if the nutritive changes in the myelin were sufficiently intense to constitute a pathological process. While, therefore, I consider the presence of those conditions both in the spinal cord and peripheral nerves as within the normal pale, it is only so here described within such limits. When the arterial changes are taken into consideration I should not consider them entirely normal in a man thirty-two years of age, but abnormal only in the sense of deficient nutrition due to arteriosclerosis.

In a cervical and lumbar enlargement of the cord, the ganglion cells of the anterior horns were diminished in number and the seat of the following changes: The yellow pigment occupied a large part of the cell area with an eccentric position of the nucleus and diminution in the number of dendrites. The nuclei of most of these cells were of much smaller size and stained very deeply with the nuclear stain. The nucleus with the hæmalaun-eosin took a pale violet tinge, in which the filaments of chromatin could be seen under a high power. In the cells under consideration the nucleus was reduced to one half or even one third of the normal size, took a deep purple stain, in the midst of which the nucleolus was hardly perceptible. In a few of the cells the nuclear area was so reduced as to form a very slight ring around the nucleolus. The other ganglion cells, both in the cervical and lumbar enlargements, were fewer in number than in normal cords.

The anterior and posterior roots were normal by the Van Gieson, hæmalaun-eosin, and Weigert stains. By the Marchi method, the posterior roots showed a number of small black granules, both in transverse and long section, but not sufficient to constitute unquestionable degeneration. This was borne out by the fact that secondary

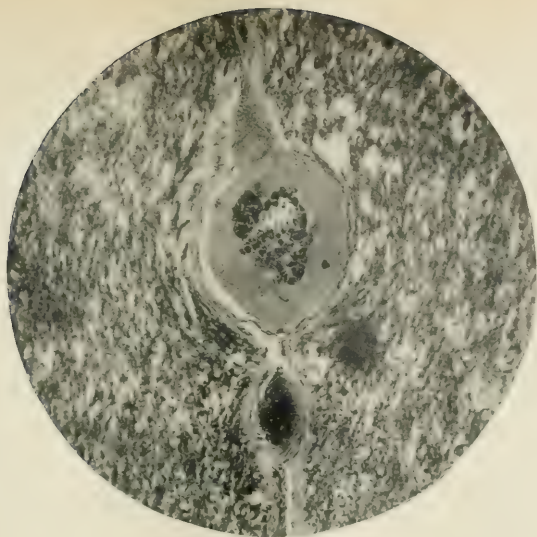


FIG. 1.—Miliary aneurysm in the anterolateral tract of the spinal cord of Case 13. This aneurysm involves one of the pial arteries. Rarefaction and an area of sclerosis are seen around the aneurysm.



FIG. 2.—Section with the exception of "E" stained by "Haemalaun-carbolic-eosin" stain. A A, Normal cells. B, Eccentric position of nucleus, with diminution of its size. C, Marked diminution in size of nucleus. The nucleus has taken very deep stain. D, Atrophy, with pigmentation of the cell and with shadow nucleus. E, Perinuclear pigmentation, as shown by Marchi method.

degeneration was not seen by the Weigert method, other than as a slight perivascular sclerosis, in the posterior column. In such a chronic process this would undoubtedly be present had this degeneration gone beyond the limits of a functional and restorable process.

The changes in the spinal intervertebral ganglia, other than the marked arteriosclerosis of the vessels, were confined to the ganglion cells. The normal ganglion cells should be spherical with a large vesicular nucleus, staining a very pale violet with hæmalaun, with the cell substance staining a light purple. The chromophilic bodies of Nissl were distinctly stained and were in these cells finely granular and absent at the periphery of the normal cells. In the ganglia of this case, it is exceptional to find a cell approaching the normal. The yellow pigment described was present in these cells in large quantities. In some of the cells it appeared as a dark yellow homogeneous mass, whereas in others it occurred as very fine granules, giving a pale yellow tinge to the cell protoplasm. The arrangement of the pigment in the spinal ganglion cells was somewhat different from that observed in the cells of the spinal column. The usual arrangement of the pigment in the spinal cells is toward one end of the cell. In the spinal ganglia the deposition of pigment as a rule is around the nucleus in the centre of the cell. This is brought out very distinctly in sections by the Marchi method. The granular pigment in this case, both in the cells of the spinal cord and of the spinal ganglia, gave a black stain by the Marchi method and a purplish black stain by the Weigert sheath stain. The same character of pigmentation with more advanced changes in the nuclei and other evidence of senile degeneration of the cells, both of the spinal cord and intervertebral ganglia and the Gasserian ganglion, were present in a case of migraine with extensive arteriosclerosis of the central nervous system. In some of the cells, instead of a deeply stained contracted nucleus, the nuclei were very pale without nucleoli and without the chromatin filaments of the normal nucleus. The chromophilic elements of the cell protoplasm stained less intensely in these cells, especially towards the periphery of the cell. The outline was somewhat irregular in shape. In more advanced stages of degeneration the cell outline is very irregular, the cell protoplasm taking a homogeneous pale violet stain with a deposition of large quantities of yellow pigment at one side and sometimes taking up the entire cell area; the nucleus is either entirely absent, or if present has an eccentric position at the edge of the cell and at times appears as a vacuolar area in the midst of a mass of pigment, but taking no stain and appearing as a clear, stainless area.

All these cell changes have been noted as occurring in the intervertebral spinal ganglia, and are also present in the Gasserian ganglion.

An examination was made of the sciatic nerve and two similar nerves sent to the laboratory unlabeled. The examination of the sciatic nerve by the Marchi method showed no distinct, well defined degeneration, merely the presence of small black granules here and there as described. The

examination by the Weigert sheath method showed distinct degeneration in small groups of fibres. This degeneration was not that of individual fibres, but of a number of contiguous fibres running parallel in the same area of the nerve. This was best seen in microscopic sections cut in the long axis. The muscles were not submitted for examination.

The pathological lesions described in this case, i. e., the cell degeneration of arteriosclerosis and the changes in the peripheral nerves, have been found in other conditions. I have noted before the same cell degeneration in a case of migraine with arteriosclerosis of the nervous system and have also seen it in other cases of arteriosclerosis. The same group of lesions identical with all those described are present in a case of paralysis agitans with joint deformity.

The similarity of certain cases of paralysis agitans to the ankylotic form of rheumatoid arthritis is very striking. Spiller has recently called attention to this same condition. I have been impressed of this similarity for a long time, and Dr. Carncross, in an investigation of my cases at the Home for Incurables, both of rheumatoid arthritis and paralysis agitans, has noted in a number of cases a distinct identity of joint and sensory symptoms. The lesions of the sensory ganglia (the spinal and Gasserian) are of especial interest in their relation of chronic trophic disturbances. The association of disturbance of the sensory system to both acute and chronic trophic disturbance, has not received the proper attention. I have called attention to it in hydrophobia, for my attention had first been directed in this direction by Dr. Burr's observation at the Philadelphia Hospital of the rarity of trophic necrosis without sensory derangement. The atrophy arrangement in the muscles and other tissues in direct association with diseased joints, so called Charcot reflex atrophy, is similar, although not so extensive as the trophic disturbance in the same structures in rheumatoid arthritis. It is probable in cases of reflex atrophy following a joint injury, that a functional or organic disturbance of the sensory neurone, such as is described in this case, may be the explanation of the condition. The findings in these cases, if they teach anything, support the theory of an affection of the central nervous system for the cause of rheumatoid arthritis; that these lesions, however, may be secondary to the joint changes should not be lost sight of, especially as we see an identical symptom complex developing in the course of tuberculosis which may more easily explain the theory of a local pathological process in the joints.

In drawing conclusions from the cases here reported, it must be remembered that all of these cases, with the exception of Case I, are of long

standing and exhibit an advanced state of the disease. Notwithstanding this fact the frequency of the spinal involvement is striking. There is, however, no special reason why the spinal articulations should not be affected with the same frequency as the other joints. The fact remains that these joints are rarely involved in acute articular rheumatism. In Case I during the period of the initial acute stage, symptoms referable to the spine were not present, or at least were not spoken of by the patient, and yet within two years well defined and apparently advanced rigidity of the spine was presented on examination. The presence of root symptoms in this case, flattening of the chest, etc., gives us a clinical picture if the other joints are left out of consideration, almost if not exactly identical with that in the group of cases described by v. Bechterew.

The history of the case of isolated spinal rigidity (C. W.) deserves careful comparison with those here tabulated. In all the cases of rheumatoid arthritis there is a well defined history of acute manifestations in the joints followed at varying intervals by the progressive joint changes and at times with acute exacerbations of the chronic symptoms. In all the cases here reported of rheumatoid arthritis in which the spine is entirely involved, there is an extensive involvement of nearly all the other articulations, even the jaw joints in some of the cases being affected. In the case of C. W. the onset was insidious, without acute symptoms, and followed some time after a shock to the spine. The initial symptoms in this case were referred to the legs and in all probability were of root origin. The immunity of the other joints after ten years of progressive stiffening of the spine is noteworthy.

In spite of the similarity of the joint symptoms in some of the cases of rheumatoid arthritis to the disease described by v. Bechterew, we are not at all positive that the latter disease is in all cases or even in the case here under consideration to be considered as being a local manifestation of rheumatoid arthritis. One should be careful about arriving at positive conclusions in such a matter, inasmuch as it is highly probable that a group of etiologically distinct joint affections are classified clinically under the term rheumatoid arthritis. From a study of the cases at our disposal we are justified in drawing the following conclusions:

(1) That ankylosis and rigidity of the spinal column is a frequent manifestation of advanced rheumatoid arthritis.

(2) That it may develop early in the course of the disease and be associated with irritative root symptoms.

(3) That if the disease described by v. Bechterew is to be considered as a distinct clinical entity separate from rheumatoid arthritis, it should only be diagnosticated as such after the disease has progressed over a considerable period of time without involving joints other than those of the spinal column.

(4) That we are not able at present to differentiate from rheumatoid arthritis that large group of cases, reported by Marie and others, where the rigidity of the spine is associated with changes in the hip and other joints.

ASEPSIS AND ANTISEPSIS IN OBSTETRICS: ALSO "STERILE GAUZE" AND "STERILE WATER."*

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We feel constrained to call attention to the fact that the word *asepsis* simply means *without sepsis* and does not mean *without antiseptics*. The definition of asepsis is absence of blood-poisoning, exemption from putrefaction and its consequences. A title quoted from Dr. J. C. Warren, *Use of the So Called Germicides in Efforts to Procure Asepsis* serves well to illustrate the meaning of the word. (*Standard Dictionary*.)

We frequently hear the terms *aseptic* and *antiseptic* loosely employed in relation to practice, as if the one implied the exclusion of the other, whereas both refer to methods aimed at the exclusion of infection, and antiseptics afford the surest means of securing asepsis.

Recently we were somewhat shocked to have our urgent appeal for immediate perineorrhaphy on correct mechanical principles,¹ read before the New York County Medical Society, vigorously opposed in the discussion by a medical gentleman who fears perineorrhaphy on account of the danger of sepsis. The gentleman in question has since circulated a reprint of his remarks as reported in the *Medical Record*, and we find that he deliberately leaves a ruptured perineum unprepared for the reason stated, while availing himself of no more efficient means of securing asepsis than "soap and hot water," with which one should "first scrub; second scrub; and third, scrub." He fails to inform us whether he uses three kinds of soap. And we strongly protest against being misunderstood as implying that we think he uses too much soap and

* Read at the meeting of the Medical Association of the Greater City of New York.

¹ Reported in *Med. Rec.*, April 4, 1903, p. 557; earlier original article (illustrated), *N. Y. Med. Jour.*, April 14, 1900, p. 540, et seq.

water. A soap solution is weakly antiseptic. Neither do we deny that very good results can be secured without the use of any other antiseptics. We simply contend that the best results cannot be so obtained.

There is no question whatever of the danger of sepsis being greater in an infected closed wound than in an infected open wound. And since we believe that microorganisms in the contiguous skin or air are occasionally responsible for infection, we too should have some hesitation in sewing up the perinæum without disinfection even in a cleanly conducted case. But why should we not cleanse the wound with an antiseptic solution and seal it from later infection? So far from being a cause of sepsis perinæorrhaphy thus becomes a valuable means of prevention. While there is one practitioner openly advocating the open treatment of the perinæum, the subject is worthy of our attention lest others be misled.

We desire right here to say a word about "sterile gauze" and "sterile water."

How long does gauze remain sterile after the unavoidable exposure to the air incidental to its removal from the sealed container and introduction into a wound or cavity? We have seen the uterus packed with "sterile gauze" after curettage in a mild case of puerperal septicaemia and at the end of twenty-four hours the gauze had a putrid odor much more offensive than any which had existed before, the patient in the meantime exhibiting no amelioration of symptoms. The gauze was removed and improvement rapidly followed.

Even though gauze be impregnated with an antiseptic, if its meshes contain air it may actually prove a source of infection. The uterus is a natural incubator. Therefore, avoid using gauze in the puerperal uterus or vagina except where packing or drainage seems very important, and when used remove it at the earliest permissible moment. Packing of the puerperal uterus either after abortion or later delivery is seldom if ever indicated. The cervix usually remains sufficiently open for drainage.

"Sterile water" exposed to the air is sterile only while it is too hot for any use in midwifery. By the time it has cooled sufficiently for use many microbes have fallen into it from the atmosphere and remain undestroyed at the lower temperature. Sterile water in sealed containers cannot be utilized without at least momentary exposure to the air. In the earliest post partum period, a few drops of such water left in the vagina or uterine cavity may be responsible for the sepsis seen a few days later. Admixture with blood forms an ideal culture medium. The puerperal uterus and genital tract probably present a better soil for infection than any other tissue or organ of the body. There is a vast dif-

ference between the puerperal uterus and the uterus not recently the seat of pregnancy. One part of corrosive sublimate in ten or twelve thousand of water will keep the water sterile when cool. A small quantity retained in the uterus or vagina will be harmless. It is obvious that no deductions from recent experience in dealing with the peritoneal cavity are applicable to the puerperal uterus and vagina. While we have reason to believe that the atmosphere ordinarily contains germs which may drop into sterile water at the moment of use and possibly cause puerperal infection, let us give our patient the benefit of the doubt as to whether Nature may be able to take care of the microbes. Let us do it for her. Our means of securing asepsis are far more certain when they include the moderate, rational use of an efficient antiseptic. Even our most scientific methods are imperfect. Dr. Brodhead has recently published a paper,² going so far as to advise abstention from all internal examinations during labor in cases previously ascertained to be normal, so long as they seem to be progressing favorably. Such extreme conservatism seems unnecessary to one who as yet has never lost one of his own patients from sepsis. But Dr. Brodhead's anxiety should at least serve to emphasize the importance of employing rigid antiseptic methods. On an occasion like this a little review may not be out of place.

Preliminary care of the patient during the early part of labor includes the usual bath, enema, and clean clothing. The hair of the pubes and neighboring parts should be clipped short with scissors so that there will be no danger of any hair reaching into the vulva later. The skin of these parts including the roots of the hair will be soaked with an antiseptic solution before making a vaginal examination (as stated hereafter) and also occasionally as labor progresses even though no examinations are made. Clean sheets, draw sheet, bed pads, or Kelly pad are employed as usual.

The hands of the attendants should be thoroughly scrubbed with soap and warm water for at least five minutes, and immersed in an antiseptic solution for an equal length of time. Wipe out under the finger nails with a little gauze or absorbent cotton wet with the solution. When late arrival does not allow sufficient time for such preparation, rubber gloves should be worn, or the hands should at least be dipped in an antiseptic solution and religiously kept out of the vagina and away from abrasions or a lacerated perinæum until properly scrubbed at the earliest opportunity.

Ordinarily a bichloride solution, 1 to 2000, is sufficient and suitable for all external purposes, and a 1 to 4000 solution internally. Where there is

² *Medical Record*, April 24, 1904.

reason to fear specific or special infection we use solutions twice as strong. Lysol, one or two per cent., keeps the examining fingers and mucous membranes slippery and is therefore useful where repeated examinations are made. Lysol is not trusted alone, but is used after the hands have been soaked in the bichloride solution. Petrolatum and other lubricants are seldom necessary.

Before making an examination, the vulvar canal and neighboring external parts for several inches in every direction, including the mons veneris, should be bathed with the antiseptic solution, using always for this purpose fresh "sponges" of absorbent cotton, as many as may be required, having a fresh solution with several such pieces of cotton in a basin within reach, either on the foot of the bed or on a chair or table near by, never dipping the cotton a second time into the solution, but dropping it after use into a slop jar or other receptacle. The preputium clitoridis should be drawn back and carefully cleansed, and creases between the labia majora and minora and all folds about the vaginal orifice which can be exposed to view should receive similar attention, the knees being drawn up and widely separated. Even where the final delivery is to be conducted in the left lateral decubitus, all this preparation should be done with the patient on her back.

The vulva should be wet with the antiseptic solution the last moment before examination. Both hands of the obstetrician (with or without gloves) are likewise wet by dipping them into the solution, and two fingers of the examining hand are introduced into the vagina, avoiding contact with apron, towel, or anything whatsoever, no matter how sterile, even the labia being held widely apart by the thumb and fingers of the other hand. With these precautions no vaginal douche need be employed in normal cases either before or after delivery. A single vaginal douche is usually given after instrumental delivery or perinaeorrhaphy; also at the end of a tedious labor, especially if there have been unusual manipulations. Forceps are boiled (or sterilized) immediately before use, and used out of the utensil in which they are boiled or a pitcher which has been disinfected with a 1 to 1000 bichloride solution and rinsed out with boiling water. Dipping them in a lysol solution will serve the double purpose of making them slip in easily and rendering a subsequent douche unnecessary.

Sterile napkins, or vulvar pads, as bought in sealed packages of reliable makers, or prepared and sterilized at home, are employed in the usual manner. A gas stove and fish kettle make an excellent sterilizer. Ordinary napkins fresh from the laundry are probably almost equally sterile and safe. Any napkin or pad must be looked upon as a neces-

sary evil and should be changed frequently, not less than five or six times daily during the first week after delivery. The mother should usually pass urine at these times, and the vulva should be bathed with a warm 1 to 2000 bichloride solution on each of these occasions. Bichloride tablets are so inexpensive that a fresh solution can be made every time. Antiseptic occlusion dressings have never seemed advisable.

In all cases, beginning with the second week after delivery we usually prescribe a mercurial vaginal douche (1 to 4000) once or twice daily to promote involution and on account of the grateful sense of cleanliness afforded to the patient. These douches may be discontinued when the lochial discharge ceases and napkins are no longer required.

In febrile cases and where the lochia develops the slightest bad odor, we do not hesitate at any time to employ vaginal or intrauterine douches, associated with digital exploration, considering such treatment absolutely indicated. The dull curette is believed to be a safe and necessary instrument in experienced hands and under certain circumstances.³ As an intrauterine douche it is customary to employ about two quarts of a warm 1 to 4000 (or 1 to 5000) bichloride solution, followed as part of the same douche by an equal quantity of fluid not more than half as strong. Such irrigation may be repeated at intervals of six or eight hours until the temperature of the patient remains under 101° F. (or even 100° F in some instances). The danger of poisoning from absorption is practically nil externally, very slight for the vagina, and very considerable for the uterine cavity. The last is greatest, of course, immediately after labor, when nothing stronger than a 1 to 8000 solution should be employed. Make sure that little or none is retained. Manipulate the uterus through the abdominal wall, and even let the patient be raised into a sitting posture for a few moments if necessary. Other antiseptics may be resorted to if the patient or practitioner exhibits an intolerance toward the bichloride of mercury. The physician may find antiseptics so injurious to his hands that he will adopt the use of rubber gloves. Rubber gloves are particularly useful in protecting the hands when it is necessary to examine a case already septic, and also as a safeguard to the patient if the skin of the doctor's hands is not perfectly sound and healthy. Small, fresh cuts on the hands should be disinfected with a bichloride solution, allowed to dry, and coated with flexible collodion.

Always warn a woman to keep her own hands away from the vulva while she is confined to bed. Let me add that this warning is not based on purely

³The indications for curettage have been admirably summarized in a paper by Dr. E. K. Brown, *Medical Record*, January 28, 1905.

theoretical considerations. During this period the bladder and rectum should not be neglected, and it is one of the exclusive duties of the nurse to render the necessary attentions. Sponge bathing and general cleanliness are presupposed, and the linen of the bed and patient may always be changed as often as desired.

19 FIFTH AVENUE.

A CLINICAL LECTURE UPON A CASE OF TYPHOID CHOLECYSTITIS.*

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The first patient that I present to you to-day is a boy, eleven years of age, who was referred to us by Dr. James, of Mays Landing, N. J. There is nothing in the family history of this patient that has any bearing upon his present condition. He is said never to have had any of the ordinary diseases of childhood.

Two months ago he developed typhoid fever, which confined him to bed for five weeks. About a week after he had gotten up from bed (that is, something over two weeks ago), he developed severe abdominal pain in the right side, which was accompanied with nausea and constipation and was associated with a temperature of 104° . There were tenderness and abdominal rigidity, and the condition was regarded as due to appendicitis.

The severe pain quickly passed away, and after three days' confinement to bed, the child was about again, with a normal temperature and apparently entirely comfortable. After a few days he again complained of pain—this time distinctly in the right hypochondriac region. The pain came on rather suddenly; was not so violent as in the first seizure, and was accompanied with an elevated temperature, headache, thirst, nausea, constipation, and coated tongue. There was no vomiting. The tenderness was decided and the rigidity was marked. The next day the physician noticed that the child was beginning to become jaundiced. This was seen first in the whites of the eyes and afterwards spread rapidly over the rest of the body. Later, the stools were found to be clay colored.

During the next few days the child suffered from paroxysmal pain and grew gradually worse. He was brought to this city and admitted to the hospital.

The examination of the patient on admission showed that he was the victim of a general and very distinct jaundice. The pulse was 108; the temperature, 99.6° . There was marked rigidity of the upper portion of the right rectus muscle. The child complained of a little pain, but not much. At times there were paroxysms of pain. There was decided tenderness over the region of the gall bladder; and where as there was a general impression in our minds that there was a mass of some kind beneath, the rigidity of the rectus muscle prevented a certain conclusion.

The physical examination showed that the heart and lungs were normal. The leucocyte count was 10,400. The urine contained a trace of albumin and bile pigment, but no blood and no casts. A bac-

teriological examination of the blood was ordered, and the subsequent report showed that it was sterile and contained no malarial organisms. It showed, however, the Widal reaction strongly.

To sum up this case: A child had a distinct attack of typhoid fever, and when convalescent from the enteric fever, developed paroxysmal abdominal pain associated with elevated temperature, constipation and abdominal rigidity. This condition passed away, and was followed within a few days by a renewed attack, in which there was pain, tenderness, fever, rigidity, and well marked jaundice. The evening before his admission to the hospital the temperature was 103.6° and he lay upon his back with the legs and thighs flexed. The morning after his admission into the hospital, however, the temperature became normal; the spontaneous pain passed away, the tenderness greatly lessened, the rigidity became less distinct, the pulse slowed down a little, and the question arose whether this was a condition that was going to pass away without operation or whether operation should be undertaken. Between then and now we have carefully studied the patient. We have found that the symptoms oscillate. Some days the temperature is up, and some days it is down. One day it reached 104.6° and remained so for a few hours. Some days the tenderness is worse, and some days it is better. During the last two days, however, the rigidity has definitely increased, and the sensation of a mass has become more distinct, in spite of the rigidity. The leucocytes yesterday were found to have fallen from 10,400, which they were on admission, to 6,800; and we might conclude either that the patient is better or that the zone of inflammation is well encapsuled, or else that toxæmia has interfered with the leucocytosis. It is evident that there is not grave toxæmia and the general condition of the patient is certainly not better. Nevertheless, this is merely speculative, and I shall never allow the count of the leucocytes alone to determine my decision. The other symptoms are not better, although the leucocyte count has fallen.

What diagnosis shall be made in this case? We at once think of that protean malady, appendicitis. To be sure the pain and tenderness are not in the right iliac fossa, but occasionally appendicitis manifests itself in the right hypochondriac region. It does so when the tip of the appendix is near to or is attached to the gall bladder; it may do so when the appendix is high up back of the cæcum; or when, from lack of development, the cæcum has not descended, but remains in the gall bladder region. In the vast majority of cases, the signs of appendicitis are in the right iliac fossa. The attack of typhoid fever is not conclusive, as appendicitis may develop during and after typhoid. Jaundice is very rare in appendicitis, but may occur. Obstructive jaundice may arise in chronic appendicitis, as the result of adhesions about the gall duct; but this case is obviously not chronic appendicitis. In acute appendicitis with deep toxæmia, slight jaundice may occur; but this is not a state of deep toxæmia and the jaundice is not slight, but marked. In appendicitis with pyæmic abscess of the liver, there may be intense jaundice; but this patient lacks the other signs of pyæmia. In this case the jaundice points to trouble with the gall bladder or the gall ducts unconnected with appendicitis.

* Delivered at the Jefferson College Hospital.

This condition is not acute enteritis, although the fever, the colicky pain, and the sudden onset might suggest it. The jaundice is against this diagnosis; and so are the local rigidity, the mass, and the absence of severe vomiting.

It is obviously not intussusception; for it lacks the characteristically shaped mass which alternately becomes rigid and relaxed, and the tenesmus with the passage of bloody mucus, and presents symptoms that do not belong to intussusception.

It is not a renal, ureteral, or gastric condition.

Could it be tuberculous peritonitis? In acute tuberculous peritonitis there may be pain, tenesmus, elevated temperature, and rigidity. The pain, however, is usually slight; the tenesmus commonly trivial; and the rigidity not marked. The signs are not definitely localized, and there is a strong tendency to intestinal obstruction.

Considering everything,—the antecedent attack of typhoid, the mode of onset, the situation of the present trouble, the paroxysmal pain, the localized tenderness, the rigidity of the upper half of the rectus muscle, the mass, the jaundice, the irregularly elevated temperature, and the rapid pulse,—we are led inevitably to the diagnosis of typhoid cholecystitis with pus in the gall bladder; that is, suppurative cholecystitis. I shall have an anæsthetic administered and shall operate before you.

It was long ago known that inflammation of the gall bladder may arise during the course of typhoid fever. Both Louis and Andral were acquainted with this fact. For many years, however, it attracted comparatively little attention; and it is only during the last three or four years that professional interest in regard to it has been strongly awakened.

We now know that in most cases of typhoid fever the bacillus of Eberth enters the gall bladder. In fact, it is stated by Dr. Rolleston, of London, that in fatal cases of typhoid fever these bacilli are almost constantly present in the gall bladder. This does not, however, mean that in fatal cases of typhoid fever there is almost always cholecystitis; because the organisms may be present in quantities without there being any evidence of the existence of an inflammatory disease. There must be some factor present besides the bacilli, in order to produce this disease; or else the bacilli must be of peculiar virulence.

A great number of bacilli may be present and yet apparently do no harm whatever. They may, however, induce a catarrhal inflammation with desquamation of the epithelium; they may cause a purulent catarrh; or they may set up suppuration of the walls of the gall bladder. There may result inflammation or suppuration outside the gall bladder. In some cases pseudomembranous cholecystitis arises; in others, the gall bladder perforates from ulceration.

In cases of typhoid affections of the gall bladder, agglutinins are present in the bile or in the inflammatory exudate; and these may lead to the precipi-

tation of masses that serve as nuclei for gallstones. There have been reported by Dr. Harvey Cushing, of Baltimore, cases of posttyphoid cholecystitis in which gall stones were present, examination of these disclosing the fact that they contained typhoid bacilli. In a series of over thirty cases of cholecystitis operated upon by Professor Halsted, of Johns Hopkins University, nearly one third had had typhoid fever at varying periods before the operation. The factors present besides undue virulence of the organisms, when typhoid bacilli cause cholecystitis, may be a greatly lessened vital resistance of the system, the presence of gallstones, an antecedent inflammation of the gall bladder, an injury of the gall bladder, adhesions of the gall bladder, and particularly a blocking of the duct that permits of stagnation of the bile.

Attention has previously been called to the similarity between cholecystitis and appendicitis. It will be remembered that in appendicitis there may be catarrhal inflammation, there may be a purulent catarrh, there may be suppuration of the walls of the appendix, there may be perforation, there may be gangrene, and there may be circumappendiceal inflammation or suppuration. In both cholecystitis and appendicitis, blocking of the exit—from the gall bladder in one case, and from the appendix in the other—strongly favors inflammation, and in both very virulent microorganisms may establish an inflammation which causes the blocking.

Typhoid cholecystitis may arise during the existence of typhoid fever. The most common period for it to arise is at the end of the third week, just as the fever is beginning to decline. It is not uncommon during convalescence from the fever, and it has been pointed out by Dr. John H. Musser, of Philadelphia, that many so called relapses in typhoid are really cases of posttyphoid cholecystitis. Whenever what appears to be a relapse begins, the attending physician should carefully examine for the existence of cholecystitis.

Cholecystitis may arise months, or even years, after the occurrence of typhoid fever; and a pure culture of typhoid organisms may be obtained from the interior of the gall bladder. There are two explanations of such an occurrence. The first is that the bacilli found in the gall bladder have descended through many generations from the organisms that were present during the existence of the typhoid, and did not become active for harm to the gall bladder until some other factor had been introduced. The other explanation is that the organisms have been recently received from the intestine, the person being immune to typhoid fever, on account of his previous attack, but not being immune to inflammation of the gall bladder induced by the Eberth bacillus. In individuals that develop cholecystitis years

after an attack of typhoid fever, it is by no means uncommon to find that in the intervening period between the fever and the cholecystitis they have been sufferers from chronic indigestion and from occasional attacks of pain in the neighborhood of the pyloric end of the stomach.

A very curious fact has been called attention to of late—that is, that there have been reported cases of cholecystitis in persons that had never had typhoid fever, the typhoid bacillus having nevertheless been obtained by cultures. This matter was dwelt upon by Burley in the October number of *Medicine* for 1903. He reports a case of his own, and has collected six other cases from literature. It is, of course, conceivable that these persons may have had typhoid fever that was not diagnosed; or it may be that they were immune to the typhoid fever, although the gall bladder could still be attacked by the bacillus and made to pass into a state of inflammation.

The frequency of cholecystitis in typhoid fever is very hard to determine, because a large number of cases are probably unrecognized. Certain it is that in many cases of typhoid deep pressure over the gall bladder region occasions pain; yet, as this condition usually passes away and may not be associated with any other symptoms, it is impossible to state definitely the cause of it. Dr. John H. Musser and some other observers think that cholecystitis is much more common than is usually believed, and in many cases is unrecognized because the liver is high up and the gall bladder is under the ribs. It may not be recognized because the associated symptoms are not positive; it may not be recognized because the patient is in a condition of toxæmia and does not definitely recognize, locate, or complain of pain. Again, it may be confused with appendicitis.

The condition is rare in children of this age, and is more common in adults; but cases in children of only five years of age have been reported.

The route by which the organisms of typhoid fever reach the gall bladder has been much disputed. They may reach the bile ducts by means of the portal circulation, afterwards pass from the vessels to the bile channels, and eventually reach the gall bladder. In such a condition, cholangitis may precede or accompany the cholecystitis. It is doubtful, however, whether the normal liver will secrete the bacteria; and whereas this mode of infection may occur, it is probably not very common. It seems likely that most of the infections take place by ascending the common bile duct. If the gall bladder is adherent to the bowel wall, infection may take place in this manner. Another route of infection is through the lymphatic system, and Dr. Charles H. Mayo, of Rochester, maintains that this positively occurs. In cases of cholecystitis that have accompanied or followed typhoid fever, mixed infection with colon bacilli, staphylococci, etc., may be

found. Mixed infection with staphylococci may be followed by disappearance of the typhoid bacilli. The staphylococci attract hordes of leucocytes and the leucocytes may destroy the typhoid bacilli. There is no regularity as to the presence of leucocytosis in typhoid cholecystitis. In some cases it is present, in others it is not; it may be present in a case at one time and absent at another. In this case it is at present absent; on admission there was very slight leucocytosis.

In the patient before us, the diagnosis seems clear. He has suffered with occasional attacks of violent pain in the gall bladder region, and has persistent tenderness in the same region; there is marked rigidity of the upper half of the right rectus muscle, a mass in the right hypochondrium, a fluctuating temperature (the type being remittent), profuse sweats during the night, nausea, and very marked jaundice. Jaundice may or may not be present in these cases, and its absence would in no wise affect the diagnosis.

I purpose in this case to make an incision in the region of the gall bladder; and shall employ the incision of Dr. Bevan, of Chicago, which I have used before you a number of times. It is shaped like the *Italic* letter *f* without the cross line.

On opening the peritoneal cavity and searching for the gall bladder, I find that the colon is adherent to the under surface of the liver and is decidedly inflamed. Separating the adhesions from side to side, I am able to get my finger posterior to a mass, which is the gall bladder. I at once proceed to pack it around with iodoform gauze, inserting a piece in the foramen of Winslow; because, when I go to separate these adhesions, should there be a flow of pus, disaster might ensue if I had not protected the greater and lesser peritoneal cavities. I now separate the adhesions between the gall bladder and the colon. You see there is a burst of greenish white pus; and I exhibit to you a larger perforation in the wall of the gall bladder, the adhesions to the colon having prevented the passage of the pus into the peritoneal cavity. We shall take cultures of this pus.

I shall not remove the gall bladder, although the mucous membrane is in an advanced state of disease; because I think it not only desirable, but necessary, to drain the ducts for a number of days. I therefore scrape away the mucous membrane by the method suggested and employed by the Mayo brothers; carry the drainage tube down to the neck of the gall bladder, hold it in place with a purse string suture of the gall bladder, and surround the gall bladder with iodoform gauze, to catch any pus that may leak out by the side of the tube. I do not in this case, as in most operations requiring drainage of the gall bladder, suture the gall bladder to the abdominal fascia and the peritoneum; because the coats are so friable that the stitches would tear out.

I now close the abdominal wound, except at the point where the tube and the gauze emerge, and put on the dressings with the tube emerging between them. When the patient reaches the ward, I shall attach a long tube to this short one, in order to permit the bile to flow into a basin beneath the bed.

NOTE.—The patient recovered without an un-

favorable symptom. The culture taken from the gall bladder shows an unidentified bacillus, which is not the colon bacillus or the paracolon bacillus, and which is not identical with the typhoid bacillus or the paratyphoid bacillus. It resembles the typhoid bacillus, but possesses no agglutinative power. Further studies will be made to determine its character.

2045 WALNUT STREET.

FOOD PRESERVATIVES AND FOOD ADULTERATIONS.*

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This, perhaps, is a hackneyed subject which you ask me to speak to you about to-night, and yet one of continued interest, not only to the physician, but also to the people themselves.

That food must be preserved is a fact recognized by every one. Only in a savage state is it necessary to eat food as it is secured, to live practically from hand to mouth; but in all civilized countries there is a laying up of stores of foods against the seasons when foods are not produced, and thus the necessity for preserving food in some way has been recognized since man emerged from the savage state.

The subject of the preservation of food by modern methods did not assume great importance until a half or a quarter of a century ago. The development of the science of chemistry placed in the hands of the manufacturer the means before unknown of preserving food, and the means of matching in manufactured foods natural tints and colors, all made possible by the development of tinctorial chemistry, on the one hand, and of synthetic chemistry, on the other hand.

We have many food preservatives which have been in use since the earliest times, the usual condimental preservatives and substances which reveal themselves to the consumers by their odor and taste, such as common salt, sugar, vinegar, and wood smoke. Their established use is well recognized and no legislation has forbidden the use of such preservatives. There is another class of preservatives, known as antiseptics; and in the quantities in which they are used they have neither taste nor odor, so that their presence is unknown to the consumer, unless stated to him.

I believe the fight against artificial coloring matters is almost won, and that the education of the public in regard to artificial colors is quite as effective in this direction as any legislation that can be enacted. The moment the people demand uncolored foods, that moment they will get them.

* Read by invitation before the Philadelphia County Medical Society.

It has been claimed that the use of colors in foods is not reprehensible so long as the colors are harmless to health. From the medical point of view I assent to that proposition. There is, however, a vice in the use of colors more insidious than the effect upon health, the vice of deception in food products. Why should a food product be made to assume a character which it does not possess naturally in respect to color? The manufacturer, who should be heard, says that the people demand that the food shall have these colors. They probably do at the present time, but they certainly did not at the beginning. The taste which now rules the public is one which has been created by the use of these coloring matters, and, therefore, the public cannot be held responsible for that taste; and, more than that, the public is certain to demand the uncolored article just as soon as they are informed in regard to the nature of these coloring matters. I refer especially to articles injurious to health rather than to that class which it is claimed have no effect of an injurious character upon the health of the consumer. I believe manufacturers agree that the use of mineral matters in foods is reprehensible. Candy manufacturers boldly proclaim this and are trying to have the use of mineral colors of any description prohibited. That is perhaps a rather sweeping condemnation, but we do know, for instance, that lead chromate and copper sulphate are not regarded by the medical profession as particularly wholesome articles of food. Copper sulphate is used because of its property of fixing in the tissues the natural green color. The color of peas and beans fades after a certain time, even though kept in the dark.

The manufacturer should have a fair inning, and he alleges that copper sulphate when added to foods enters into a chemical combination in which the copper salt becomes inert and insoluble in the digestive juices. I am not inclined to accept that as a logical argument. I have not, however, myself made any experiments looking to the determination of the effect of copper sulphate upon health and upon digestion, but am dependent upon data collected by other people. In a court of justice the accused is held to be innocent until proved guilty. Here, however, is a criminal, confessed to be guilty by everybody. Even the manufacturer will admit that copper sulphate in itself and uncombined in a food product is a harmful agent and, therefore, it should be held to be harmful until proved innocent.

As in many other cases, experts disagree in this. I am not speaking of the character of the expert. I believe that an expert has the same right to advance the interests of his client that an attorney

has, provided he does no violence to his conscience and to science. He has the right to make out the best case he can, preserving, always, his integrity. You all know that experts can take the same data and viewing them from different points, draw conclusions diametrically opposite, and do it reasonably and perhaps logically. Especially has this been true in France, where there was formerly a decision of the Committee on Hygiene prohibiting the use of copper sulphate in food products. The committee was convinced after further study that this decision was not applicable, and it was annulled. As a result we now get large quantities of food products from France containing copper in varying quantities. But the real effect of copper sulphate was not altered by this change of opinion. In considering questions of this kind, if we had the results of experiments with copper sulphate such as we have with borax we would have some additional sound and conclusive evidence. In the absence of such data, and in the presence of the conflicting opinions of experts the best thing to do is to be guided by the general principle that a substance known in itself to be injurious to health is guilty until proved innocent. All we have done in executing our food law so far is not to send the guilty party to jail, but to ask that the criminal be labelled so that all may be warned of his character. We hope some time to be able to settle this question by definite experimental evidence, but meanwhile we are content with publicity. I believe we can do more in many cases by moral suasion than by the strong arm of the law. In the almost two years of the execution of our food law we have never had a case in court and yet we have secured what we wanted. Since March 16th all food products entering this country artificially colored have had to bear a label stating the fact, though the material used for coloring need not be declared, except in the one case of the copper sulphate, which is not a coloring matter alone, but also a mordant.

I want to illustrate the position which I have occupied upon the almost universal coloring of butter. I have for many years opposed that practice, and I attended a convention some time ago in this city in which I took as it were my life in my hands upon this question. I am glad to report to this assembly that there is to-day a growing tendency among the farmers to believe that uncolored butter is better and will bring a higher price in this and other countries. The moment the dairymen understand this there will be no more difficulty about coloring butter. The farther south you go the deeper the people want the color of the butter. I don't know why a high

temperature and a desire for high color in butter go together, but it is a fact. Demand that the butter you eat shall be uncolored, and in two or three years, without trial by jury, you will get what you want. I was in a convention recently in Detroit, when one of the largest manufacturers said to me that they had joined me in my crusade against color, and that after the first of January their factory would make no more artificially colored food products. I do not believe it is a good thing for us to eat continuously even a small quantity of colors which may be regarded as harmless. They are not foods, are not, as a rule, digestible and have no relation to the chlorophyll and its derivatives which are the natural coloring matter of vegetable life. We know that there is a certain amount of foreign matter in food which is necessary to digestion, but Nature provides this in the foods. The idea which I formerly held to tenaciously, viz., that the coloring of foods by harmless matters made them more attractive and, therefore, more digestible, I no longer hold. My advice to food makers is to stop using colors as soon as they can and especially if the coloring is under suspicion of any kind.

Concerning antiseptics in relation to foods, I think the rights of the consumer are paramount. My position is that there should never be an antiseptic save those already enumerated admitted to foods, except in case of absolute necessity, unless the consumer orders it for himself. I believe anybody has a right to eat anything he pleases, but that he has no right to make another person eat the same thing. Antiseptics should not be used in food products except when ordered by the consumer, or when the foods are made for specific purposes and when they cannot be safely preserved by ordinary means until they are used and where such preservative is absolutely necessary in long journeys and in remote localities. It is far better to eat foods with antiseptics in them than to have no food at all. I am in sympathy with the campaign of education and believe that when preservatives are placed in foods the consumer should be notified; also that he ought to have the opportunity to get foods without them when he wants to. I believe many of the great food manufacturers are already excluding many of the antiseptics. At first when labelling was suggested the manufacturers said the people would not eat the correctly labelled foods. This brought them to the proposition that it was either right to deceive the consumer or to injure him. I do not believe it is right to deceive a consumer or to injure his physical health. Neither should violence be done to a man's moral health. One of the men interested in the making of foods stood

up before a committee of Congress and maintained that deception was the life of trade in foods and that the very moment you stopped deception you ruined trade.

Our experiments have convinced us that anti-septics in foods are injurious and unnecessary. Our methods of experimenting may be wrong, but they will all be published with the data and not a single fact observed has been left out. Our conclusions make the use of these substances in food products deleterious to health and they should be excluded on that ground. If I had any view at all concerning borax it was that it was the least harmful of all preservatives used in food. If it is, the others must be very injurious. We showed conclusively that borax in quantities not exceeding half a gramme a day and extending over a period of fifty or sixty days was distinctly deleterious to health, and used in large quantities it speedily put the subject out of the fight. We didn't get quite the results that our German friends did. Neither did we get those of the experts on the other side of the question employed by their clients to show that borax was harmless. The strength of our ground is that we had no client. We were not employed to do anything, except to make studies upon the effects of borax. We were not studying borax from the standpoint of the manufacturer. We were trying to enlighten the public and bring about a state of affairs radically different from that in the past. We have had a most sympathetic body of advisers in the medical profession, and I believe that through the medical profession the public will be taught the true principles of nutrition in this respect.

Sulphurous acid is found largely in foods, especially in desiccated fruits which are subjected to the fumes of burning sulphur to retain their color. It is also used to preserve wine, being produced by burning sulphur in the casks. I do not know of any way of preserving the good color of fruits during desiccation, except by fumigation with sulphurous acid. Whether that is justifiable or not I am not here to say, but that is a use which appears to be a universal one, and the same is true about the burning of the sulphur match in the barrel in wine-making; a use which has come down from antiquity. But when it is used as at the present time in an enormous excess for preserving a poor wine and putting on the market a new wine before it has ripened it is unpardonable. In this connection we are having a battle royal with our French brethren. To pay them a high compliment we adopted some time ago their standard for the use of sulphurous acid in wines, and as soon as we adopted it they objected to their own

standard and appointed a new commission who raised their standard to just double. They then appealed to us to adopt their new standard, and I suppose if we did they would make another double on us in the use of sulphurous acid.

We hope so to conduct the execution of this law that we will secure not the opposition, but the support of the importers. We are improving the character of our wines by keeping out those in which sulphurous acid is used in excess. We are improving the character of our Frankforter sausage by requiring Germany to send us such as they are willing to eat at home. Our law happily says that any food product not allowed to be sold in the country in which it is made shall not be allowed to come to the United States. On that ground we have sent back several cargoes of German sausage containing borax, and on arriving at the German frontier they are inspected and rejected, and, like the *Flying Dutchman*, they are still flying over the sea, seeking a port, a haven of rest.

I believe the application of the principle of honesty would be the best food law that could be enacted. If I were to write a food law in one sentence it would be that nothing unwholesome should be added to foods and that every food product should be marked and be exactly what it was said to be.

THE GONOCOCCUS IN THE VULVOVAGINAL REGION.*

By HERMANN J. BOLDT, M. D.,
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The locality primarily attacked by gonococci is the vulvovaginal region and the urethra. In all instances of acute gonorrhœa, gonococci may be demonstrated to be present in the urethra. Even in later stages of gonorrhœa when the microorganisms have disappeared from the vulvovaginal region they may still be found in the urethra in seventy-five per cent. of the cases, if the patient retains her urine for about three hours or longer, and if the secretion is then expressed from the posterior part forward toward the meatus. Still later they may be found to have retained their abode in the peri-urethral and vulvar follicles, and in the excretory ducts of the Bartholinian glands. The prognosis is invariably good if the disease is properly treated. With very rare exceptions the progress or diffusion of the gonococci is so rapid that they invade the cervix, uterus, Fallopian tubes, and pelvic peritonæum almost simultaneously with the vulvovaginal region and urethra. Even without any treatment, gonococci disappear spontaneously from the urethra and vulvovaginal region in most instances.

* Remarks made at a meeting of the Section in Genitourinary Diseases of the New York Academy of Medicine.

If, however, proper treatment is begun early, they can be prevented from invading the more highly situated structures in fully ninety-five per cent. of the cases. The treatment should consist in the partaking of a bland diet, perfect cleanliness, and local applications. The vagina should be swabbed very thoroughly with a strong solution of one of the albumose or gelatose salts of silver. The urethra, the patient having previously urinated, should receive a similar application of a twenty-five per cent. solution. It is best applied with an intrauterine applicator syringe, made by the Kny-Scheerer Company on my suggestion. The advantage of applying this or any other medicinal agent in this manner may be obvious. The slender silver nozzle, which is four and one half inches long, is wrapped with absorbent cotton like an intrauterine applicator, the barrel of the syringe having previously been filled with the medicament. There being but one opening at the termination of the nozzle, the cotton becomes saturated from the tip backward when the fluid is ejected, and thus the solution in its full strength is brought in contact with every part of the mucous membrane. The cotton may be left in the urethra several minutes before removal. If a probe is first saturated with the solution to be used, a part of its strength is lost by its passage over the mucous membrane from before backward. The treatment should be used daily, then usually in ten days or less it will be found that the gonococci have disappeared.

ON TWO UNUSUAL CONDITIONS AFFECTING THE GASTRIC AND EPIGASTRIC REGIONS.

By W. MOSER, M. D.,

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CASE I.—The patient, a man about 30 years of age, consulted me in reference to a continuous distress in the gastric region. He could not describe what this distressful sensation was, but insisted that it was not painful. Status præsens: Heart normal; apex of one lung showed commencing consolidation; liver and spleen normal; stomach quite normal in position and outline; no vomiting or much gaseous eructation. Incidentally the patient stated and likewise showed that he could, as he expressed it, "push his stomach out." He did this as he said by "holding his breath." He took a deep inspiration, retracted the abdomen when presently his stomach appeared in the epigastric region like a balloon or a very large epigastric hernia.

Epigastric hernia very rarely attains such a size, and could be made to appear by acts of coughing, lifting, etc., and is, of course, an entirely different condition. The stomach, as we

are aware, admits at times of unusual mobility; but not voluntarily produced or replaceable. I refer to gastropotosis, which is a downward displacement of the stomach. What anatomical peculiarity underlies this voluntary forward displacement or dislocation I am unable to say. Athletes and physical culture exhibitors may produce through muscular action alone considerable bulging at the epigastrium. In our case possibly intraabdominal pressure and diaphragmatic action may come into play. It is possible that this abnormal mobility of the stomach may stand in relation to the distress of which he complains.

CASE II.—An Italian complained for many months of painful "knocking," as he expressed it, of his stomach and gastric region. Examination revealed clonic contractions in the epigastric region, which might be easily seen and felt.

The superficial or epigastric myoclonus did not disturb him so much as the "inside knocking," by which he meant the gastric clonic contractions. The patient complained of obstinate vomiting and diarrhoea, and was losing flesh.

The condition was probably a neurosis, or might have been secondary to serious organic lesions.

It was allied to gastrospasm (cardiospasm or pyloric spasm), in which the contractions are tonic in character, or to the "peristaltic unrest" of Kussmaul. In gastrospasm the whole stomach contracts and feels hard like a board (Hemmeter), which was not the case here.

In peristaltic unrest there was an undulatory motion, not clonic contractions, the waves varying from seven to eight in ten seconds and being continuous. This was a very distressing and obstinate condition, and difficult to subdue. I had tried bromides, valerian, etc., on a diagnosis of neurosis, with unsatisfactory results.

This condition certainly requires much further study. Epigastric myoclonus or gastroclonus *per se* is independent of clonic gastrospasm, is not associated with vomiting and diarrhoea, nor is it painful, being more like abdominal myoclonus or spasm of the abdominal muscles, which is one of my cases followed an attack of delirium tremens. It is possible that the pneumogastric or sympathetic nerve may be in some way implicated.

Bismuth and opium temporarily allay the symptoms.

In hysterical acute gastrospasm clonic or tonic contractions occur when a tube is passed or a hot or cold drink taken and not when the stomach is empty. Chronic cardiospasm produces the sensation as if some food stuck before it reached the stomach, like as occurs in stricture or carcinoma of the oesophagus. There was no difficulty in deglutition in Case II described.

In hysterical cardiospasm other symptoms of hysteria are usually present.

ATONY OF THE RECTUM AND ANAL SPHINCTERS: ITS ÆTIOLOGY, PATHOLOGY, DIAGNOSIS, AND TREATMENT.*

By WILLIAM BODENHAMER, A. M., M. D.,

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This subject is one of such general interest that the writer feels that no apology is necessary on his part for selecting it for discussion on the present occasion. Atony of the rectum is not an uncommon disease, and it is especially very interesting from the fact that it is not well understood, being almost always confounded, with what is commonly called *constipation* or *obstipation*, terms which, however, do not designate any disease whatever, neither can they be so considered or construed, for these terms simply signify the impaction or the repletion of fecal matter in the rectum, or in any other part of the intestinal canal, and are solely a cause of the disease in question, by the superdistention or dilatation of the walls of the organ, which such impaction or repletion of fecal matter induces. These terms can, therefore, represent only a cause or an effect of disease, but not the disease itself. Indeed, the writer will endeavor to show by some of the many authors he will give as references, how singularly, in this instance, they confound the cause, the effect, and the disease. But the fact must be conceded that the principal point, and the greatest difficulty in scientific practice, are to discriminate accurately between the causes and the effects of disease, for it is only by the removal of the former that we can expect to counteract effectually the operations of the latter.

Now, in order to be well understood, the writer will further say of the word *constipation*, that it is derived from the compound Latin word *constipo*, formed from *con*, together, and *stipo*, to crowd or to fill up closely; and also of the corresponding term *obstipation*, that it is derived from the Latin word *obstipo*, that is from *ob*, denoting, to obstruct, hinder, and from *stipo*, to fill up, or press closely together. It is, therefore, very evident that the abnormal stoppage or obstacle, as signified by the Latin prefix *ob*, is a foreign body in the rectum, the material or substance of which is compressed fecal matter; consequently, the obstruction or hindrance, signified by *ob*, cannot be owing to any morbid normal or organic structure pertaining to the rectum itself, causing such impediment. The true import, then, of these two words, is a mere collection of impacted, excremental matter in the rectum, the residuum of the

various processes concerned in alimentation; and that they differ so slightly in signification, that all medical lexicographers declare them to be synonymous.

ATONY, ITS DESCRIPTION AND DEFINITION.

Now, in describing or defining any disease, it is of the utmost importance to give, in the first place the etymology, signification, and application of its name. It is well known, however, that this self evident truth is singularly enough almost always ignored by both authors and lecturers on diseases of the rectum. Atony of the rectum, as its name implies (Latin, *atonia*, Greek, *arōia*, from *a*, priv, and, *trōos*, tone), consists essentially in the loss to a greater or less degree of the tone or contractile power of the muscular coat of the organ. It is not, strictly speaking, either *asthenia*, or is it *adynamia*, as some authors have named it, for it does not interfere seriously with the functions of the organ, as these terms seem to imply, no permanent or irreparable injury being done in such instances to the muscular fibres themselves by their distention; neither is it a true paralysis, such as occurs in paraplegia, but is merely a local impairment of muscular contractility. Comparatively few authors have written especially upon this affection as *rectal atony*, while numerous authorities have treated the subject under the denomination *rectal constipation*. It is evident that these names cannot be substituted the one for the other as one designates disease, the other not. Some few authors who have noticed the subject denominate it, severally, *constipation*, *distention*, *dilatation*, or *relaxation* of the rectum. But all these terms are employed in a very loose and bungling manner, and this simple circumstance alone shows that the subject has not been well studied; indeed, these terms are entirely too vague and too indefinite to denote the true nature of the malady; they merely indicate the cause or the effect, but not the real affection itself; hence, they are all misleading.

The habitual neglect to attend strictly to the calls of Nature in regularly emptying the rectal pouch is often, doubtless, a remote cause of the atony of its walls, for in such instances the consequent result of this neglect is the accumulation and impaction of the fecal matter in the cavity of the organ, which may in order be considered the approximate cause; while the superdistention or dilatation of the parietes of the organ by such repletion is the direct or immediate cause of the atony or loss of power in it; and it may be observed, too, that in such cases the protracted presence of the indurated fecal matter obtunds

* Read before the American Proctological Association at its meeting in New Orleans, La., May 6, 1903.

the organic sensibility of the rectal pouch, so that it sometimes requires something more than the mere rectal repletion itself to stimulate it to the expulsive effort.

This defect of muscular power in the rectum, the result of prolonged distention of its walls, is similar to that familiar condition which takes place in the bladder when the calls to empty it are postponed too long; in this case the organ will not respond when the effort is made to relieve it, so that catheterism must be resorted to should simpler means fail.

The distention of the rectal pouch by the impaction of fecal matter, may, on the contrary, however, be the sequel or effect instead of the direct cause of the atony; as when some other cause has previously produced it. In such a case the repletion of fecal matter is suffered to take place, because the organ is powerless to completely expel it; as, for example, atony or the loss of rectal power is often caused by the long and continued pressure of the head of the child upon the inferior portion of the rectum during a difficult and protracted labor. The writer has observed a number of such cases, and they are quite familiar to gynecologists, and are often difficult, if not impossible, to entirely relieve; he has seen some such cases, in which for months or for years after the accident the patients had not the power to expel indurated feces without resort to artificial measures. It is also well known that atony of the rectum is sometimes produced by the pressure upon the organ of ovarian tumors, uterine fibroids, uterine displacements, and the gravid uterus. It is very obvious that we can neither appreciate rightly, nor treat successfully the rectal atony in such cases without first also taking into consideration for treatment those primary and correlated affections of the genital organs themselves.

In certain conditions of the stomach and bowels there is often an excessive quantity of gas generated, which accumulates in the colon and rectum, and of itself, independent of fecal impaction, causes constant distention of these organs, and thereby produces atony of the same. Indeed, the writer must not omit mentioning here that the abuse or the too frequent use of effervescing or gaseous products, such as some mineral waters or other waters charged with gas, is also fraught with mischief by the gas producing constant undue distention of the walls of the intestinal canal, more especially in the colon and rectum, into which it so readily passes, and in which it is more or less detained, thus inducing the disease in question.

Now, as to the terms *distention*, *dilatation*, or *relaxation*, it is evident that each, like *constipation*, can only be properly used to designate the cause or the effect, as may be, instead of the atony itself. An evidence of the improper use of the term *constipation* to designate atony of the rectum, will at once appear by the manner in which it was used by the distinguished M. Bretonneau, of Tours, France, who was the preceptor of two pre-eminently great men of our profession, M. Trousseau and M. Velpeau, and who a number of years ago met with many cases in which he found "great dilatation and torpor of the rectal pouch, forming as it were, a greatly enlarged place for the lodgment of fecal matter, which sometimes accumulated in it to such an extent as to fail to be expelled by the natural efforts." This plainly described atony of the pouch of the rectum, he called *rectal constipation*, and astonished his contemporaries by the recommendation of powerful tonic and astringent injections into the rectum, remedies such as are usually employed in diarrhoea, etc., instead of the active purgatives generally used to cure constipation. But viewing the disease as atony, and not constipation so called, the tonic and astringent injections of M. Bretonneau were both highly proper and rational, as will be shown. Constipation, as it is called, has generally been attributed to torpor of the liver, and the most active concentrated cathartic remedies in the form of pills, etc., were employed to arouse the indolent organ; whereas, on the contrary, in the affection under consideration, the torpor is in the rectum itself and not in the liver, and can be relieved by much milder, safer, and more certain means. The writer himself has often witnessed great suffering from the indiscriminate and the very "infelicitous" administration of drastic purgatives in such cases.

Thus far the writer has been explicit upon several points, perhaps to prolixity, but he has found great discrepancy in the descriptions of various authors regarding this malady. Indeed, the loss of tonicity or defective muscular power in the rectum, especially in its pouch, rendering it incapable of properly expelling its contents is, to repeat, of much more frequent occurrence than is generally believed, and is doubtless often overlooked and diagnosticated as constipation of the bowels merely, and treated as such by purgatives. It is, however, an affection which is attended by much distress, inconvenience, and trouble, and is apt, unless relieved, to result in serious injury, not only to the rectum itself, but also to those organs in its immediate vicinity; indeed, whether the atony is due originally to the distention of

the rectum by impacted fecal matter, or to some other cause, it cannot continue long without also seriously affecting the muscular contraction or movement of the organ.

SOME OF THE CAUSES AND SYMPTOMS.

To enter fully into the causes, symptoms, rectal reflexes, and sequelæ which are consequent upon this pathological condition of the rectum, would far exceed the limits of this paper. A few observations, however, upon the most common causes and sequelæ of atony of the rectum, in addition to those already given, will be considered. The most common remote cause of atony is, perhaps, the habitual disregard of the calls of Nature to relieve the organ, as previously remarked. It is demonstrated by the anatomy and the physiology of the rectum and anus that Nature has designedly made provision for the accumulation as well as the retardation of the fecal matter in the rectum by furnishing this organ with a pouch or ampulla, and its extremity with a muscular mechanism in subjection to the will for the purpose of opening and closing it. This controlling and restraining power when properly and duly exercised is highly essential to our comfort and convenience, but when it is abused in order to postpone or to set aside the admonitions of Nature, so as to retain the excremental matter beyond the period when Nature calls for its expulsion, serious results, sooner or later, will inevitably ensue.

It may also be proper here to remark that not an infrequent cause of atony of the rectum is that some persons, especially females, are in the constant habit of daily using warm or hot water injections into the rectum for the purpose of evacuating this sometimes torpid organ; by continuing this pernicious practice, the rectum will soon be deprived of all normal power of evacuation by its own efforts. It must be obvious to all experienced practitioners that the continued employment of either warm or hot water enemata for the purpose of daily relieving the bowels is injurious; for, while it is true that by their first impulse they induce the peristaltic action, their reaction, however, is always followed by the muscular fibres being left more or less softened, relaxed, and deprived of their contractile power. These objections do not apply to cold water injections at the ordinary temperature; therefore, if such persons are compelled to use enemata in these instances, they should employ cold water instead of warm or hot water, by which they would more easily attain the end they have in view, and thus increase the tonicity of the muscular fibres of the rectum, and avoid the injury

of diminishing more and more every day the contractile force of those fibres; for it is known to be an established fact that the reaction of cold water leaves the muscular fibres of the rectum more vigorous, more natural, and more effectually disposed to peristaltic action; whereas the reaction of either warm or hot water leaves the muscular fibres of the organ relaxed and enervated; consequently neither warm nor hot water injections should ever be used in atony of the rectum as their tendency would be to induce the disease instead of curing it. But the abuse or the too continued use of large cold water injections may also produce atony, as they by their large quantity or bulk unduly dilate the walls of the rectum, and thus impair the power of its muscular coat. The very fashionable and frequent "flushing" of the colon, as it is called, by injecting into the bowels several gallons of water at a time, is a most pernicious practice, except in some serious disease, as many have found to their grief.

SYMPTOMS.

Some of the most prominent symptoms of atony of the rectum may be summed up as follows: There is generally experienced in confirmed cases a sensation of fullness or weight in the rectum and a frequent desire to defecate, but an evacuation, even if effected, does not altogether appease the desire, but leaves an uneasy feeling as if some fecal matter still remained, without sufficient power, however, to expel it; defecation is sometimes attended with tenesmus and forcing pains, and a discharge of mucus streaked with blood, or a discharge of fluid feces which may have passed by a fecal bolus lodged in the rectal pouch, and which may lead to an erroneous diagnosis of diarrhœa. In some of these cases the pouch of the rectum becomes dilated to an almost incredible extent, and filled with fecal matter, so that this distended viscus will sometimes be found to occupy a large space in the pelvis; while at the same time the organ makes but little or no effort to dislodge the accumulated mass; if the finger or the bougie is now introduced *per rectum* it will readily encounter the rectal bolus, and at once determine the nature of the case. The bladder, the urethra, and the other contiguous organs often participate in the irritation produced. In men the prostate gland and the bladder become affected, and in women uterine irritation and frequent micturition are the results. In such cases, whenever the rectum is completely evacuated, there is often experienced a distressed feeling of weakness in the loins, and of a sinking sensation, with a want of the usual muscular tension, until the organ again becomes moderately replenished. On

a specular examination of the empty rectal pouch in the worst cases, it will be found abnormally enlarged and presenting a smooth membranous bag, from which it would be difficult to expel indurated fecal matter by the natural efforts. In some instances, however, the pouch will be found to be partially filled with enlarged folds of loose mucous membrane, which during defecating efforts sometimes pass down into the fossa between the internal and external sphincters of the anus, blocking the narrow canal, and impeding the evacuation of the feces, and also to some extent forming an impediment to the introduction of instruments and enemas. This morbid condition of the mucous lining is doubtless the result of a neglected state of the bowels. Indeed, this affection, if neglected or mismanaged, may give rise not only to internal prolapsus recti, but also to an intussusception of the superior and undilated portion of the rectum into the dilated pouch of the inferior portion, and it may also give rise to a painful contraction or enlargement of the anal sphincters.

Atony of the rectum and colon is most commonly met with in delicate women of a lax muscular fibre, and in those whose sedentary occupations lead to a neglect of the necessary measures to insure the regularity of the functions of the organ. It is also frequently met with in delicate children.

(To be concluded.)

Adventures of Two American Officers in the East.—The War Department received a despatch on March 15th from Colonel Valery Havard, Medical Department, and Captain W. V. Judson, Corps of Engineers, military attachés with the Russian army in Manchuria, which read as follows: "Captured. Both well. Inform families. Havard, Judson." On the same day, according to the *Army and Navy Medical Journal*, for March 18, 1905, the State Department received a despatch from United States Minister Lloyd Griscom at Tokio, Japan, announcing capture by the Japanese forces near Mukden of Colonel Havard and Captain Judson, and stating that the two American officers would be sent to Tokio. Thence they will undoubtedly be ordered home to report at the War Department the results of their observations while with the Russian forces. The capture by the Japanese of these two officers leaves only one American army officer—Major Montgomery M. Macomb—with the Russian forces in the field. Major Macomb has not been heard from for two months, but it is believed at the War Department that he was with the Russian right wing during the battle of Mukden. No fear is felt by the authorities for his safety. Major General Arthur MacArthur left Tokio, Japan, on March 10th to join Marshal Oyama at Mukden. Captain John J. Pershing, United States Military Attaché at Tokio, left that city on the same day to join the army under the command of General Kuroki.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXVII.—How do you manage the alcohol habit? (Answers due not later than April 15, 1905.)

XXXVIII.—How would you prevent disease of the vermiform appendix? (Answers due not later than May 15, 1905.)

XXXIX.—How do you treat erysipelas of the face? (Answers due not later than June 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the *NEW YORK MEDICAL JOURNAL* and *PHILADELPHIA MEDICAL JOURNAL* (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXVI has been awarded to Dr. Samuel Stalberg, of Philadelphia, whose article appears below.

PRIZE QUESTION NO. XXXVI.

THE DIET IN TYPHOID FEVER.

By SAMUEL STALBERG, M. D.,

PHILADELPHIA.

As soon as the diagnosis of typhoid fever, whether mild or severe, is made in an adult, he is put on the following diet: Add two ounces of boiled water to six ounces of pure raw milk, and give it to the patient, through a glass tube or a feeding cup, and either cold or warm, as is more agreeable to him, every two hours and a half of the twenty-four. Every half hour two ounces of cold boiled water is given. The water, if more agreeable to the patient, may be replaced for a time by either weak lemonade or weak tea, or the three may be alternated, water always being preferred. At least half an hour must elapse after the feeding before water is given. If the patient cannot drink two ounces of water at one time, it can be taken during the half hour. The patient rinses his mouth thoroughly after each feeding, either with a solution consisting of a teaspoonful of hydrogen peroxide in half a tumblerful of water, or of ten grains of boric acid, twenty drops of glycerin, and a few drops of lemon juice to the ounce of water. If the patient is too weak to

rinse his mouth, the nurse swabs it gently with the same solution.

On this plan my patient gets $3\frac{3}{8}$ pints of pure milk and a little more than two quarts of water during the twenty-four hours, with an allowance of four hours' uninterrupted sleep once during the same period. If the patient sleeps uninterruptedly for six hours, he is not, except in rare instances, awakened, when he gets only eight feedings, amounting to exactly three pints of milk. As a rule a patient should not be disturbed from sleep to take food. Every case of typhoid, as of any other disease, is a law unto itself, so I use the foregoing as a guide and watch my patient. If the milk agrees with him, as shown by a comparatively clean tongue, soft abdomen, and the absence of gastric symptoms, of curdy masses in the stools, and of repugnance of the patient to the milk, this diet is continued to the end of the first week of convalescence, this process dating from the day when the evening temperature first falls to normal.

If with the milk well digested, emaciation is marked, the quantity is increased to five pints, gradually, in the twenty-four hours, both by increasing the amount at each feeding and by shortening the intervals to two hours. If emaciation is still marked, an egg, either raw or soft boiled, is given with each of two or three of the daily feedings, either mixed in the milk or separately.

This brings us to those cases in which milk does not agree. When the only objection to the milk is the patient's repugnance, the latter is overcome by a little perseverance and urging, by giving teaspoonful amounts at a time, or by rendering the milk more palatable by the addition of a teaspoonful or two of coffee, etc., and we may have the patient grow accustomed to it and take it throughout the course of the disease.

When symptoms of indigestion and malassimilation of the milk present themselves, such as vomiting, eructations, diarrhœa, constipation, colicky pains, and the presence of curdy masses in the stools, the milk is either modified or replaced, in whole or in part, by other foods. The only trouble with the milk may be that too much is given—overfeeding—when it must be cut down to one half or less. In severe cases all food is stopped for a day or two.

When overfeeding is not the only cause, the milk is diluted and the precipitation of curds prevented by the addition to it of oatmeal water when there is constipation or barley water in diarrhœa. Arrowroot, gum arabic, or a teaspoonful of gelatin, which has the additional advantage of being an "albumin sparer," may be em-

ployed instead. When vomiting is present, the milk is peptonized.

If milk still disagrees, it is replaced, either wholly or in part, by the following foods: eggs, raw or soft boiled, not more than four during the twenty-four hours; broth of beef, mutton, veal, or chicken; oatmeal or rice gruel, clam soup, beef juice, and cocoa. The milk diet, or the one last described, or a mixture of the two is continued up to the end of the first week of convalescence. During the second week of convalescence milk forms the bulk of the diet, but from one to three of the milk feedings are replaced by any of the following: Milk toast or zwieback soaked in hot milk, chicken broth thickened with rice or vermicelli, raw or soft boiled eggs, junket, arrowroot and oatmeal gruel, and chicken jelly. During the third and fourth weeks more of the milk feedings are discarded, and to the list are added poached eggs, rice pudding, blanc mange, raw oysters, scraped beef sandwiches, bread and butter, baked apple, tender chicken, and finely divided broiled chop. After the fourth week a return to solid food may be made, avoiding the coarser foods, such as raw fruit, for several weeks.

When intestinal hæmorrhage occurs, food is withheld for a proper length of time, only small pieces of cracked ice being given, or teaspoonful doses of cold water, the return to food being made by giving teaspoonful doses of cold milk. In perforation all food is discontinued pending an operation.

Alcohol is not given as a food, but in cases with heart failure, delirium, etc., it is given in conjunction with other stimulants in the form of whiskey or brandy. The older and intemperate patients are those most likely to need this form of stimulation. Children are fed exclusively upon milk, which is Pasteurized or sterilized, the broths, junket, and egg albumen being allowed only when milk disagrees or is for any other reason contraindicated.

Finally, while the feedings are to be given regularly, and a minimum of nourishment is to be insisted upon, food should never be forced beyond the patient's ability to take it.

In outlining this dietary, certain principles, some well established and others theoretical, were considered. In typhoid fever we are confronted, on the one hand, by a debilitating fever which is to last some weeks, and during which the patient's strength must be maintained and conserved, and, on the other hand, by an ulcerated condition of the bowel, which must not be irritated by the passage through it of solid or rough particles of food or stretched by the gas produced

by the fermentation and decomposition of indigestible food, or perforation may occur.

Milk is the best food, because, in the first place, it is a complete food in liquid form, containing all the ingredients necessary for the maintenance of bodily nutrition. In addition, it is a good diuretic. In the second place, while it is true that milk becomes almost solid in the stomach by curdling, this is lessened by proper dilution, and hardly any residue is left after the last stages of its digestion in the first part of the small intestines. Most patients do well on an exclusive milk diet, and while the present tendency to extend the dietary in typhoid fever is not attended by so many dangers as were formerly feared, there are still good reasons for the adherence to as near a pure milk diet as possible; besides, this extension is in most cases unnecessary. The other foods mentioned do not come up to milk in either of the respects named; still, they are allowed when the use of milk is impracticable. To broth there is the additional theoretical objection that typhoid bacilli readily reproduce themselves in it, but it is allowed along with the other foods.

The liquid diet is continued for a whole week after the beginning of convalescence, for it is a fact well known by pathologists that healing of the ulcers may not be completed long after clinical recovery has taken place.

Water is important in typhoid fever, because it quenches thirst, washes out the alimentary tract, the blood, and kidneys, and supplies fluid to the, as it were, dried tissues and bodily juices. Plain water rather than carbonated is given, because the latter produces flatulence. For the same reason the latter is not used for milk dilution. Lime water is not employed for diluting the milk, because it would neutralize an already feeble gastric juice.

The care of the mouth indicated is important, as it enables the patient to take food more easily, and prevents several complications, such as stomatitis, otitis, etc.

There are cases in which, after all the typhoid symptoms have disappeared, the temperature remains elevated. This may be due to exhaustion, inanition, furunculosis, etc. In these cases the diet is to be more liberal, with proper precautions, in spite of the fever.

1331 SOUTH SIXTH STREET.

Dr. Harry M. Pierce, of St. Louis, writes:

The judicious administration of a suitable diet in typhoid fever is very often the most perplexing, as well as one of the most important questions in the treatment of this disease, for the bowels must bear the brunt of the affections. There-

fore any article which tends to increase the irritation and inflammation already present must be strictly eliminated from the diet. The food should be of the most nourishing kind, without an undue amount of residue to be passed in the stools, and it should be as varied as the patient's condition will allow. For if more than the minimum amount of waste products is to be passed, it causes a harmful increase of work by the bowels, which excites an increased blood supply and an excessive nerve stimulation, and thereby pain, excessive peristalsis, fermentation, tympanites, and perhaps hæmorrhage and perforation. The food should be varied or prepared in different ways, so that it will not become monotonous or nauseating, as is often the case. It is not necessary or advisable to limit the diet to liquids, as was formerly thought proper, except of course in dangerous and complicated cases.

Milk, in various forms, is the food *par excellence* in typhoid fever. Often, however, it is ordered in large amounts for a patient with whom it never agreed, or who disliked the taste, even when well. It will then only nauseate, or cause constipation, or be passed in the form of curds. If the taste of cow's milk cannot be tolerated, it may be given disguised as to taste or other milks substituted, such as kumyss or some proprietary milk food, or whey or buttermilk.

When it is given, it should be given in small amounts, never undiluted, but diluted with plain or mineral water, including vichy and seltzer, or peptonized, to the amount of two or three ounces every three or four hours.

Albumen is an important article of diet, and may be given at intervals in the form of egg water (made by stirring the whites of two eggs in a pint of cool water), or as egg nog.

Beef juice is best given by extracting the juice from fresh, tender beefsteak, a pinch of salt being added, or if the patient is rational and has the strength, by letting him chew small pieces of beefsteak, the nurse standing by to see that none is swallowed.

Barley water and rice water, well strained, to which a pinch of salt may be added, forms an important addition and relieves the monotony of a milk diet. The patient should be given plenty of cool (not ice cold) water or lemonade at frequent intervals. Weak tea, coffee, and cocoa form agreeable beverages and act as gentle stimulants.

Alcohol in small amounts should be given as a food in the form of egg nog or sherry and other light wines. Sweet wines, such as port wine, also ale, porter, and beer, are contraindicated.

Unless the case is complicated or of a danger-

ous character, it is best to give, at intervals (after ten or fourteen days), various semisolids, as follows:

Eggs, soft boiled, poached, or raw and well beaten.

Gelatins, plain custards, ice cream (plain), and other delicacies, such as blanc mange and soft puddings without raisins.

Soups, chicken, beef, oyster, rice, and barley, well strained and slightly seasoned; or they may be thickened with rice, barley, or a few plain crackers.

No solid food should be given for a week or ten days after all fever has left. This rule will prevent many a complication and relapse. Care should then be taken to add only the most digestible articles, and they should be given only at intervals and in small amounts. White meat of chicken or turkey, squab, tender beefsteaks, lamb chops, white fish, strictly fresh, and white mashed potatoes may be allowed, also tender and digestible vegetables, preferably stewed, and perhaps a small amount of stewed fresh fruits. Pork, in any form, veal, coarse and canned vegetables and fruits, fried articles, hot bread, pastry, gravies, and all rich and highly seasoned articles are strictly contraindicated.

If, after giving solid or semisolid food, distressing symptoms appear, such as pain, diarrhœa, tympanites, or even a slight rise in temperature, all solid and semisolid food should be withdrawn and the patient kept on a liquid diet until all these symptoms have disappeared. It is a good plan to allow no food for at least twenty-four hours.

The above described diet is prescribed for an uncomplicated and typical case of typhoid fever. When complications arise, the physician must use his own judgment in regard to what foods to allow.

When rectal feeding must be resorted to, it is usual to give four ounces at each feeding, composed of milk, without cream, to which an egg, well beaten, and three or four teaspoonfuls of whiskey or brandy have been added. This amount is given about every six hours. Much more than this amount is not apt to be retained or assimilated.

(To be concluded.)

Hyperpepsia is combated successfully, according to Soupault, cited in *Revue française de médecine et de chirurgie*, for September 19, 1904, by the following powder:

℞ Sodium phosphate.....5 grammes (75 grains);
Sodium bicarbonate.....4 grammes (1 drachm);
Sodium sulphate.....3 grammes (45 grains).

M. Take one such powder in a glass of alkaline water, daily, before breakfast.

Correspondence.

LETTER FROM PARIS.

The Shortcomings of the Hôpital Laennec.—Dr. Doyen and the Micrococcus Neoformans.—Paris as a Dwelling Place for Consumptives.—The Society for the Prevention of Consumption.—Sailing Vessels as Propagators of Yellow Fever.—Tuberculous Cows.—The Brains of Great Men.—A Gift by Madame Zola.—American Practitioners.—Rivious Students.

PARIS, March 26, 1905.

The newspaper called *Le Matin* may, of course, have other reasons for existence, but a great amount of its energy is devoted to keeping the Parisian hospitals from dropping into a slough of atrocious inefficacy. This week it is the Hôpital Laennec that is being considered, and the cause of the drubbing it is receiving lies in the shameful neglect of applicants for treatment. Like most hospitals here, it is immensely picturesque; like most also, it affords clinical material to students from the four corners of the earth; but, also like most, its sanitary condition is more suitable to China than to civilized France. The constant scourgings administered by the daily press seem to affect the hospitals in no way whatsoever, except, possibly, to keep them from becoming unthinkable worse. Of neglect, several examples are given where patients upon admission have been left for twenty-four hours without food. Of course I do not know the true reason for this, but it is quite within the limits of credibility that the money thus saved for the hospital goes into the hands of some brutal and heartless underling. Such things are done, and are quite in consonance with the strange French character.

Dr. Doyen—and the question about him is never *Is he doing any thing?* but always *What is he doing?*—is now before the public as a victim of persecution. Verily some bright man with time for trifles should put Doyen into a libretto, for in this Latin country he has all the importance of a pirate in opera bouffe. Some time ago, during the last Surgical Congress, Dr. Doyen obtained the appointment by the Surgical Society of a committee of its members for the purpose of following the methods which obtain in his clinic in the rue Piccini. Professor Metchnikoff, who was on the committee, made a report from the bacteriological point of view, and in this report, which was read before the society, Professor Metchnikoff recognized the existence of the *Micrococcus neoformans*, which Dr. Doyen discovered.

Since then Doyen has continued his researches.

Notably, it seems that by a number of demonstrable facts he has established the possibility of the transmission of cancer as a result of inoculation with the *Micrococcus neoformans*. With the object of making his discovery known to the scientific world, he addressed to the Academy of Medicine a request that he be permitted to deliver a lecture on the subject, accompanied by an exposition of his micrographic work. After such approval as Metchnikoff had given to his work, it seemed only natural that the Academy should accede to his request. But a contrary result was produced, for the Academy returned to him his photographs and his other preparations, and denied his request, on the ground that it could not nominate a commission to do over again such work as had already been done by the commission of the Surgical Society. The papers here have come to his aid; they have a mysterious trick of coming to his aid; but he did not need it. The day after, or very soon after, he read before the Anatomical Society a paper—the paper—on the Serum Diagnosis of Cancer. He also invited the society to study his microscopical preparations in the laboratory of Dr. Cornil. Moreover, as Harduin (a prominent French journalist) gravely announces, “very soon the great scientific public of Paris will be called to listen while Dr. Doyen himself shows forth the very important results of his researches upon cancer.” This whole matter of the Doyen controversy has proved to be a very excellent advertisement for Dr. Doyen himself, but so artistically handled withal that there is nothing toward which the most prudish of American doctors can point the finger of scorn.

The official placards of the French government are white. No private individual may put up a white poster, and fully one third of the official posters seem to be designed to educate the people upon consumption. Paris is one of the worst cities in the world for a consumptive to live in, if we are to credit the mortality tables. I find few writers, however, who give proper importance to the food of the Parisians and to the conditions in which they exist. The typical Parisian cares not a straw what he eats, so long as he may soak himself with strong drink, and I am constantly marveling at the meagre portions that content the restaurant frequenters. This, also the small rooms; the lack of water, the uncleanly habits, the vile sanitary arrangements, and the use of charcoal fires are things that should be eliminated, and if they were eliminated, I have no doubt that Paris would prove to be a desirable city for the consumptive to live in, or, at least, no worse than Washington or Baltimore, which have

approximately the same climate with a much smaller mortality from tuberculosis.

On March 12th M. Etienne, Minister of the Interior, presided over the annual general assembly of the Society for the Prevention of Consumption. Dr. F. Plicque received the five hundred franc prize of the assembly for his educational brochure.

At the Academy of Medicine Professor Chante-messe has brought forward facts to show that sailing vessels are more likely to be agents of the propagation of yellow fever than steam vessels, and M. Moussu, a professor in the Veterinary School of Alfort, has asserted, not only that the milk of tuberculous cows should not be used, but that no cow ever so slightly affected should be tolerated on a dairy farm.

Professor Poirier recently delivered an interesting lecture at the Sorbonne upon the brains of great men. Beyond explaining that modern science did not permit us to draw any conclusions as to the intellectual capacity of the individuals by an examination of the brain alone, nothing new was developed. Of cerebral localization, he spoke at length.

Madame Zola, the widow of the late writer, has offered the property at Medan to the public charities of Paris, the buildings thereon to be devoted to hospital purposes.

Along the boulevards, and on the avenue de l'opéra one sees everywhere the sign “American Dentist,” and Paris seems to be the city for an American dentist if the prices that Parisians are willing to pay for American dentistry are any criterion. The American surgeon, too, is highly esteemed, but it is the American quack who takes the palm. In all the Vespaciennes his placards are posted, with the Stars and Stripes to support his assertion. The skin grafters are also beginning to invade the Paris field, and glaring advertisements are cropping up on every hand.

Here, whenever the students have nothing else to do they start a riot. Anything will serve as a pretext, even the meteorological condition. Whether it is to the credit or discredit of the medical students I shall not say, but they excel all other students in this sort of deviltry. Before I began to write this note in the Café Vachette—all writing here is done in cafés—I noted outside the window, on the corner of the rue des Ecoles and the Boul' Mich', about fifty medical students. They were demonstrating against Professor Gariel. “Conspuez Gariel! A bas Gariel!” Other students joined them, and now the whole quarter is in a riot, with two hundred policemen endeavoring to keep the peace.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 651.)

Antitetanic dusting powder is a mixture of equal parts of chloretone and dried antitetanic serum, which is used as a local application as a prophylactic against tetanus.

Aristol oil is a sterilized 10 per cent. solution of aristol in sesame oil, which forms a clear, reddish brown liquid that never decomposes or becomes rancid. It is recommended in the treatment of different diseases of the eye.

Cupridol is the name used to designate a 1 per cent. solution of mercuric iodide in oil, which is used hypodermically in the treatment of syphilis.

Decemliquor is represented to be a stable decuple iron manganate solution, 1 part of which, upon dilution with 1 part of 96 per cent. alcohol and 8 parts of water, yields a simple solution ready for use.

Digalen, the so called soluble digitoxin of Cloëtta, is now offered in aqueous solution containing 25 per cent. of glycerin and 3 Mg. of amorphous digitoxin, and put up in original vials of a capacity of 15 Cc.

Digitalysatum Bürger is a standardized preparation of digitalis, each gramme of which contains 0.7 Mg. of crude digitalin, corresponding to 1 Gm. of the fresh and 0.2 Gm. of the dried leaf. It is asserted to be made from selected, freshly sun dried digitalis leaf. The dose is 1 Gm.

Digitoxin, soluble, is a white, amorphous body which is described by the discoverer (Cloëtta) as a substance chemically identical with crystalline digitoxin. (See Digalen.)

Duran is a combination of calcium carbonate and phosphate with egg albumen, in the form of a white powder; it is also put up in chocolate tablet form. It is said to be useful in children's diseases, particularly rickets and similar ailments.

Durana is the name given by a German firm to a rubber plaster, mull and cambric plaster, prepared according to the process of Unna.

Dysentrol is referred to as an extract of bidam, of German origin, the nature of which is unknown to us. It is put up as a fluid extract and in tablet form, and is recommended in the treatment of dysentery in doses of three tablets daily or a teaspoonful of the fluid extract thrice daily.

Elchina is referred to as a fortified cinchona elixir containing 0.32 per cent. quinine, 2 per cent. sodium glycerophosphate and 1 per cent. tincture of nux vomica. Mixed with wine and in some cases with the addition of 3 per cent. of hydrochloric acid it is considered useful in gastric affections and weakened conditions of the system.

Emulgates are dry, light, and rather pleasant tasting powders, which may be administered pure or mixed with sugar in capsule or tablet form. The powders are prepared by a special process from equal parts of oils and lecithalbumin. A number of these so called emulgates have been put on the market under the names of castor oil

emulgate, cod liver oil emulgate, iodipin emulgate, bromipin emulgate, creostal emulgate, sandal oil emulgate, copaiba emulgate, male-fern emulgate, etc.

Enesol is a mercury salicylarsinite, obtained by the action of methylarsinic acid on basic mercuric salicylate. It is a white, amorphous powder, soluble in water to the extent of 1 in 25. It is said to form a less irritating and less toxic substance than its constituents separately.

Enterin is the name under which a hexamethyl-entetramine proteid has been introduced. It is used as an antipyretic and astringent in doses of 0.75 gm.

Erosan is one of the new guaiacol elixirs put up by a Swiss firm. It is said to consist of potassium sulphoguaiacolate, gm. 10; water, gm. 30; syrup, gm. 105; fluid extract of orange peel, gm. 5; and ethyl morphine hydrochloride (dionine), gm. 0.3. This may be identical with erasin, previously reported, as it is a common occurrence for names to become altered in the printing.

Ether salicylate has been introduced as a substitute for mesotan. Mixed with an equal volume of castor and olive oils it is used in this way as an external application in the treatment of rheumatism.

Eucaine lactate appears in form of a white powder, with a melting point of 155 degrees C. It is easily soluble in water, forming a solution of faint alkaline reaction; 119 gm. of eucaine lactate contains the same amount of eucaine base as 100 gm. of eucaine hydrochloride. It is said to be very effective as a local anæsthetic, and is preferred in eye, ear, nose, and throat operations, being prepared in solutions of different strengths according to the site of operation.

Eusoma, a word compounded of the Greek prefix *eu*, meaning well, good, etc., and the suffix *soma*, meaning the body, is applied to a liquid compound of *Echinacea angustifolia*, *Thuja Occidentalis* and *Baptisia tinctoria*, which has been used successfully as an antiseptic dressing in the treatment of wounds and skin diseases.

Fatigue antitoxine is said to be obtained by injecting into horses a specific toxine obtained from muscles of animals which have been worked to death. W. Weichardt's own account of his discovery, as translated from the *Deutsche medizinische Wochenschrift*, is as follows: "The author pulled guinea pigs back and forth over rough ground until they were very tired and there came a sinking of the bodily temperature. Under careful antiseptic precautions I obtained some muscular plasma, which, as compared with the normal flesh, tasted bitter, and was reddish in color. Animals into which it was injected in any quantity died promptly. I secured some of the dialysable matter of the residue, which contained a toxine, which in a few weeks became absolutely dry, and at low temperature remained active. Injected into animals it produced an antitoxine. Consumption (*verfütterung*) of this antitoxine produces a species of immunity against weariness. Contrary to the toxine, the antitoxine is dialysable, and therefore easy to obtain."

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AND

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THIS JOURNAL'S FORTY YEARS OF PUBLICATION.

The first number of the *New York Medical Journal*—it was started as a monthly—was dated April, 1865, the month that witnessed the virtual termination of the great civil war and the assassination of the beloved President of the United States, Abraham Lincoln. The times were troublous, and to found a new medical journal was venture-some. Had the venture been assumed by any ordinary man, failure would probably have followed; but it was taken by so strong a man as Dr. William A. Hammond, a man who, though certain martinets had succeeded in temporarily humiliating him, stood honored by the medical profession of the whole world. Dr. Hammond launched the journal upon a successful and creditable career, and its further conduct, up to the time when, with the beginning of the year 1880, the present editor assumed control, was under the editorship successively of Dr. Edward S. Dunster, Dr. William T. Lusk, and Dr. James B. Hunter—all well known men.

When the present editor entered upon his duties, the time for changing the journal from a monthly to a weekly seemed to him to have arrived, but it was not until three years later that the publishers thought themselves justified in making the change. The first actual issue of it

as a weekly was dated January 6, 1883. In size of page and in general typographical appearance it was then exactly what it is now, but the pages of reading matter were only twenty-eight in number. Successive amplification has brought us to the fifty-two page numbers of the present day. In 1890, when the journal became the property of its present publishers, it had only a short time before been expanded to thirty-six pages—a gain of eight over the original number. Since that time it has gained sixteen. During less than five years of its present ownership, therefore, it has been enlarged twice as much as during the seventeen preceding years of its publication as a weekly. Its circulation has steadily increased, until now it is believed to have the largest of any weekly medical journal printed in the English language (and probably in any other language), if we exclude such circulation as is mainly provided for by membership in some organization. It was powerfully reenforced in 1903 by the consolidation with it of the *Philadelphia Medical Journal*, whose best features the consolidated journal has since continued.

Though the position of this journal has always been conservative, avoiding the sensational and seeking only to give its readers the greatest practicable amount of useful matter, it can point to certain occasions when it took a stand calling for some courage—notably its early warning against too implicit a trust in the supposed curative powers of Koch's tuberculin and its defense of the German surgeons in the memorable case of "Frederick the Noble." Such is the present activity of medical journalism that it is not easy to add to any individual journal a feature that is at the same time novel and valuable. Perhaps our most noteworthy achievements in that direction are to be seen in our department of Subscribers' Discussions and in that of Issues and Events of the Day.

While we do not believe in cackling like a hen when she has laid an egg, it has seemed proper to remark in this general way upon the completion of our forty years of publication. We do not in the least doubt that in the future we shall meet with that cordial appreciation and cooperation of our subscribers that we have to thank for our

successful career thus far, and we look forward therefore to still further advances in usefulness to the profession of medicine.

LESIONS OF THE BONE MARROW IN TYPHOID FEVER.

It is gratifyingly evident that the *Bulletins* issued by the Ayer Clinical Laboratory of the Pennsylvania Hospital are worthy to be ranked with the *Journal of Experimental Medicine*, the *Journal of Medical Research*, and other publications of the first order that this country has within the last few years been contributing to the solid medical literature of the world. The second number of the *Bulletin*, now before us, opens with an article by the director of the laboratory, Dr. Warfield T. Longcope, entitled *A Study of the Bone Marrow in Typhoid Fever and Other Acute Infections*. The field of investigation gone over by the author is not one that had before been entirely overlooked, but it must be conceded, we think, that his work has covered it much more thoroughly than any one person's previous researches and perhaps more systematically than those of all other preceding investigators. The interest of the subject and the light that its study may shed on the morbid processes set up by some of the infections are readily apparent. In addition to typhoid fever, the diseases studied by Dr. Longcope with regard to changes in the marrow were pneumonia, peritonitis, chronic nephritis, and tuberculous disease, but to a certain extent acute cerebrospinal meningitis and puerperal septicæmia also were investigated.

In twenty-six cases of typhoid fever Dr. Longcope found certain definite and constant histological lesions closely resembling those of the mesenteric glands and the lymphoid follicles of the intestine and spleen. They were characterized by the presence of many lymphoid cells, large phagocytes, and foci of necrosis, with more or less hyperplasia of the blood-forming cells. In many cases of intestinal perforation and general peritonitis there were, besides the disseminated foci of necrosis, diffuse degenerative changes in blood-forming cells, accompanied with marked œdema and congestion of the tissues. Differential counts of the bone marrow cells in ten cases showed a decided relative increase of the lymphoid cells

over the granular myelocytes. The author thinks it possible that the lesions of the marrow are in some way nearly related to the hypoleucocytosis characteristic of the disease, and perhaps the cause of it.

THE QUICK ACTION THERMOMETER.

There seems to us to be food for reflection in one of the sections of a pamphlet entitled *The Testing of Clinical Thermometers* recently issued by the Bureau of Standards of the Department of Commerce and Labor. The half minute thermometer appears to have been produced in compliance with an unreasonable call on the part of the profession, and possibly those who have joined in the demand have to some extent defeated their own purpose. There are clinical thermometers, we are told in the pamphlet, that, "when properly used," require from less than half a minute to two minutes to indicate the temperature within the mouth, and in a water bath, it is said, these same thermometers will generally "take up" the temperature of the bath in five seconds or less.

The structural requirements of such a thermometer make it fragile in the extreme and its index difficult to replace. It is in this difficulty of shaking the index down below the normal mark that there probably resides the chief stumbling block in the way of rapid thermometry, for a thermometric observation involves such shaking down as well as the retention of the bulb in place for a specified time. In addition, for some persons there is required the devotion of an appreciable space of time to such management of the magnifying front as to make it practicable to read the scale. When these things are taken into account, we doubt if the half minute thermometer really saves times to the busy practitioner. We may admit, of course, that it abbreviates the patient's annoyance, though that curtailment is held to be dependent on the patient's keeping the bulb "under and in good contact with the tongue," care being taken "not to press the thermometer against the tongue hard enough to impede circulation," and "not to inhale air through the mouth." We do not think it advisable to place a thermometer under the tongue, for in that situation it is a torment to a sick man, who, if he is at

all inclined to doze, is apt to crush it between his teeth. The best place, it seems to us, is between the molar teeth and the cheek, and we doubt if the difference in temperature between that space and the one under the tongue is sufficient to vitiate an observation. Attempts at quick thermometry, we believe, have been overdone.

THE REVIEWING SHAM.

Few things of human interest contain so much humbug as the review departments of various publications. The medical journal, which should be freer from adverse criticism in this regard than the secular periodicals and newspapers, is peculiarly open to impeachment. The abuses of reviewing are by no means confined, however, to the journals. Publishers are wont to send for review works of such trifling importance that mere mention of their titles, publishers, and prices is more than compensation for the expense incidental to the publication and postage of the work. In many instances, however, the publisher is at considerable expense in the presentation of review copies of works of considerable importance. It is not my purpose to discuss here the relations of the book publisher and journal, save to say that a better understanding between them along common sense lines is decidedly in order.

What I have to say bears solely upon the interests of valuable literary productions and the educational features of reviews. Oftentimes the reviewer is expected to review such books as are allotted to him and receive no other compensation for his work than the book itself. This is perhaps most frequently the case with medical book reviewers. The reviewer is more often than not an individual whose professional and literary experience by no means qualifies him for the work. The spectacle of the tyro in medicine reviewing a comprehensive scientific treatise by an author of many years' experience and profound learning is more amusing than edifying. The airy manner in which some ignorant reviewers will wave aside works comprising the best effort of the best years of the author's life is by no means encouraging to honest literary and scientific endeavor. The larger percentage of books of which alleged reviews are published are, as a recent

writer in the London *Author* pertinently remarks, "either never read or merely skimmed through, quoted from, condemned or praised at the whim of the reviewer."

Some reviewers entertain the fallacious idea that the author and publisher are highly entertained and fully compensated for sending a book for review by a flattering eulogy of the work. Other reviewers fondly imagine that to condemn a really valuable work *in toto* is the strongest possible evidence of the wisdom, scientific acumen, and literary discernment of the writer of the review. Both are decidedly in error. It would require literary and scientific ability of a very high order to write a book of any pretensions which would be wholly good or wholly bad. The wise author or publisher is he who weighs reviews which are merely eulogistic and those which are sweepingly condemnatory in the same balance, and entertains only contempt for them. A review which shows plainly that the writer of it has merely skimmed the book through or read only the title page is accepted by the initiated as evidence of the incapacity of the reviewer. When he is so impertinent as to utterly condemn without argument a work which has required years of preparation and the best thought of its author, he merely decorates himself, to use a well worn metaphor, with a pair of long, mouse-colored ears.

Many of the reviews which are published in medical journals are mere reiterations. A journal of more or less prominence having published a review, the lesser lights of journalism simply republish it in many instances. So lazy are the reviewers employed by many medical journals that in order to get a review which will show the scope and character of a book it is necessary for the publisher to send with the work a printed or typewritten synopsis of its contents. This plan alone will in many instances prevent a complete waste of the volume and the postage required to transmit it to the journal.

In these days of multitudinous literary productions, the review department of a periodical should be considered one of its main features, and not a matter of secondary importance. One would think, to read the reviews and notices in some of

our prominent medical journals, that the editors begrudged any more space than was necessary to stimulate publishers to send them volumes to be sold for the personal benefit of the editor or to be added to his own private library.

The review department of medical journals should be comprehensive, up to date, and conducted by men of sufficient learning and literary discernment to make their reviews valuable. In general, much more space should be accorded the review department than is the usual custom. Reviews of new medical works are of much more importance to the subscribers of the journal than My Last One Hundred Cases of Catheterization of the Iter a Tertio ad Quartum Ventriculum, by Professor A. Packinghouse Carver, of the Hospital of the Little Sisters of the Rich.

Last, but not least, erudite and critical reviews would serve as a stimulus and educator for the author who conscientiously desires to do good work. To maintain a proper and authoritative standard for such reviews, the plan recently adopted by the *New York Medical Journal* and *Philadelphia Medical Journal*, that of purchasing for review works which are of real importance, would seem wisest.

G. FRANK LYDSTON.

DR. CHARLES A. L. REED AND ISTHMIAN SANITATION.

Dr. Reed's strictures on the policy pursued by the late Isthmian Commission of cramping the work of Colonel Gorgas and the other sanitary officers on the Isthmus of Panama gives promise of resulting in a very wholesome change. Some people have fancied that their publication by Dr. Reed was indiscreet, but in our opinion it was not only justified, but actually called for by the condition of things.

THE SO CALLED GLOBUS HYSTERICUS.

The hysterical nature of the subjective sensation known as globus hystericus is put in very serious doubt by Dr. Max Buch (*St. Petersburger medicinische Wochenschrift*, 1905, No. 4; *Berliner klinische Wochenschrift*, March 6th), who reports twenty cases in which it was associated with decided hyperalgesia of the cervical and lumbar sympathetics. In half of them the sensation could be evoked by pressure on the lumbar sympathetic. Not one of his patients was hysterical, but most of them were chlorotic. Six of them were men, and they all had neurasthenia.

THE DIFFICULTIES OF SANITATION IN RUSSIA.

The plight of the medical profession in Russia will be brought home to physicians of this country when they read that the recent medical congress in Moscow, in spite of heavily penalized bureaucratic orders to the contrary, was obliged to discuss political questions in connection with measures designed to prevent a plague of cholera. A resolution was passed declaring that an improvement in the economic conditions of the people was necessary as a basis for the preservation of health, and that for the future prevention of epidemics it was imperative to have radical changes in the tax laws, to grant an increase in the quantity of land allotted to the peasants, to satisfy the demands of the industrial classes, and to grant all the concessions necessary to completely tranquilize the ignorant population, among whom otherwise it would be impossible to execute sanitary measures. Even the lives of doctors, the resolutions said, would otherwise be in danger.

AN UNUSUAL CASE OF MENINGITIS.

On Monday morning a young woman was picked up in the street in New York in an advanced stage of alcoholic intoxication. Upon her recovery from this attack she was found to be suffering from cerebrospinal meningitis and is, we believe, still under treatment for the latter. This case is interesting in leading to speculation as to what effect alcoholic saturation of the system may have on the course and prognosis of meningitis.

Obituary.

WILLIAM BODENHAMER, M. D., LL. D.,
OF NEW ROCHELLE, N. Y.

In the decease of this aged physician—he was in his ninety-seventh year—the profession has lost a man who was still of great power, though it is several years since he retired from practice. Dr. Bodenhamer was for many years a specialist in rectal diseases in New York, and his treatise on those affections, published many years ago, is a work still frequently consulted. In recent years it has been our privilege to publish several of his articles, all showing his erudition and distinguished for precision of statement; and the correspondence involved has impressed us with his modesty and amiability.

The Osler Dinner.—Invitations to subscribe to this dinner, to be given at the Waldorf-Astoria, New York, on Tuesday evening, May 2nd, may be obtained by applying to the chairman, Dr. James Tyson, 1506 Spruce Street, Philadelphia, up to April 20th.

News Items

Society Meetings for the Coming Week:

MONDAY, April 10th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; New York Medicohistorical Society (private); New York Ophthalmological Society (private); Gynecological Society of Boston; Corning, N. Y., Medical Association; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, April 11th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, April 12th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, April 13th.—New York Academy of Medicine (Sections in Pediatrics and Otolary); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, April 14th.—New York Academy of Medicine (Section in Neurology); Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 1, 1905:

	April 1.		March 25.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	470	21	379	9
Diphtheria and croup.....	317	31	294	38
Scarlet fever.....	224	20	258	13
Smallpox	1	..	..	..
Chickenpox	149	..	180	..
Tuberculosis	413	172	576	198
Typhoid fever.....	45	6	19	6
Cerebrospinal meningitis.....	189	131	167	85
	1,808	381	1,873	349

Society of Sanitary and Moral Prophylaxis.—

A meeting of this society will be held at the Academy of Medicine on Friday, April 14th, at 8.30 p. m. The business before the meeting will be adoption of constitution and by laws; papers on: Education in Sexual Hygiene, by Dr. John H. Elliott, of the Hudson Guild; The Sexual Necessity, by Dr. Edward L. Keyes; Attitude of the Church Toward Sexual Hygiene, by Reverend Henry A. Brann, rector of St. Agnes's Roman Catholic Church; Ignorance, Perversion, and Degeneracy, by Mr. Frank Moss, of the Society for the Prevention of Vice; Education Within the Medical Profession, by Dr. Prince A. Morrow.

The papers will be discussed by prominent members of the laity and of the medical profession. Stephen Smith, M. D., chairman; Edward L. Keyes, Jr., M. D., secretary *pro tem*.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held in Hosack Hall, New York Academy of Medicine, on Monday, April 10, 1905, at 8.30 p. m. Order of exercises: Immunity and Infection; Introductory Lecture on Immunity, by Dr. Edward K. Dunham; Phagocytosis in Its Relation to Immunity, by Dr. Eugene L. Opie; Therapeutic Value of Antitoxic Sera, by Dr. H. T. Marshall; Therapeutic Value of Bactericidal Sera, by Dr. H. D. Pease; Diphtheria Antitoxine in Cerebrospinal Meningitis, by Dr. Arthur J. Wolff; Limitations of Serum Therapy, by Dr. Henry W. Berg; discussion by Dr. William H. Park, Dr. James Ewing, Dr. Frank Grauer, Dr. James C. Ayer, and Dr. Edward Waitzfelder. J. Lee Morrill, M. D., treasurer; P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street.

New York Hospital Commission.—John E. Parsons, chairman of the committee of twelve recently appointed to consider propositions for the benefit of New York city hospitals, was empowered by his committee at its first meeting on April 3rd at R. Fulton Cutting's office, 32 Nassau Street, to select four subcommittees which are to hold frequent meetings and report to the general hospital committee. These subcommittees are to deal, respectively, with hospital support, hospital cooperation, hospital economics, and hospital accounting. The committee of twelve, which was appointed by Mr. Cutting, president of the Association for Improving the Condition of the Poor, consists of Frederick Sturges, Dr. John A. Wyeth, Dr. John Winters Brannan, Isaac Wallach, Hoffman Miller, Seth Low, Thomas Mulry, representing the Roman Catholic hospitals; T. O. Callender, representing the Brooklyn hospitals; Frank Tucker, vice-president of the Provident Loan Society; Frederick A. Cleveland, chairman of the subcommittee on accounting of the Mayor's finance committee of fifteen, and Leonard E. Opydyck, secretary of the New York Association for Improving the Condition of the Poor.

Academy of Medicine.—The Section in Pediatrics will meet on Thursday, April 13th, at 8.15 p. m. Order: Presentation of patients: A Case of Congenital Defect of Some of the Shoulder Muscles, by Dr. Charles Herrman; A Case of Hæmophilia in a Girl of Eleven Years, by Dr. Matthias Nicoll, Jr.; report of cases: A Case of Intrauterine Amputations, by Dr. William L. Stowell; paper: The Fat Question in Its Relation to the Production of Infantile Marasmus, by Dr. Heinrich Stern; paper: Important Points in the Diagnosis of Sporadic Cretinism, Mongolism, Achondroplasia, and Rachitis, by Dr. Charles Herrman. Discussion by Dr. Louis Fischer, Dr. Louis C. Ager, and others. L. E. La Fetra, M. D., chairman; John Howland, M. D., secretary, 49 East Fifty-third Street.

The Section in Otolary will meet on Thursday,

April 13th, at 8.15 p. m. Order: A Case of Mastoiditis, Complicated by Gangrene of the Lung, Endocarditis, and Pericarditis, without Apparent Involvement of the Lateral Sinus, by Dr. S. McCullagh; (a) A Case of Exploratory Cerebrotomy, (b) Exhibition of a Case of Ossification of the Auricle, by Dr. G. B. McAuliffe; Report of a Case of Acute Mastoiditis. Death from Meningitis. Post Mortem Examination, by Dr. Arnold Knapp; Preliminary Report of a Case Presenting Menière's Symptoms for Five Years. Result to Date of Operation of Ossiculectomy, by Dr. P. D. Kerrison; paper: The Dangers of Attempting to Curette the Jugular Bulb Prior to Ligation of the Jugular Vein in Operations Upon the Sigmoid Sinus, by Dr. J. D. Richards. Emil Gruening, M. D., chairman; W. H. Haskin, M. D., secretary, 42 East Forty-first Street.

The Section in Medicine will meet on Tuesday, April 18th, at 8.15 p. m. Order: Presentation of Cases and Specimens; Clinical Reports: (a) Pernicious Anæmia with Exhibition of Case, by Dr. Theodore C. Janeway; (b) Hæmophilia, by Dr. Harlow Brooks; papers: Analysis of Forty Cases of Arthritis, with Special Reference to the Diagnosis of Gout and Rheumatism, by Dr. Charles C. Ransom; discussion by Dr. Townsend, Dr. Potter, and others; An Introduction to the Bacteriology of the Typhoid Colon Group of Bacilli, by Dr. B. H. Buxton; On the Impossibility of Differentiating So Called Paratyphoid from Typhoid Fever Except by a Bacteriological Examination of the Blood, by Dr. Warren Coleman; discussion by Dr. W. G. Thompson, Dr. Meltzer, Dr. Brill, Dr. Manges, Dr. Ewing, Dr. Park, and others. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

PHILADELPHIA.

Change of Address.—Dr. Rufus B. Scarlett, to 4242 Chestnut Street.

Woman's Medical College.—Dr. Gertrude A. Walker has resigned the position of clinical professor of ophthalmology in the Woman's Medical College of Pennsylvania; Dr. Anina C. Rondinella has resigned the positions of demonstrator of ophthalmology and assistant demonstrator of pathology.

Charitable Bequest.—By the will of Meyer Guggenheim, who died at Palm Beach, Fla., on March 16th, the Jewish Hospital of Philadelphia receives \$20,000. The money will be used for improvements in the Guggenheim Private Hospital, which was founded by a gift of \$80,000 from the testator in 1903.

The Society of Normal and Pathological Physiology, University of Pennsylvania, offered the following programme at its meeting held April 3rd: Knee Jerks Without Stimulation of the Patellar Tendon, by Dr. E. B. Twitmyer; A Study of the Initial Stage of Voluntary Movements of Extension and Flexion, by Mr. Robert H. Gault.

Nurses Graduate.—The commencement exercises of the Pennsylvania Hospital Training School for Nurses were held on March 30th, at the hospital, Eighth and Spruce Streets. Dr.

Alfred Stengel delivered the address. After the formal exercises the graduating class held a reception. The following young women finished their course of training:

Ida F. McBride, Sara Virginia Kenley, Parmelia M. Doty, Cora Mae Acker, Beulah May Cope, Martha Mills, Jennie Clapp, Ethel Van Harlingen, Clara Newby, Helen Maud Fair, Anne O. Richards, Margaret Wagenhurst, Edith F. Krause, Helen E. Sprecher, Margaret Stuart, Anna Van Valkenburg, Julia McL. Cruikshank, Florence E. Owen.

Scientific Society Meetings for the Week Ending April 15, 1905.—Monday, April 10th, Section on General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, April 11th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, April 12th, Philadelphia County Medical Society. Thursday, April 13th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, April 14th, Northern Medical Association; West Philadelphia Medical Association. Saturday, April 15th, West Philadelphia Branch, Philadelphia County Medical Society.

Death.—Dr. William H. Warder died at his home, 1212 North Broad Street, on March 28th, aged 71 years. Dr. Warder graduated from the University of Nashville in 1859. He came to Philadelphia from the South in 1864 and identified himself with the Jefferson Medical College, where he quizzed in obstetrics and surgery. Dr. Warder was a member of the obstetrical staff of the Philadelphia General Hospital from 1874 to 1881. He was a member of the Pennsylvania State Medical Society, the Philadelphia County Medical Society, the Obstetrical Society, and the Medical Club.

The Health of the City.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending March 25, 1905:

	Cases.	Deaths.
Malaria fever.....	0	0
Typhoid fever.....	306	17
Scarlet fever.....	48	1
Smallpox.....	1	0
Chickenpox.....	66	0
Diphtheria.....	54	9
Cerebrospinal meningitis.....	7	2
Measles.....	28	1
Whooping cough.....	12	3
Tuberculosis of the lungs.....	48	51
Pneumonia.....	87	51
Erysipelas.....	12	0
Puerperal fever.....	2	1

The total death rate was 531, in an estimated population of 1,438,318, corresponding to a yearly mortality of 19.19 per 1,000 population. The total infant mortality was 117; under one year, 96; between one and two years, 21. There were 36 still births, 23 males and 13 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 10; dysentery, 1; diarrhoea and enteritis, under two years, 23. The increase in the number of cases of typhoid fever in the districts described last week continues. The temperatures have been higher and there was 1.07 inches of rain falling during the week. On Sunday evening, March 19th, there was a sharp thunder storm, the first of the year.

Some Legislation Affecting the Public Health.

—The State legislature now in session at Harrisburg passed a bill on March 30th, permitting the use of certain maximum proportions of sodium benzoate and of harmless vegetable coloring matter in fruit syrups and fruit products for use in soda water, "soft" drinks, and ice creams. It is to be hoped that the governor will use his veto power on this measure. He has vetoed the measure, reported in these columns last week, to allow of the castration of idiots. A bill to permit the State Live Stock Sanitary Board to conduct scientific investigations in relation to the causes, nature, and prevention of diseases of domestic animals has met with the governor's approval.

American Society of Tropical Medicine.—The second annual meeting of the American Society of Tropical Medicine was held at Philadelphia on March 24, 1905. The following scientific programme was offered:

Dr. Seneca Egbert, The History of the Republic of Panama and of the Panama Canal; Dr. Joseph McFarland, The Canal Zone; Dr. Roland G. Curtin, Medical Conditions of the Isthmus of Panama.

At the business meeting which preceded the scientific meeting the following resolution, which is to be sent to the proper authorities, was adopted:

The American Society of Tropical Medicine, at the suggestion of Sir Patrick Manson, of London, one of its honorary members, begs to call your attention to the fact that the investigations of the past decade have so increased our knowledge of malaria, yellow fever, hook worm disease, and other tropical diseases as to make their prevention quite possible by the exercise of comparatively simple measures, and begs to recommend as a means toward the diminution and extinction of these maladies, that a certain amount of information regarding them be included in the curriculum of the public schools in our tropical colonial possessions.

The following officers were elected for the ensuing year:

President, Dr. Roland G. Curtin, of Philadelphia; vice-presidents, Dr. Victor C. Vaughan, of Ann Arbor, and Dr. William S. Thayer, of Baltimore; treasurer, Dr. Wharton Sinkler, of Philadelphia; secretary, Dr. Joseph McFarland, of Philadelphia; assistant secretary, Dr. John M. Swan, of Philadelphia; councilors, Dr. Thomas H. Fenton, of Philadelphia; Dr. James M. Anders, of Philadelphia; Dr. Judson Daland, of Philadelphia; Dr. Ramon Guiteras, of New York, and Dr. B. F. Stahl, of Philadelphia.

The next annual meeting will be held in March, 1906.

Future of the Free Hospital for Poor Consumptives.

—At the annual meeting of the Free Hospital for Poor Consumptives, held March 13th, Dr. Lawrence F. Flick outlined plans for broadening the scope of the institution, provided the legislature appropriated the \$300,000 which were asked for. Later, in presenting himself before the committee of the legislature having the appropriation under consideration, Dr. Flick was treated with such discourtesy as to make it apparent that this appropriation would not be granted, and the announcement has been made that the institution will at once be placed on a paying basis. On March 1, 1904, there were 100 patients in the sanitarium; 281 were admitted in the year, 204 were discharged, 63 left, and one died. The total cost of maintenance was \$31,-

989.11. A table bearing on the progress of the patients while at the institution follows:

Deaths	1
Improved	58
Much improved	62
Disease arrested	101
Not improved	32

The following officers were elected: President, Dr. Lawrence F. Flick; vice-presidents, Louis Gerstley and M. S. Kemmerer; secretary, Charles W. Welsh; treasurer, Edward A. Millar; managers, James M. Willcox, Tatnall Paulding, Frank Graham Thompson, Talcott Williams, Benjamin Wolf, Samuel Castner, Jr., Dr. C. J. Hatfield, Dr. John K. Mitchell, Dr. D. J. McCarthy, and Dr. Joseph Walsh. The failure of this appropriation is to be regretted by all who have the interests of the control of pulmonary tuberculosis in Pennsylvania at heart. The Free Hospital is well established, and has done an excellent work, so far as its means have permitted, and it seems wiser to encourage such a well established institution than to give the amount of money asked for to an institution which does not yet exist.

GENERAL.

Change of Address.—Dr. A. A. Gillette, to 511 North Washington Street, Rome, N. Y.

Dr. F. E. Prewitt has been appointed police surgeon to the force of Denver, Colo.

Dr. Gilbert E. Seaman, of Milwaukee, has been appointed surgeon major of the first regiment, W. N. G.

Epidemic in Louisville, Ky.—There is said to be a severe epidemic of follicular amygdalitis in Louisville.

Illness of Professor Edward S. Wood, of Boston.—Dr. Edward S. Wood, professor of chemistry at the Harvard Medical School, upon whom an exploratory laparotomy was performed a few days ago, is convalescent, and will leave the hospital in a short time. The nature of the abdominal trouble is, however, said to be serious.

Nurses Graduate in Kansas City.—The following young women graduated as trained nurses from the Training School for Nurses of the Kansas City Hospital on April 4th: Elizabeth W. Canfield, Mary P. Hetrick, Elvia M. Patton, Nellie Holmes, Lulu B. Hunt, Emma D. Sandell, Josephine Reidy.

Council of Physicians and Surgeons of New Brunswick, Can.—A meeting of the Council of Physicians and Surgeons of New Brunswick was held at Fredericton on March 27th. The following officers were elected: President, Dr. Atherton; treasurer, Dr. Walker; registrar, Dr. Skinner.

Professor Osler's Successor.—The trustees of the Johns Hopkins University have elected Dr. Lewellyn Franklin Barker, now head of the department of anatomy in the University of Chicago and in Rush Medical College, to the professorship of medicine made vacant by the resignation of Dr. William Osler.

Gaillard's New Title.—Since the amalgamation of *Southern Medicine* and *Gaillard's Medical Journal*

(in October, 1904) it has been decided to consolidate the name to *Gaillard's Southern Medicine*, published by Gaillard's Southern Medicine, Inc. The officers of the incorporation are William Edwards Fitch, M. D., president and treasurer; M. C. Fitch, vice-president, and E. W. Fitch, secretary. We wish our contemporary every success under its new name.

American Physician Appointed to the Vatican.

—Dr. William A. Dunn, of Boston, has become a member of the medical and surgical staff of the Vatican. Dr. Dunn is 50 years old and graduated from Harvard Medical School in 1875. After studying abroad for some time he returned to Boston, where he built up a practice. His attainments have secured him the place of consulting physician with the chief medical attendant of Pope Pius X.

Hampton County, S. C., Physicians Organize.

—The physicians of Hampton met on March 23rd, the counties of Hampton, Beaufort, Colleton, and Dorchester being represented. Dr. Southwood Smith was elected president; Dr. J. L. Folk, vice-president; Dr. C. A. Rush, secretary and treasurer. Dr. M. B. Mouson was elected delegate to the State Medical Association, which will meet at Greenville, April 12th. The following were elected censors: Dr. J. W. Colson, Dr. C. P. Walter, Dr. C. R. Peebles.

The Proposed General Military Hospital.—It is understood the commission appointed to select a site for the general military hospital, for which an appropriation of \$100,000 was made at the last session of Congress, has decided upon the tract of land lying on the west side of the Seventh Street Road, about opposite the national cemetery known as the Battle Cemetery, a short distance above Brightwood, D. C. The tract contains ninety-one acres and has a broad frontage on the Seventh Street Road and runs back to the line of Sixteenth Street extended.

Medical and Chirurgical Faculty of Maryland.

—Dr. William Osler will make his last public appearance on the afternoon of Thursday, April 27th, when he will deliver the annual oration of the Medical and Chirurgical Faculty of Maryland. The lecture will begin at 4.30 o'clock, and will be delivered in the large assembly room of McCoy Hall, Johns Hopkins University. The anniversary meeting, marking the one hundred and seventh year of the faculty, will be held April 25th, 26th, and 27th, and will be a farewell to Dr. Osler. An interesting programme of medical papers and discussions is being prepared.

The Fifteenth International Medical Congress will be held at Lisbon in April, 1906. At a meeting of the National American committee, held at St. Louis last September, officers and members were appointed to represent the Congress. The executive committee are Frank Billings, M. D.; William Osler, M. D.; Frederick Shattuck, M. D.; Abram Jacobi, M. D.; and J. H. Musser, M. D., chairman. Any communications regarding the presentation of papers at this congress can be sent to Miguel Bombarda, secretary

at Lisbon, or to Dr. Ramon Guiteras, secretary for this country. John H. Musser, M. D., chairman; Ramon Guiteras, M. D., secretary.

Assistant Surgeons for the Navy Graduated.

—The following have graduated as assistant surgeons from the Navy Medical School at Washington:

H. W. Smith, of Massachusetts; Eugene A. Vickery, of Massachusetts; Harry F. Hull, of Colorado; William A. Angwin, of California; James L. Belknap, of Massachusetts; Norman T. McLean, of Massachusetts; Richard Beck Chapman, of California; Robert Graham Heiner, of the District of Columbia; Robert Earl Stoops, of Ohio; George Lewis Wickes, of New York; William John Zalesky, of Iowa; Lewis Hawley Wheeler, of Connecticut; Henry Agett May, of Maryland; William Dunlop Owens, of the District of Columbia; Owen Joseph Mink, of Illinois; Frederick Eugene Porter, of Tennessee; Carey Travers Grayson, of Virginia; Wrey Gilmor Farwell, of New York; David Clark Cather, of Virginia; William Neil McDonnell, of Minnesota; Addison Bertram Clifford, of Michigan; Clarence Edward Strite, of Maryland; Howson White Cole, Jr., of Virginia.

Statement of Mortality in Chicago for the Week Ending April 1, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	April 1, 1905.	March 25, 1905.	April 2, 1904.
Total deaths, all causes.....	577	581	576
Annual rate per 1,000.....	15.11	15.21	15.58
By sexes.....			
Males.....	323	322	341
Females.....	254	259	235
By ages.....			
Under 1 year.....	134	126	91
Between 1 and 5 years.....	54	58	37
Over 60 years.....	122	109	117
Important causes of death.....			
Acute infectious diseases.....	30	24	25
Apoplexy.....	17	12	23
Bright's disease.....	56	37	36
Bronchitis.....	21	22	21
Consumption.....	69	81	80
Cancer.....	21	27	32
Convulsions.....	19	16	11
Diphtheria.....	6	4	4
Heart diseases.....	45	36	36
Influenza.....	4	7	5
Measles.....	11	2	0
Nervous diseases.....	20	27	30
Pneumonia.....	106	106	124
Scarlet fever.....	1	0	5
Smallpox.....	1	2	0
Suicide.....	11	7	11
Typhoid fever.....	6	5	4
Violence (other than suicide).....	25	25	22
Whooping cough.....	12	9	0
All other causes.....	98	132	117

Public health conditions at the end of the week and of the month continue fairly satisfactory. There is some decrease of the hospital population, especially of typhoid fever and pneumonia. The worst of the pneumonia season is over and consumption will soon again resume its lead as cause of the greatest number of deaths. Between November 1, 1904, and April 1, 1905—154 days—there were 2,263 deaths reported from pneumonia and 1,384 from consumption. During the corresponding period of 1903 to 1904, there were 2,666, or 403 more, pneumonia deaths and 1,295, or 89 fewer, deaths from consumption. At the close of office hours Saturday, April 1st, there had been 3,657 deaths from consumption reported in New York city and 5,700 from pneumonia during the 154 days of the current pneumonia season. Chicago is especially favored, by comparison, in respect of these two diseases, as well as of cerebrospinal fever.

Pith of Current Literature

SEMAINE MEDICALE.

March 1, 1905.

1. Anaphylaxis, By Professor R. LEPINE.
2. Treatment of a Crushed Hand, By Dr. F. LEJARS.

1. **Anaphylaxis.**—Lepine says that after the administration of a drug three results may follow; there may be a return of the organism to the status quo ante, there may be developed a habituation, or tendency to immunity against a similar dose, in other words, prophylaxis, or there may be developed an exactly opposite tendency which Richet has named anaphylaxis. Some diseases seem to be anaphylactic, such as grippé, as it is a matter of common observation that persons who have once suffered from this disease are more prone to other attacks. The writer says that perhaps the idea of anaphylaxis may be of use in the domain of pathology, but he does not show how it is of any practical value.

2. **Treatment of a Crushed Hand.**—Lejars advises to anesthetize the patient, apply Esmarch's bandage, cleanse the wound and neighboring parts thoroughly, remove all foreign bodies and débris of whatever nature, bits of bone, flesh, etc., amputate any portion which has been crushed beyond hope of recovery, readjust the tissues as nearly as possible to their normal condition, suturing the divided tissues when necessary, remove Esmarch's bandage, check hemorrhage, drain freely, and apply a sterile dressing.

LYON MEDICAL

March 12, 1905.

1. The Weight of Certain Organs in Diabetics, By R. LEPINE.
2. Gastrostomy in Certain Forms of Peritonitis, By JABOULAY.
3. Myelitis from Tuberculous Toxines, By CLEMENT.

1. **Weight of Organs in Diabetics.**—Lepine examined the internal organs of 36 patients who died of diabetes and obtained the following results:

Heart, small (less than 270 grammes for men and 250 grammes for women).....	17
Heart, large.....	14
Heart, normal.....	5
Spleen, normal.....	10
Spleen, below normal weight.....	8
Spleen, above normal weight.....	18
Liver, normal.....	10
Liver, greatly increased.....	13
Liver, small.....	8
Liver, pathologically changed.....	5
Kidney, normal.....	11
Kidney, over 400 grammes, but proportional to the weight of the liver and spleen.....	8
Kidney, very large in proportion to the other organs and to the weight of the patient.....	10
Kidney, pathologically changed.....	8

2. **Gastrostomy in Certain Forms of Peritonitis.**—Jaboulay reports a case of septic peritonitis complicating an operation for intestinal obstruction in which gastrostomy was successfully performed to control the vomiting and prevent distention of the stomach with consequent pressure on the neighboring parts.

3. **Myelitis from Tuberculous Toxines.**—Clement reports six cases, and states as his conclusions that myelitis occurs in the same way as peripheral toxic neuritis in the tuberculous, and

is usually tabetic in appearance. In most cases the nervous phenomena, especially at the beginning, mask the pulmonary trouble to both the patient and the physician. It may therefore be said to be an initial lesion of phthisis of the tabetic or spasmodic type. The nervous symptoms develop slowly and never result in complete locomotor ataxia, but remain perhaps for years resembling incipient tabes. The pulmonary tuberculosis seems to develop more slowly than usual, but in two of the cases here reported it ran a very rapid course.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

April 1, 1905.

1. Acute Meningitis, By W. T. COUNCILMAN.
2. The Surgical Aspects of Major Neuralgia of the Trigeminal Nerve. A Report of Twenty Cases of Operation of the Gasserian Ganglion, with Anatomical and Physiological Notes on the Consequences of Its Removal (Continued), By HARVEY CUSHING.
3. Fluorescence Artificially Produced in the Human Organism by the X Ray, by Radium, and by Electric Discharges, as a Therapeutic Method, By WILLIAM JAMES MORTON.
4. The Diagnosis and Treatment of Perforation in Typhoid Fever, with a Report of Nineteen Cases, of Which Sixteen Were Operated on, with Five Recoveries, By MORRIS MANGES.
5. Early Diagnosis and Operative Treatment of Gastric Cancer, By G. W. McCASKEY.
6. Some Complete Urine Analyses, By J. H. LONG.
7. Immunity. Chapter X.

1. **Meningitis.**—Councilman writes on the pathology and bacteriology of acute meningitis. He does not concern himself with the symptomatology and treatment of the disease. While acute meningitis may be produced by a number of microorganisms, three are most generally concerned in its production. They are the pneumococcus, streptococcus, and meningococcus of Weichselbaum. It is the latter coccus which is at present of so much concern. The evidence which we have justifies us in the conclusion that there is a form of meningitis produced by the *Diplococcus intracellularis meningitidis*, that the epidemics of acute meningitis are due to this organism, that sporadic cases are not infrequent, that, with rare exceptions, primary cases of meningitis are due to this organism; that recovery takes place much more frequently in this type of disease than when infection is due either to the pneumococcus or the streptococcus, that the disease is more common than is generally supposed, that the organism does not live as a saprophyte outside the body, that the organism may be found on the mucous membrane of the nose, where it may produce a rhinitis, and that it is probable that infection of the meninges takes place by extension from some of the adjacent mucous membranes by means of the lymphatics. We can only explain the epidemics of the disease by the assumption that at certain times the power of infection is increased either by an increase in the virulence of the diplococcus or by a decrease in the resistance of the tissues.

3. **Fluorescence.**—Morton summarizes his

paper thus: (1) The excitation of fluorescence within tissue is a species of phototherapy and depends on the same basis for curative effects. The term sensitization is not accurate, for it is not known what the term means. There is no proof that fluorescent substances make the cells or other microorganisms vulnerable to the exciting radiation. (2) What the fluorescent light lacks in intensity is compensated for by propinquity to tissue. (3) The methods of Tappeiner, 1900, followed by Dreyer, 1903, consist primarily of superficial applications, or of parenchymatous injections submitted to the action of sunlight or to the action of the electric arc light. (4) The method here outlined consists of a medicinal saturation of the entire blood system with a fluorescent solution, and submission of parts or of the whole of the patient to the Röntgen and Becquerel radiations and to electric discharges. (5) The method naturally includes filling cavities with fluorescent solutions, as well as using these solutions medicinally. (6) This method is not of the same category as sensitization by Dreyer's method, for the process and the results are different. (7) The curative effects obtained by this method are probably due to the fluorescent light. (8) This method permits of an improvement in skiagraphic effects and of fluoroscopic examinations. (9) Following the suggestions of the use of fluorescent solutions in diagnosis and treatment, the method has proved of value in determining the position and size of the stomach and other cavities of the body. (10) The thoracic cavity presents on the fluoroscope a degree of illumination greater than that produced by the x radiation alone. (11) The method is useful in tuberculosis of the lungs, and in other cases of tuberculous deposit, as well as in cancer.

4. **Perforation in Typhoid.**—Manges emphasizes the need of more closely watching all cases of typhoid fever, so that the first symptoms of perforation will not occur unheeded. It is impossible to formulate rules for guidance in reaching a diagnosis of perforation. It has often been said, and it is undoubtedly true, that the so called absolute signs of perforation are in reality the signs of the resulting peritonitis. Sudden pain, vomiting, and obliteration of the liver dullness are the most characteristic signs of perforation. With experience and care a correct diagnosis is not very difficult, and a strong suspicion of perforation justifies recourse to operation.

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 30, 1905.

1. The Results of Medical Treatment of Peptic Ulcer at the Boston City Hospital. By GEORGE G. SEARS.
2. Angeioneurotic Œdema: Report of a Case Operated Upon During an Abdominal Crisis.
By FRANCIS B. HARRINGTON.
3. Observations on Pneumonia with a Report of Two Fatal Cases of Extrapulmonary Suppuration. Suggestions for Treatment, By DANIEL E. KEEFE.
4. Eclampsia, By WARREN R. GILMAN.

1. **Peptic Ulcer.**—Sears concludes: (1) That the strongest argument so far presented in favor of the surgical over the medical treatment of pep-

tic ulcer is the failure of the latter. (2) That the danger to the patient from operation in skilled hands is not greatly increased, the immediate results of both medical and surgical treatment being about the same. (3) That the future interest to the clinician lies, not in hearing of the prowess of the surgeon, recorded in long series of successful operations, but in learning their end results. Until they are known conservatism seems the proper course, but when medical treatment has failed, as shown by the recurrence of repeated small hæmorrhages or the persistence of other symptoms, a resort to operation is legitimate and justifiable. (4) That the surgical treatment of hæmorrhage is of questionable utility, since in many cases it has continued, or first appeared, after operation, and in some, at least, of the successful ones it is doubtful if operation had any influence for good. (5) That the interests of the patient will be best served, when doubt arises as to the advisability of operation, if the decision is not left to the physician or surgeon alone. Only by their cooperation will it be possible to avoid either the sacrifice of life from unnecessary delay, or the performance of useless or even harmful operations.

2. **Angeioneurotic Œdema.**—Harrington reports a case of angeioneurotic œdema which came to operation on account of an acute abdominal crisis. At operation the following condition of affairs was found: There was a good amount of clear free fluid among the intestines and filling the pelvis. The intestines themselves were engorged with blood, and so red that a mild peritonitis was at first suspected. There were no hæmorrhagic areas in the intestinal walls, but at a point within a short distance of the ileocecal valve, a cylindrical enlargement of the ileum $2\frac{1}{2}$ inches long was brought to light which entirely surrounded the gut, increasing the bowel circumference to twice its ordinary size. The swelling was evidently in the bowel wall, elastic to touch and did not pit upon pressure. It can be easily understood how such an infiltration could derange peristaltic action of the intestine. The engorgement of the intestines and the free fluid were explained by the violent peristalsis brought on in the effort to force down the lesion which was actually in the intestinal wall. There was no distention above the lesion, since the finger could be easily passed into the swelling at either end. The patient recovered from the operation.

3. **Pneumonia.**—Keefe is in the habit of treating pneumonia according to the following plan: Patients are instructed to lie, not on the affected side, but on the side of the sound lung, thus favoring the emptying of the vessels of the lung by means of gravitation, while ice is applied to the affected side. The medicinal treatment, especially the first stage, should consist of: (1) One active purge; (2) wet or dry cups or leeches; (3) free use, all over affected lung, of as strong counterirritants as can be comfortably borne; (4) veratrum viride to bleed the lungs into the abdominal and general capillaries, or the direct abstraction of blood from a vein followed, if need be, by infusion. For the remainder of the disease we are

virtually powerless. There may be a moment when a dose of digitalis, ammonia, or whiskey may do good, but the author has not been able to find it. It is not before the latter part of the second or third stage. A few doses of morphine may be indispensable in pleuropneumonia. Plenty of fresh air should be admitted, but the body covering should be sufficient to promote perspiration and dilatation of the superficial capillaries.

AMERICAN MEDICINE.

April 1, 1905.

1. Treatment of Cerebrospinal Fever,
By CHARLES G. STOCKTON.
2. A Dissertation on Temperament, Diathesis, Dyscrasia,
Predisposition, Cachexia, Susceptibility, Idiosyncrasy,
and Heredity, By HOMER WAKEFIELD.
3. On Peritoneal Adhesions, By CARL BECK.
4. The Treatment of Hæmoptysis, By FRANCIS HARE.
5. Some Observations Upon the Treatment of Chronic Dis-
eases, By CURRAN POPE.
6. An Interesting Tumor and Its Relations to Heredity,
By HENRY E. RADASCH.
7. Papillomas in Syphilitic Child, Occluding Both Nostrils,
By W. G. B. HARLAND.

1. **Cerebrospinal Fever.**—Stockton concludes that when we recollect the difference in virulence in different epidemics, it is easy to understand how faulty notions of the effects of treatment may gain credence. A review of the subject seems to warrant the conclusion that benefit does follow certain measures and that the most useful procedure is to bring about the best hygienic condition for the patient, that is: (1) Absolute quiet in well ventilated, darkened rooms, with the absence of all excitement and irritation. (2) Giving the greatest attention to secure the proper performance of the various functions of the body. (3) The trial of the hot baths after the method of Aufrecht in all cases in which they seem to do good. (4) The practice of intraspinal puncture, with drainage when necessary to relieve severe pressure symptoms, to be repeated, if necessary, provided benefit follows the first puncture. (5) The use of antipyrine in cases in which the temperature is raised, not only for the relief of this symptom, but for the mitigation of headache and hyperæsthesia. This drug is also useful in improving the mental state, and it is not followed by depression. (6) The use of opium or the bromides alone, or in connection with antipyrine for the relief of convulsions, pain, hyperæsthesia and pressure symptoms generally, which are not relieved by the foregoing methods of treatment. (7) The use of mercury when needed for its laxative effect, or to assist elimination.

3. **Peritoneal Adhesions.**—Beck's paper consists of cursory remarks he made during the discussion of a paper read in a local medical society. Peritoneal adhesions are easier to prevent (by early operation) than to deal with when once formed. The author's experience with cases of chronic progressive adhesion-forming peritonitis, as it is observed idiopathically as well as after appendicitis, is absolutely bad. The nature of this condition demands further study.

4. **Hæmoptysis.**—Hare reports nine cases of hæmoptysis (eight tuberculous and one from mitral disease) treated with amyl nitrite inhalations. In all sixteen attacks of hæmorrhage were combated. In fifteen of the cases the hæmorrhage ceased inside of three minutes, in one case inside of ten minutes. There was in no case immediate recurrence of bleeding after the drug had expended its power.

5. **Chronic Disease.**—Pope asserts that there would be less chronic disease if the profession put less faith in drugs and more in rational and pain-taking treatment. The best means of combating chronic disease are, in the order of their importance: (1) Hydrotherapy, local and general; (2) electric currents, local and general, high frequency, galvanic, faradaic, sinusoidal, static, static wave; (3) massage and vibration, local and general; (4) exercise and gymnastics, local and general; (5) hygiene and diet; (6) rest, freedom from worry and work; (7) control and individual influences; (8) medicinal measures.

MEDICAL NEWS.

April 1, 1905.

1. The Coagulation of the Blood, By LEO LOEB.
2. Nephritis Complicating Mumps,
By JAMES ALEXANDER MILLER.
3. The Status of Suprarenal Therapy,
By SAMUEL FLOERSHEIM.
4. The Specific Therapy of Tuberculosis,
By CHARLES DENISON.
5. Intestinal Ileus with Strangulation. By R. R. HUGGINS.
6. Report of a Case of a Large Parovarian Cyst, and Two Cases of Large Ovarian Cysts,
By FRANK C. HAMMOND.

1. **Coagulation of the Blood.**—Loeb reviews the more recent investigations regarding the coagulation of the blood, reports some of the more important facts and briefly considers what is usually termed the "therapy of the coagulation of the blood," which comprises, however, only one phase of the process of coagulation. The blood of invertebrate as well as of vertebrate animals is studied. The paper is fragmentary in character and only considers certain aspects of the problem.

2. **Nephritis in Mumps.**—Miller reports the following case: Acute exudative nephritis in the course of mild double parotiditis, in a boy four years old, with a marked family predisposition to kidney disease, occurring in the twelfth day of the parotiditis, which was further complicated on the eighteenth day by a moderately severe attack of measles. The measles exercised no influence upon the nephritis, which entirely disappeared in thirty-five days, and after several months had not recurred. There are thirty similar cases on record and a summary of them is given. The author concludes: (1) Acute nephritis complicating mumps may occur in either children or adults, and is much more frequent in males than in females. (2) The parotiditis is usually double, mild in character, and the nephritis is more liable to occur during early convalescence. Exposure to cold

may be a predisposing factor. (3) The nephritis is usually moderately severe, of less than one week's duration, and ending in complete recovery. Rarely it may develop into chronic nephritis, or it may be so severe as to cause death. (4) This complication of mumps is infrequent, but probably not as rare as usually considered. Febrile albuminuria is probably very common in mumps, but this, as well as more serious kidney lesions, is probably often overlooked. (5) Careful urine examinations should be made, and strict precautions against exposure should be taken, in all cases of mumps, both during the acute symptoms and during convalescence.

3. Suprarenal Therapy.—Floersheim asserts that there are no contraindications to the exhibition of preparations of the suprarenal glands. He believes that some of the stable preparations are of the greatest utility in very many different conditions, and that their use should be better understood.

5. Intestinal Ileus.—Huggins reports four cases of ileus with strangulation. Two of the patients died and two recovered. The paper is a plea for early diagnosis and early operation.

MEDICAL RECORD.

April 1, 1905.

1. The Relation of the Nervous System to Visceral and Trophic Phenomena, By JOSEPH FRAENKEL.
2. Perinæorrhaphy and Prolapse, By ARNOLD STURMDORF.
3. Compound Traumatic Separation of the Lower Epiphysis of the Femur, By GILBERT GEOFFREY COTTAM.
4. The Value of the Present Quantitative Tests for Hearing; with the Demonstration of a New Apparatus, By W. SCHIER BRYANT.
5. The Rapid Bacteriological Diagnosis of Diphtheria, By HENRY A. HIGLEY.
6. The Best Method of Administering Potassium Iodide, By MAX HÜHNER.
7. A New Remedy for Ulcerative Processes, Acute and Chronic, Including Pulmonary Tuberculosis, By HUBBARD W. MITCHELL.

1. Relations of the Nervous System.—Fraenkel attempts to define the relations of the nervous system (the cerebrospinal or somatic, and the vegetative, or as Langley calls it, the automatic) to the pathology of the vegetative functions. The paper, owing to its scope, is necessarily fragmentary in character, and does not lend itself to condensation. The author holds that a thorough study of the influence of the nervous system on vegetative functions and its dependence upon them promises the following results: (1) Greater exactness of localization of organic disease of the nervous system and better interpretation of early symptoms. (2) More rational conception of functional conditions. (3) Clearer therapeutic indications.

2. Perinæorrhaphy.—Sturmdorf asserts that a perfect restoration of the pelvic floor after laceration is not to be hoped for unless it is possible to unite each of the severed tissues to each other. This can never be accomplished, save by an immediate operation. Even then the difficulties may

be insurmountable unless guide sutures are applied before the perinæum is torn. He advises therefore introducing three or four silk sutures through the perinæum before the child is born. If no tear occurs the stitches are easily removed. There is no best operation for the repair of an old perineal tear. Each case should be studied separately and operated upon according to circumstances. This implies, on the part of the operator, an adequate knowledge of the mechanism of prolapse of the pelvic organs. The author propounds some theories of his own regarding intraabdominal tension.

3. Epiphyseal Separation.—Cottam reports two personal cases of traumatic separation of the lower epiphysis of the femur. Both these cases were subjected to operation and both recovered. In the first case the deformity was considerable. The second case is of such recent date that ultimate results cannot be predicted.

4. Tests for Hearing.—Bryant has devised a special type of phonograph for use in testing the hearing. The instrument is not described. The author thus summarizes his paper: "The methods at present in use do not give adequate tests for the perception of the human voice, nor do they give results which can be compared. My phonographic acoumeter does all of these things, and more. It overcomes the chief difficulties and inaccuracies formerly accompanying quantitative hearing tests. It gives a satisfaction and accuracy not hitherto attained. It furnishes a test with the human voice which does not vary and can be multiplied and repeated indefinitely. Unilateral as well as bilateral tests can be applied without doubt or error. Eyesight aids are eliminated. It furnishes a universal standard, whose records are always comparable. It furnishes a sure way of detecting all feigned deafness short of total bilateral deafness; and it is an ideal machine for furnishing acoustic exercise which has been recommended in the treatment of deafness."

5. The Diagnosis of Diphtheria.—Higley describes in detail a rapid method of diagnosing diphtheria from the examinations of stained slides made directly from the diseased membrane. The author emphasizes the fact that the method he advocates is not suited to the uses of the average clinical practitioner, as it requires the skill of the trained laboratory worker to get good results from it.

7. A New Remedy.—Mitchell advocates the use of a preparation he has devised. The substance is non-toxic, can be used internally or externally, and is prepared as follows: To a convenient quantity of water add 3 per cent. sodium chloride, 0.1 per cent. bromine, and 0.5 per cent. hydrochloric acid (C. P.). Subject this mixture to the action of an electrical current until such chemical action has taken place within the mixture as to convert all free bromine into a compound with the other elements present. The length of time necessary for this depends upon the amount of fluid acted upon and the strength of the current used. The resulting fluid is pale amber in color, with a strong odor of chlorine, a

slightly acid taste, and a sp. gr. of 1022. It must be kept in amber colored bottles, in a cool place, and tightly corked.

THE PRACTITIONER.

March, 1905.

1. The Clinical Aspects of Puerperal Fever, By HERMAN.
2. The Treatment of Puerperal Fever, By GALABIN.
3. The Prevention of Puerperal Septicæmia, By BERRY HART.
4. The Midwives Act, 1902, By CULLINGWORTH.
5. A Criticism on the Midwives Act, 1902, By GLOVER.
6. Some Impressions of Puerperal Septic Disease in Its More Severe Forms, By GORDON.
7. On the Prevention of Puerperal Fever in London Lying-in Hospitals, By GOW.
8. Asepsis in the Rotunda Hospital, Dublin, By TWEEDY.
9. Puerperal Fever and the Control of Midwives, By PAGET.
10. Puerperal Septicæmia from a Public Health Aspect, By WILLIAMS.
11. The Pathology of Puerperal Fever, By FOULERTON.
12. The Blood in Puerperal Fever, By EMERY.
13. On an Epidemic of Puerperal Fever a Century Ago, By HELLIER.

[This "symposium" will be found interesting and important, and is therefore abstracted with a view to comprehensiveness.]

1. **The Clinical Aspects of Puerperal Fever.**—Herman defines the disease as one which results from the inoculation of wounds with pathogenic organisms. Puerperal ulcers may be present upon the vaginal mucous membrane, with false membrane and fever. Hospital gangrene, with fever and prostration, is now rarely seen. Spreading traumatic gangrene is also rare. It is accompanied with false membrane and suppurative inflammation of the veins, lymphatics, and muscular structure of the uterus. It quickly extends to other tissues and is usually fatal. Sapræmia is a local poisoning which disappears when the infecting cause is removed. Septicæmia means the entrance of toxic microbes into the blood with intense systemic disturbance. It is usually quickly fatal. Pyæmia usually results from uterine phlebitis. Fever is intense, and there are many secondary abscesses. Death is the usual result. Peritonitis quickly follows delivery, from direct injury, from the extension of endometritis or from extension of inflammation of the pelvic cellular tissue and uterine muscular tissue. It is usually quickly fatal. Late peritonitis may be caused by substances retained in the uterus, by the extension of gonorrhœa, or by the injury to a preëxisting tumor or abscess during labor, the inflammatory symptoms being deferred until a week or longer from the occurrence of labor. Pelvic cellulitis usually develops rapidly to peritonitis, and may be quickly fatal or it may result in a chronic condition resulting in absorption or suppuration, surgical interference being eventually required in the latter case.

2. **The Treatment of Puerperal Fever.**—Galabin considers local disinfection the first step to be taken, sores and ulcers being treated according to the intensity of the local lesion. A specimen

of the secretion from the uterus should be submitted to microscopical examination and culture. The uterus should be irrigated with an antiseptic fluid if the temperature exceeds 102° F. The bowels should be opened with calomel, followed by sodium sulphate. If the temperature reaches 103° or 104° F., the uterine cavity should be explored with the finger. This is better than repeated irrigation or curettage. The curette may be used if the finger detects substances which it cannot remove. Plugging with iodoform gauze is advisable if bleeding is persistent. The diet should be principally fluid, abundant, and administered in feedings at short intervals. Saline injections into the rectum or cellular tissue are frequently beneficial. Cold, quinine, tincture of iron, strychnine, and phenacetin will often be found useful means of treatment. Antistreptococcic serum is thought worthy of trial, also nuclein and silver. Abscesses should be opened as soon as they are apparent. Hysterectomy should rarely be practised. Pyosalpinx may be treated by abdominal or vaginal section, according to the indications.

3. **The Prevention of Puerperal Septicæmia.**—Berry Hart considers that in this disease the lymphatics are invaded by microbes conveyed on the fingers of the attendant or from the patients' uncleaned external genitals. Infection may also arise from preëxisting disease in the uterus or its appendages. Preventive measures consist: 1. In avoidance of infection by clean hands with or without gloves. 2. In cleansing the external genitals. 3. In avoiding laceration by skilful conduct during the labor. 4. In avoiding uterine manipulation to separate the placenta, which does not exclude manipulation during hæmorrhage. 5. In general hygienic care during pregnancy. A vaginal douche may be given at the end of labor, but subsequently cleansing should be accomplished with cotton moistened in bichloride solution. Puerperal infection is preventable, and should be prevented by conscientious individual effort.

4. **The Midwives Act, 1902.**—Cullingworth discusses this useful act which was intended to secure the better training of midwives and regulate their practice.

5. **A Criticism on the Midwives Act, 1902.**—Glover discusses this act from the standpoint of the general practitioner, and suggests that the requirements for the practising midwife should not be made too exacting.

6. **Some Impressions of Puerperal Septic Disease in Its More Severe Forms.**—Gordon thinks this disease is seen in its worst forms in a large isolation hospital, and his hospital experience has largely been with such cases. The women are usually very poor, have been attended by a midwife, and are not taken from their homes until their prospects for recovery have nearly or quite disappeared. Such patients are usually delirious, the abdomen is swollen, the uterus very large, cervix and perineum lacerated, and the uterine discharge fœtid. In the sapræmic cases, the disease being still local, recovery usually takes place. In

the septicæmic cases, with streptococcic invasion, even though the typhoid condition is present, there may be twenty per cent. of recoveries. In the septicæmic cases with infection from the colon bacillus, the infection occurs later than in the other forms and the result is usually fatal. The author believes in curetting in the severe cases with the sharp curette, and in irrigating and disinfecting the surface immediately afterward. Gloves are to be worn, and after the curettage an injection of antistreptococcic serum is to be made. Pelvic suppuration and septic thrombosis of the femoral vein have been frequent complications.

7. Prevention of Puerperal Fever in London Hospitals.—Gow mentions the following requirements for the accoucheur at Queen Charlotte's Hospital: 1. The finger nails must be short, no rings worn, the sleeves must be rolled up; 2, thorough washing of the hands with soap and water, and scrubbing with a nail brush; 3, hands must be rinsed in clean water, but not dried; 4, immerse hands in 1 to 1,000 bichloride solution for one minute, scrubbing with nail brush; 5, lubricate finger with vaseline immersed in 1 to 100 bichloride of mercury; 6, do not let examining hand touch anything before the examination; 7, after the examination wash hands thoroughly in soap and water. Treatment should be simply that which is comprehended in the expression—surgical asepsis.

8. Asepsis in the Rotunda Hospital, Dublin.—Tweedy describes this ancient maternity and the methods in vogue there. The attendant washes and scrubs his hands and wears gloves or finger stalls; instruments are boiled in soda solution. The vulva of the patient is cleansed and only four examinations are allowed during a labor. No douching is practised, the placenta is expressed after it has reached the vagina, a diaper moistened in bichloride is applied to the vulva, and an abdominal binder secured. Each bed has its own clothing and furniture. The patients are cleansed night and morning with all possible antiseptic precautions. All vessels used are sterilized. If symptoms of sepsis appear, examination is made, also a culture of the secretions, and a douche is given, also a purgative. If the symptoms persist, the douche is repeated the following day, secretion from the uterus is aspirated into a glass tube and a culture again made. The uterus is then douched with salt water, or hydrogen peroxide. If on the following day there is no improvement the patient is placed in an isolation ward and there receives special nursing and appropriate treatment. The mortality and morbidity have been reduced to an extreme limit.

9. Puerperal Fever and the Control of Midwives.—Paget observes that midwives are now subject to legal restrictions. The inspector acting under the medical officer of health has the following instructions: 1. To inspect the midwife's case book; 2, to inspect her antiseptic washes, lubricants, and instruments; 3, to report as to personal cleanliness; 4, to report as to the sanitary condition of her residence; 5, to see that she has washable dresses for use only in her prac-

tice; 6, to exercise educational influence on those who need improvement; 7, to carry out such correspondence concerning midwives as the county health officer may direct; 8, to report any case of malpractice, negligence, or misconduct as the health officer may direct.

10. Puerperal Septicæmia from a Public Health Aspect.—Williams states that statistics show that while this disease has almost disappeared from the lying-in hospitals it is as prevalent as ever in private practice. The author thinks this is largely due to the imperfections of midwives and prophesies great improvement from the influence of the new law regulating the practice of midwives.

11. The Pathology of Puerperal Fevers.—Foulerton observes that puerperal fever includes a number of forms of disease which differ in their pathology and their clinical features, hence no concise classification is possible. The processes involved in this disease are: 1. Infection of lacerations of the perineal tissues or of the vaginal wall with possible extension to the cavity of the uterus, that is, localized infection and toxæmia or these conditions and generalized infection in addition. 2. Primary infection of the contents of the uterus, or of the placental site, localized poisoning, or localized and then general infection. Ten different varieties of bacteria were found in a study of fifty-four cases of puerperal fever. Of these the streptococcus was by far the most frequent and most important. In many cases there was mixed infection. In the secondary infections the colon bacillus and the streptococcus pyogenes albus were most frequently found. Autoinfection is not frequent, but is possible as follows: 1. There may be infection by bacteria carried by the blood to the uterus from some focus of infection localized in a remote part of the body. 2. Infection may proceed from bacteria which were present before labor in the cervical canal or the upper part of the vagina. 3. Bacteria from the lower part of the vagina or the external tissues may be carried to the uterus by the examining finger or by instruments. Vaginal douching is usually, though not always, unnecessary, and so also is curettage. The latter is often harmful. In the absence of exact bacteriological diagnosis the safe rule is to treat every case of puerperal fever as probably of streptococcic origin.

12. The Blood in Puerperal Fever.—Emery sums up his study as follows: The patient may or may not be anæmic at term. If anæmic the hæmoglobin is reduced rather than the corpuscles. The leucocytes are increased, especially in the first pregnancies, the polynucleus being more numerous. If the puerperium is normal the leucocytes diminish soon after delivery and continue to do so for a fortnight. The red corpuscles and the hæmoglobin diminish for a day or two and then are regenerated. Should general septic infection occur, the leucocytes would increase, the hæmoglobin and red cells diminish, and the leucocytes would have the iodine reaction. Should abscess occur apart from general septicæmia the polynuclear leucocytes would show a marked increase.

and would give the iodine reaction. The hæmoglobin and red corpuscles would be affected slightly if at all.

13. An Epidemic of Puerperal Fever a Century Ago, and Its Surroundings.—Hellier writes of an epidemic at Leeds, from 1809 to 1812, recorded by William Hey. It was associated with a severe epidemic of erysipelas, but the connection of the two was not recognized. The treatment consisted of bleeding and purging, and with this treatment Hey states that all but three of his patients recovered. One of these was a consumptive, and one was not bled enough.

ANNALS OF SURGERY.

March, 1905.

1. The Diagnosis and Treatment of Fracture of the Carpal Scaphoid, and Dislocation of the Semilunar Bone,
By CODMAN and CHASE.
2. Fractures of the Tarsal Bones., By EISENDRATH.
3. Technics of Exposure of the Spinal Cord and Canal, Osteoplastic Resection, and Laminectomy,
By BICKHAM.
4. A Case of Cervical Rib, with Symptoms Resembling Subclavian Aneurysm, By MURPHY.
5. Cases of Intussusception in Children Treated by Laparotomy, By FAGGE.
6. A Series of Cases of Intussusception in Childhood,
By WALLACE.
7. Intestinal Hernia, By CUMSTON.
8. The Relation of Mechanical Distention to the Etiology of Appendicitis, By VAN ZWALENBURG.

1. Fracture of the Carpal Scaphoid.—Codman and Chase draw the following conclusions as to the treatment of simple fracture of the scaphoid bone: 1. Cases which have not been treated or which have been treated as sprains, by a short period of fixation followed by massage, active and passive motion, seldom if ever have union of the fragments. 2. If the joint is kept fixed for a number of weeks immediately after the injury union may occur, but the functional result is not perfect, though better than in cases of non-union. 3. It is too late to obtain union if fixation is not attempted within a few weeks after the injury. 4. Excision of the proximal half of the broken scaphoid promises a better ultimate result than any other form of treatment. 5. In operation involving risk, a reasonable attempt should be made to obtain union by fixation, if the case is seen soon after the injury. 6. Operation should not be delayed many months, because secondary joint changes may occur and chronic arthritis result. 7. The advisability of operating in cases of long standing is doubtful, and must be decided by the amount of disability in each individual case.

2. Fractures of the Tarsal Bones.—Eisendrath gives as the points of greatest value in making the diagnosis of fractured tarsal bones, palpation of a fragment, pes valgus or varus traumaticus, the x ray examination, and the history of the case. *Treatment.*—1. In simple fractures without displacement. Immobilization at right angles, well padded removable cast. Massage on the third or fourth day. Cast should be worn eight weeks. 2. In simple fractures with displacement, if a frag-

ment impinges on the skin, make the fracture a compound one, with aseptic surroundings. Remove the fragment, if lateral. If behind the ankle and the tendo achillis is detached the latter should be sutured to the os calcis. If astragalus or os calcis is badly splintered, it should be removed. 3. In compound, crushing, and gunshot fractures, the same rules should be observed that apply elsewhere in the treatment of such injuries of the extremities. .

5. Intussusception in Children.—Fagge has operated in eighteen cases, and the advantages of operation are now generally recognized. Fourteen of the patients were under one year of age. In sixteen a tumor was felt through the abdominal wall or per rectum. Routine examination under an anæsthetic is always desirable in suspicious cases. All those cases in which the lesion had persisted less than forty-eight hours were reducible, reduction being facilitated by very early treatment. Ten of the intussusceptions were single and ileocæcal, one was single and enteric. Seven were double, three being colic ileocæcal, two ileocolic colic, two enteric ileocæcal. In one case there was probably a triple intussusception. In seventeen cases primary laparotomy was undertaken as quickly as possible, in one inflation had been twice tried without success. The incision was, as a rule, on the right of the middle line, its centre being at or below the level of the umbilicus. The combination of inflation with laparotomy is not approved. The intussusception can often be reduced by a finger in the rectum as high as the iliac colon, where it can be easily treated through the abdominal incision. Until the reduction reaches the ascending colon it is performed partly out of sight; the intussusception is then delivered from the abdomen. The escape of the intestines from the abdomen should be avoided as far as possible. When eventration has been compulsory the abdominal wound should be widely opened and the intestines returned, coil by coil.

Six patients died from shock and toxæmia within twenty hours after the operation; a seventh died on the fourth day, two more died on the twenty-third day, but only indirectly from intussusception. A number of the cases were gangrenous and offered no chance for recovery. There are remote as well as immediate risks from intussusception, and recovery from the acute illness may be more apparent than real. When the intussusception is irreducible, gangrene being present, resection is preferable to the formation of an artificial anus.

LANCET.

March 18, 1905.

1. Industrial Anthrax (*Milroy Lectures*, I),
By T. M. LEGGE.
2. The Physiology and Treatment of Surgical Shock and Collapse (*Hunterian Lectures*, I),
By J. P. L. MUMMEY.
3. The Changes Produced by Inflammation in the Conjunctiva (*Hunterian Lectures*, III),
By M. S. MAYOU.
4. The Nature and Treatment of Epilepsy,
By W. A. TURNER.

5. Mental Faculty in the Child: Its Growth and Culture,
By F. WARNER.
 6. Two Unusual Occurrences in Typhoid Fever: Acute
Encephalitis and Perforation of the Sigmoid Flexure,
By J. McCRAE.
1. **Anthrax.**—(See our abstract of *British Medical Journal*, for March 11 and 18, 1905.)

2. **Surgical Shock.**—Mummery, in the first of his Hunterian lectures, tells us that the essential feature in the production of the condition known as surgical shock, is a steady fall in general blood pressure. This fall in blood pressure results from exhaustion or fatigue of the vasomotor centres. That it is not due to structural changes is evident from the fact that no lesions are found in persons dying from shock and that when recovery takes place it is complete. It is produced mainly in two ways: (1) By injury to important afferent nerve paths; and (2) by exposure or injury of the abdominal viscera. Shock and its causative conditions give rise to marked changes in the action of the heart. The pulse rate is only secondary to the blood pressure as a guide to the condition of the vasomotor mechanism. During the early stages of operations the pulse rate usually follows the blood pressure. In the later stages of severe operations, however, a fall in the blood pressure is usually accompanied by a rise in the pulse rate. The vasomotor centres are, of course, not the only ones affected—but the others, such as the cardiac or respiratory centres, are affected secondarily. In many cases of shock there is a marked toxic element present. Direct poisoning of the nerve centres, especially of the vasomotor centres by the toxins in the blood, is a factor of considerable importance in the production of exhaustion and paralysis of these centres. Collapse differs from shock mainly in the fact that the vasomotor centres are not exhausted—their function is only suspended. The symptoms in the two conditions are almost identical. Collapse is due to a sudden great fall in blood pressure, resulting from a severe hæmorrhage or from a great and sudden loss of circulating fluid, such as occurs in cholera; or from a sudden suspension of function or paralysis of the vasomotor centres, resulting from some violent afferent nerve impulse, as, for instance, a blow in the splanchnic area or upon the genital organs. In shock the condition develops gradually, whereas in collapse the symptoms come on suddenly or at least very rapidly. In shock treatment is very difficult and often unsatisfactory, since the nerve centres are exhausted. In collapse, however, treatment is apt to be more satisfactory and effective, since the cause is either a lack of circulating fluid which can be remedied, or a suspension of function of nerve centres which it is only necessary to set going again.

4. **Epilepsy.**—Turner defines epileptic equivalents as certain psychological states which to some degree take the place of epileptic seizures. The following characters may be accepted as sufficient reason for regarding psychological manifestations as epileptic equivalents: (1) The occurrence in the family history of similar or allied

conditions, interchangeable with forms of genuine epilepsy; (2) their association in the same person with forms of genuine epilepsy; and (3) the existence of definitely epileptic characteristics, such as sudden onset, transitory duration, and irregular periodicity. The interparoxysmal mental condition found in epileptics is not wholly a direct consequence of the seizures, but is an expression of the same hereditary degenerative constitution which gives rise to the convulsions. The close relation which exists between mental disability and facial expression is nowhere more readily seen than in cases of confirmed epilepsy. One of the commonest and at the same time most characteristic stigmata of degeneration is seen in facial asymmetry and deformity. Certain cellular cortical changes also occur which indicate defective cerebral development. The essential feature for the development of convulsions appears to be deprivation of arterial blood, coinciding with capillary and venous stasis, from cortical motor areas. The medicinal treatment of the convulsions forms only one item in the treatment of epilepsy. The most satisfactory management of the disease is that which is carried out in special institutions or under the care of a well trained and sensible nurse attendant. Epileptics suffer notoriously from lowered vitality and sluggish circulation in the extremities for which warm baths, spinal douches, and massage are important remedial agents. In the treatment of epilepsy there has ever to be kept in mind the persistent character of the malady and the tendency towards mental deterioration.

BRITISH MEDICAL JOURNAL.

March 18, 1905.

1. The Present Teaching of Practical Midwifery in England,
By W. R. DAKIN.
2. Some Remarks on Puerperal Infection,
By A. W. W. LEA.
3. The Increasing Use of Lead as an Abortifacient; a
Series of Thirty Cases of Plumbism, By A. HALL.
4. New Methods of Studying Affections of the Heart,
By J. MACKENZIE.
5. Industrial Anthrax (*Milroy Lectures, II*),
By T. M. LEGGE.

2. **Puerperal Infection.**—Lea states that the frequency of severe puerperal infection has shown little diminution during the last forty years in Great Britain, except in lying-in hospitals, where the mortality has been reduced to a minimum. Puerperal sepsis still causes over 40 per cent. of all deaths in child birth, and its death rate is 2 per 1,000. It occurs mainly among women confined at home and attended by midwives. Overcrowding, climate, and even zymotic diseases, such as diphtheria and scarlet fever, have but little to do with its production. And there is still far too much sepsis among patients of the better class attended by physicians. The gravity of instrumental or manual interference cannot be too strongly insisted upon. The essential point is surgical cleanliness. The morbidity, that is, the proportion of cases in which a rise of temperature takes place, varies from 10 to 15 per cent. in even

the best maternity hospitals. Puerperal fever is a wound infection, nearly always the result of the introduction of organisms from without. The conditions during and after delivery are such that it is surprising that infection does not take place in every instance. Many organisms may produce the disease. *Streptococcus pyogenes* is the most frequent; many varieties exist, and exhibit all degrees of virulence. Streptococcal invasion of the uterus is often characterized by gray membranous exudation over the cervix; the lochia are usually profuse, hæmorrhagic, and not offensive. In severe cases they may be suppressed. *Staphylococcus pyogenes*, *albus* and *aureus*, are usually only saprophytic, but occasionally they may cause severe or even fatal infection. The colon bacillus is a frequent cause of infection. The infection is often superficial and characterized by very offensive lochia, often becoming purulent. Association with streptococci increases the virulence of the colon bacillus. Other specific organisms occasionally met with are the diphtheria bacillus, the typhoid bacillus, and the tetanus bacillus. The saprophytic bacteria of the vagina are responsible for many cases of infection; they are anaerobic and usually non-pathogenic. The clinical course of puerperal infection depends on many factors; among them are: (1) The period at which infection occurs; (2) the site of infection; (3) the type of organism and its virulence; (4) the local conditions present in the uterus; and (5) the resisting power of the individual. Putrid infection of the uterus may occur—(a) as an infection of the amniotic fluid, commencing before delivery; (b) as an infection of the placenta, especially after abortion; (c) as an infection of the decidua and blood clot *in utero* after delivery; (d) as gaseous septicæmia; large quantities of gas developing in the uterus; (e) as an abscess of the uterus or infection of a myoma; and (f) as gangrene of the uterus or dissecting metritis. Autogenous infection may occur as absorptive fever from decomposition of clots, decidua, or placenta. Gonorrhœa at the time of delivery may cause an autogenous infection. The early symptoms are few but definite: 1. The temperature usually rises within forty-eight hours; this is slight at first, but becomes marked on the third or fourth day and is often accompanied by a chill. Fever after the fifth day points to a post partum infection. 2. The pulse rate is early increased and out of proportion to the degree of pyrexia. 3. Delayed involution of the uterus is characteristic of infection of the uterine cavity, and is often accompanied by tenderness. The cervix is soft and patulous. 4. The lochial changes are not uniform, and should be investigated bacteriologically always. The writer discusses the various modes of treatment and the indications for the same. His conclusions regarding the use of antistreptococcal serum are as follows: 1. The serum is innocuous if carefully prepared and injected with due precaution. 2. It must be administered early in the disease and in large doses—20 c.c. twice or thrice in twenty-four hours in severe cases. 3. If administered early and in large doses definite improvement is observed in a considerable proportion of cases. 4.

All statistics are valueless unless accompanied by bacteriological details.

3. **Lead as an Abortifacient.**—Hall reports a series of thirty cases of lead poisoning resulting from the use of lead to produce abortion. This practice prevails in the Midland districts of England, and is gradually increasing. The drug is usually taken in the form of patented pills—for "regulating" the monthly periods, etc. The author has purchased and analyzed several varieties of these pills, and finds that they all contain small quantities of lead. All of his patients were women of child-bearing age, usually married, and mothers of families. Of the first 18 patients, 11 did miscarry, one was pregnant, five admitted delayed menstruation, while only one denied any menstrual trouble. More than half the patients admitted having taken an abortifacient.

5. **Anthrax.**—Legge, in his second Milroy lecture, discusses the treatment of anthrax. Until recently it has been merely expectant or consisted in cauterization or other allied treatment of the local pustule. But a serum derived from an immunized animal is coming more and more into use. As spontaneous cures are frequent in external anthrax, the relative value of the three methods of cure must be considered—i. e., as to the amount of scarring, time required for treatment, etc. The general mortality is 25 per cent. Good results can be obtained by excision if it is practised early. The claims for the serum treatment are as follows: 1. It is innocuous even in large doses. 2. It can be well borne even when introduced into the veins. 3. No case taken in an early stage, or of moderate severity, is fatal if treated with the serum. 4. Some apparently hopeless cases are saved by the use of the serum. 5. When injected into the veins the serum quickly arrests the extension of the œdematous process which often causes death by suffocation. 6. It reduces to a minimum the destruction of tissue. 7. In some situations (eyelid) the serum must not be used. 8. Patients treated with the serum appear to become convalescent in a few hours. 9. In internal anthrax, where it is administered intravenously, it is the only treatment which can hold out any hope. The serum is prepared by Professor Scavo, of Siena, Italy, and is known by his name. It is obtained from asses which have been immunized against the disease.

EDINBURGH MEDICAL JOURNAL.

March, 1905.

1. The Operative Treatment of Chronic Suppuration in the Frontal Sinus, By TURNER.
 2. A Case of Anæmia and One of Acute Lymphocythæmia with Special Reference to Conditions of Aplasia of the Hæmopoietic Tissues in Leucæmia, By WEBER.
 3. The Decrease in the Birth Rate, By WALKER.
 4. The Therapeutic Value of Relaxing Climates, By WILLIAMS.
 5. On Addison's Disease, with Two Cases, and Also a Case Which Presented the Symptoms of Disease of the Suprarenal Capsules, By CONDER.
1. **Chronic Suppuration in the Frontal Sinus.**—Turner admits that there is no single method

of procedure applicable to all cases of this disease. If the sinus is a small one and inspection of it through the aperture made in the anterior wall has been thorough, and if no ethmoidal disease co-exists, opening and draining may suffice. Communication with the nose by means of a drainage tube must be kept up for a long period. In all other cases the sinus should be obliterated. This permits thorough inspection, access to the ethmoidal cells, and free communication with the nose. The bridge of the nose need not be preserved if the sinus is shallow and the supraorbital region is not prominent. Whatever radical procedure is adopted the ascending process of the superior maxilla should be removed to facilitate access to the ethmoid labyrinth and nasal cavity. The author feels the desirability of collective investigation into the results of surgical interference upon the frontal sinus and possibly upon the antrum also.

4. The Therapeutic Value of Relaxing Climate.—Williams affirms that the attitude of the majority of physicians toward climatic treatment is that of indifference. This is partly due to the lack of opportunity to become familiar with climatotherapy. Change of air is often recommended, but in a very vague manner. Besides pure air, moisture, sunshine, and exposure must always be thought of. The bracing climate is most useful for those who are in moderately good health, its elements, including high altitude, dryness, and rarefaction of the atmosphere, free exposure to sun and wind, and moderate rainfall. In the relaxing climate, which has no charms for the robust, there are moderate elevation, moderate exposure to wind, full exposure to sun, and high humidity with equability of temperature. This is the climate which is desirable for sufferers with chronic pulmonary disease, chronic renal disease, and chronic nervous disease. In the chronic pulmonary diseases sedative measures are more frequently indicated than stimulating ones. A relaxing climate is therefore very often the most suitable. Emphysema is much benefited by a moist atmosphere, and may serve as the type of pulmonary diseases, which are best treated by a relaxing climate. For the chronic kidney diseases, especially intestinal nephritis, the climatic essentials are warmth and equability. A bracing climate constricts the cutaneous vessels and raises the blood pressure, while a relaxing climate reduces it. For these diseases, therefore, Madeira, the Canaries, and many places in France and the British Isles are eminently suitable. In chronic heart disease also one must remember the danger arising from too bracing a climate, with heightened blood pressure, mental exhilaration, and improved functioning of the entire organism. In the degenerative processes of the nervous system in which the most that can be done is to retard the morbid process, the relaxing climate is the only safe medium; a bracing climate, though more agreeable will hasten the fatal issue. With the climatic treatment, such therapeutic aids as baths and waters go hand in hand. A locality should therefore be chosen, if possible, in which all these desiderata can be combined.

GLASGOW MEDICAL JOURNAL

March, 1905.

1. The Increase of Lunacy, By PARKER.
2. Case of Vagitus Uterinus, By FRASER.
3. Perforated Enteric Ulcer in a Child of Seven Years; Operation 23 Hours Later; Pneumonia; Recovery, By PATON.
4. The Presence of Connective Tissue Cellular Elements (Glia) in Epithelium, By REID.

4. Connective Tissue Cellular Elements in Epithelium.—Reid concludes: 1. That glia tissue is a constant and essential element of the cutaneous epiblast; 2. that it is the active agent in the formation and development of the hair; 3. that in the process of repair of injury or alteration of the epiblast it acts as a protective agent for the epithelium.

MONTREAL MEDICAL JOURNAL.

March, 1905.

1. Pressure Paralysis, By SHIRRES.
2. On Certain Problems of the Nervous System, More Especially Nerve Grafting and the Neurone Concept, By MILLS.
3. An Unusual Case of Injury to the Cervix Uteri During Labor, By BROWNE.
4. A Case of Atresia of the Pulmonary Artery, with Transposition of Viscera. A Second Case of Transposition, By McCRAE.
5. A Case for Diagnosis, By BELL.

2. Certain Problems of the Nervous System.—Mills finds that all experimenters agree that no functional union can take place between the central ends of two nerves. Bethe believes that functional union of the peripheral ends of two limb nerves has been demonstrated in puppies. Langley and Anderson could not get such union in rabbits and cats. If the central end of a limb nerve joins two peripheral nerves, stimulation of one peripheral nerve, after severance of the joined nerves from the central nervous system may cause contraction of the muscles innervated by the other. This is an axon reflex set up in fibres from the central end, one branch joining one peripheral nerve, and the other branch joining the other. If one peripheral nerve consists of afferent fibres an axon reflex may still be produced by stimulating it. This supports the view that regeneration takes place by downgrowth of axis cylinders. Nerves may be lengthened by joining them with a corresponding nerve of the opposite side. The phrenic nerve can unite functionally with the cervical sympathetic, and the cervical sympathetic with the recurrent laryngeal. The functional result will be that which is proper to the nerve of final distribution. The fibres of the sympathetic in the neck central cannot, when the ganglion is removed, make functional connection with those beyond the ganglion; preganglionic fibres cannot connect with postganglionic fibres. Afferent fibres cannot unite with efferent and give motor effects, that is, they cannot really coalesce with efferent fibres. Whether the regeneration taking place when fibres of the same class are united is due to coalescence or to downgrowth is still a matter of dispute.

Letters to the Editor.

AN OPERATION FOR PHIMOSIS.

MERIDIAN, MISS., March 27, 1905.

To the Editor,

Sir: I have an operation to report performed according to my method of circumcision. The operation was done by Dr. de Gaffenried, of this city, assisted by myself, and done according to my method. After sterilizing the instruments, etc., an incision was made with scissors on the dorsum through the skin and mucous membrane as far up as possible. These two flaps were held back and the prepuce was stitched all around behind the corona and as high up as they could be inserted, using the smallest size continuous catgut suture, the frenum being skipped, the last stitch coming out opposite the first. The operation was done in fifteen minutes. The suture first having been inserted, then all the prepuce in front of it was trimmed or cut off with scissors as close to the suture as possible. Then the operation was ended. There was good coaptation, with very little hæmorrhage. It is now five days since the operation. The wound is nearly all healed by first intention. There is no pus and the little suture is entirely absorbed. The advantages of this method are: 1. The continuous small sized catgut suture is inserted before there is any cutting done (except the dorsal cut), making it an easier job to insert the sutures, as in the old method the field for insertion of the sutures is obscured by the blood, making it troublesome to insert the sutures. In my plan there is very little bleeding, and if there is bleeding, the sutures are already inserted; hence the bleeding does not interfere with the suturing. The use of the smallest size catgut suture that will hold causes less irritation and helps union by first intention. This is a little thing, but little things count. J. M. WHITE.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of February 22, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

The Pasteur Treatment for Rabies Administered at the Patient's Home.—Dr. MYER SOLIS COHEN reported the following case: A man and his son were bitten by a dog whose medulla and plexiform ganglia showed the changes diagnostic of rabies. They were given the Pasteur treatment at their homes, the virus being mailed by special delivery each day by the Pasteur Institute of the Department of Health of New York city. On its arrival the virus was put on ice and as soon after as practicable was injected with aseptic precautions into the subcutaneous tissue of the abdomen. The patients' bowels were kept open and alcoholic excesses were avoided. There was no constitutional disturbance or any interruption of the daily work.

On but two occasions did the treatment cause a local reaction, which, however, responded to antiseptic measures. Two weeks after the cessation of all treatment no symptoms of rabies had developed. The patients consequently were considered out of danger.

Dr. COHEN concluded that a person when bitten by a rabid dog need not necessarily go to a Pasteur Institute for treatment, but, if within a day's journey of one, might be supplied daily by mail with the virus, which could then be injected by the family physician, with probable success.

Dr. ERNEST LAPLACE referred to his privilege of working with Pasteur in 1885 and 1886 in his experiments which had resulted in an absolutely preventive treatment of hydrophobia. Pasteur never made a diagnosis of hydrophobia unless a piece of the brain or spinal cord of the dog was injected into rabbits and they died of hydrophobia. Dr. Laplace did not advocate the adoption of this method, but believed that for the scientific value of the treatment it was not well to be satisfied without this inoculation. Although the germ of hydrophobia had not been found, Dr. Laplace believed that the treatment was based upon a scientific foundation. That the poison existed was undeniable, for it could be produced and reproduced, attenuated, and made more and more virulent at will; and more could be done with this poison than with any other, except that of anthrax. Pasteur's idea was to produce in a patient with dog hydrophobia, which required three weeks for development, a tolerance of the rabbit hydrophobia, which was more virulent and took only ten days to develop. The pains alluded to in Dr. Cohen's case he thought due to local causes. If treatment could be carried out at home, he regarded it as a step of great worth to medicine in general. The moral effect upon a patient leaving home in a desperate rush for treatment he considered very bad.

Dr. WILLIAM M. ANGENY referred to a person bitten by a supposedly rabid dog who was sent to New York for the first two days' treatment, and after that the virus was sent to Dr. Angeny for use.

Dr. G. MORTON ILLMAN thought it strange that there should not be an admission of the diagnosis of hydrophobia, since the condition is proved by inoculation and was rapidly becoming associated with a definite pathology. In human beings there were distinct changes in the ganglion cells and in the medulla. With their complete Board of Health, he thought Philadelphia should have a laboratory in which this treatment could be carried out.

Dr. COHEN said that in the question of whether or not a dog had rabies, if the head only was taken to the pathologist of the Live Stock Sanitary Board of Pennsylvania, a report would be given on it.

Surgical Intervention in Cases of General Peritonitis from Typhoid Perforation, and from Acute Gonococcus Infection.—Dr. JOSEPH PRICE said that the profession had been slow in accepting the overwhelming evidence of operative and clinical facts. A few of the early surgical obstructionists, however, were now the most aggressive and persistent advocates of early surgical intervention in abdominal traumatism and pathology. With the present precise knowledge of pathology and diagnosis, he believed there was no excuse for delay in operation. Surgical intervention for peritonitis and

perforating ulcers was suggested during the seventeenth, eighteenth and nineteenth centuries, but nothing of a positive nature was done until about 1878. Embolism of large and small mesenteric vessels he believed had not yet received deserved attention. Any variety of peritonitis or infection should be anticipated surgically. From a long experience he believed that about all the sufferers from perforations in and about all the viscera in the peritoneal cavity, typhoid, suppurative, gall bladder, gastric, and duodenal perforations should be saved. The possibility of peritonitis remaining local or circumscribed by adhesions should not be considered if a diagnosis of perforation had been made. Firm, pure silk he regarded as the best suture material and the interrupted sutures as giving the best results with less risk of strangulation. If the margins of the ulcer were ragged, they should be trimmed. A resection was unjustifiable. The irrigation should be a thorough cleansing of the entire surface with sterilized water. It was his impression that irrigation with hot normal salt solution was harmful, causing irritation. Curetting or wiping dirty points with gauze was followed by good results. The gauze pack, as so commonly and recklessly used, he regarded as a dangerous thing. Two typical cases were cited and the plea was made for early diagnosis, early surgery, and more thorough toilets to arrest peritonitis and sepsis.

Dr. ERNEST LAPLACE said that cases of peritonitis proved fatal because of their coming too late to the surgeon. This he thought was more often the fault of the physician than of the patient. Two distinct problems in Dr. Price's paper, he said, were peritonitis as produced by perforating typhoid ulcer, and diffuse peritonitis from other causes. An important point of difference between the two was that when a typhoid fever ulcer perforated, the contents of the intestines that flow into the peritoneal cavity were largely harmless at the time, as it required a little while for the germs to become pathogenic. If such a case ended in recovery, the poisoning was local. It was quite a different thing to treat a foul peritonitis resulting from a gangrenous appendix or from the rupture of an appendicular abscess that had gradually leaked into the abdominal cavity.

The abscess cavity in particular and the peritoneal cavity in general, he believed were best cleaned out with sterile water. The much vaunted saline solution, he thought, was objectionable on account of its irritating effect. The cleansing of the abdominal cavity should be continued as long as it was possible without detriment to the patient, and to effect this he carried out a plan of repeated irrigation.

Temperature and pulse records, while valuable with reference to shock, gave no indication of the necessity for an operation. The decision should depend upon the general appearance of the patient. In washing out the abdominal cavity he avoided the use of gauze, using rather the smooth surface of a glove or the bare hand. While iodoform gauze was a great power for good in some wounds, in some it caused increased inflammation. If used at all it should cover only the spot that was the seat of the abscess, and should be separated from the rest of the cavity by the plain gauze.

Dr. JOHN H. GIBBON did not believe the diagnosis of typhoid perforation easy, and he regarded it as a

great mistake to wait for the typical symptoms of perforation before the surgeon was called in. The most valuable symptoms to the surgeon, in his opinion, were localized pain and rigidity coming on suddenly. He agreed with Dr. Price that resection was hazardous. Anchoring the bowel, surrounding it with coffee dams of gauze, he believed was the best method. The element of time he regarded as of the utmost importance in these operations. In localized peritonitis thorough drainage was better than thorough irrigation, but generalized peritonitis demanded complete irrigation. Admitting that salt solution might give pain when applied to the peritonæum, he yet believed that it did good.

Dr. B. F. BAER's experience with salt solution did not agree with that of Dr. Laplace. He had used it for the last few years, and believed it nourished the patient by filling the blood vessels. There was less probability of adhesions, and the skin was in a better condition on account of the effect of the salt solution upon the kidneys.

Dr. LAPLACE explained that he had said he believed salt solution would irritate in general peritonitis where from the washing there could only be expected a cleansing effect and where the amount of the solution was insufficient to prove an antiseptic.

Dr. EDMUND W. HOLMES thought surgeons should agree that the four symptoms of pain, localized tenderness, abdominal rigidity, and some interference with respiratory action were indications for operative interference.

Dr. R. P. McREYNOLDS thought the diagnosis in typhoid perforation particularly difficult. In general peritonitis from gonorrhœal infection he saw no reason for operating in the acute stage. The temperature came down to normal if the patients were kept in bed, given hot douches, and treated by the expectant method. After this the purulent tubes might be removed and the abdomen closed without drainage.

Dr. PRICE said that no progress in medicine had pleased him more than that of the modern clinician in the question of diagnosis. It was his experience that often the rural practitioner would make a more refined and accurate diagnosis than he personally was willing to make. In the packing of gauze, too often there resulted bowel pressure. It should be placed not too low down, and not packed upon viscera paralyzed by peritonitis and overdistention. The cases of peritonitis which he feared the most were those with enormous distention. With reference to waiting for recovery from collapse or for reaction, practised by early operators, Dr. Price believed surgery to be a very good treatment for shock.

Book Notices.

Handbuch der Tropenkrankheiten. Herausgegeben von Dr. CARL MENSE, Kassel. Erster Band, mit 124 Abbildungen im Text und auf 9 Tafeln. Leipzig: Johann Ambrosius Barth, 1905. Pp. xii+354. (12 marks.)

The last few years have witnessed a remarkable renewal of interest in the diseases of tropical climates, and the revival can hardly have failed to

facilitate medical administration in our new tropical possessions. Indeed, our own medical men serving in Cuba and in the Philippines have contributed not a little to the common stock of knowledge of such diseases. In this handbook Dr. Mense has had the collaboration of Baelz, of Tokyo; Bassett-Smith, of Haslar; Van Brero, of Lawang; Van der Burg, of Utrecht; Calmette, of Lille; Carroll, of Washington; Eysell, of Kassel; Leishman, of London; Looss, of Cairo; MacCallum, of Baltimore; Martin, of Diessen; Plehn, of Berlin; Pösch, of Vienna; Rho, of Naples; Ruge, of Kiel; Rumpf, of Bonn; Sander, of Berlin; Van der Scheer, of The Hague; Stickler, of Giessen; and Ziemann, of Charlottenburg. It will be seen therefore that the book may well be called an international work.

The first article, by Plehn, is on tropical diseases of the skin. Diseases occasioned by worms and the *Arthropoda* are then treated of by Looss. The next article, on the nervous and mental diseases of the tropics, is by Van Brero. The varieties of vegetable poisoning are described by Rho, and those of animal poisoning by Calmette. All these articles are of the condensed cyclopædic character, and they are freely and very effectively illustrated. The volume gives great promise that the completed work will be a noteworthy addition to the literature of tropical diseases.

Pathologische Physiologie. Ein Lehrbuch für Studierende und Aerzte. Von Dr. RUDOLF KREHL, O. Professor und Direktor der medizinischen Klinik in Strassburg. Dritte neu bearbeitete Auflage. Pp. xvi-620. Leipzig: F. C. W. Vogel, 1904. (Price, 15 M.)

The title of this volume involves a contradiction to established definitions of a few years ago, and affords some indication of the rapid progress which is being made along important lines. Pathological physiology is indeed a misnomer if the scope of physiology is limited to a consideration of the normal functions of the body, but this is no longer admissible. One of the distinguishing and attractive features of Landois's *Physiology* of a generation ago was the attention devoted to the changes in function produced by disease. Other writers on general physiology have since followed more or less the example of Landois in this respect, but it has remained for Professor Krehl to elevate pathological physiology to the rank of a distinct and separate subject. That there was need of such a treatise is sufficiently shown by this third edition of his scholarly work. In it will be found much interesting material which has hitherto been available only from the most scattered sources. Of special value are the chapters on the blood, including hemolysis; recent problems of infection and immunity; nutrition, and metabolism. In them the reader will find a clear guide to many of the intricate developments in modern experimental medicine which promise important practical results in the near future. The value of the text is materially increased by a complete index and by the wealth of references to recent literature accompanying it.

Outlines of Physiological Chemistry. By S. P. BEEBE, Ph. D., Physiological Chemist to the

Huntington Fund for Cancer Research, and B. H. BUXTON, M. D., Professor of Experimental Pathology, Cornell Medical College. New York: The Macmillan Company; London: Macmillan & Co., Limited, 1904. Pp. vii-195. (\$1.50.)

The increasing attention which has been paid to the study of physiological chemistry has called forth several valuable manuals on the subject during a recent period, but none that we have thus far examined makes so successful an attempt to deal with the theoretical side of the many questions involved in this study as does the little work before us. The theory of solutions is studied in the opening chapter, and a terse but succinct account is given of the phenomena of ionization. The nature of the reactions in chemico-physiological processes is explained throughout, and the work closes with a valuable chapter on disease and immunity, which is explanatory of the actions of serums. All the important discoveries of modern chemical research which are utilized in the teaching of physiological chemistry are embodied in this handy-sized textbook, which should commend itself strongly to teachers.

A Manual of Personal Hygiene. Proper Living Upon a Physiological Basis. By AMERICAN AUTHORS. Edited by WALTER L. PYLE, A. M., M. D., Assistant Surgeon to the Wills Eye Hospital, Philadelphia; Secretary of the Section on Ophthalmology, American Medical Association, etc. Contributors: D. H. BERGEY, M. D.; J. W. COURTNEY, M. D.; GEORGE HOWARD FOX, M. D.; E. FLETCHER INGALS, M. D.; WALTER L. PYLE, M. D.; B. ALEXANDER RANDALL, M. D.; G. N. STEWART, M. D. (Edin.); and CHARLES G. STOCKTON, M. D. Second Edition, Revised and Enlarged. Philadelphia: W. B. Saunders & Co., 1904. Pp. xiv-441. (Price, \$1.50 net.)

In the second edition this useful book has been augmented by an illustrated section on home gymnastics, a chapter on domestic hygiene, and an appendix explaining the simpler methods of massage, bathing, and first aid. It is a book that the physician may recommend for his patient.

Miscellany.

The Present Position of the Treatment for Carcinoma of the Rectum.—Mummery, in the *Practitioner*, for November, 1904, in referring to the present practice states that excision is performed, as a rule, only when the growth is small, is easily reached from the anus, and is not fixed to surrounding parts. This limits the operation to less than 10 per cent. of all cases of cancer of the rectum.

The percentage of suitable cases is smaller than in other forms of cancer, because the disease is seldom detected in its early stage. Too often the piles or fistula which may complicate the disease is thought to be the only difficulty, and too often a careful digital examination is not made.

The operation also is a difficult one, and the mortality has been high, sepsis being the most cause of a fatal result.

The reduction of the mortality from the opera-

tion must be aimed at, and this must come by improvement of the technics.

With regard to recurrence, if the diseased tissue has been thoroughly removed the statistics are favorable. The glands are not involved early, and metastatic deposits occur late, if at all. The unfavorable features of the operation and its consequences have been overdrawn and the percentage of those who recover and who lose control of the faces is not more than 10. Even should incontinence occur it can be overcome if necessary by the performance of colotomy, which also leads to far less annoying consequences than have usually been depicted. Colotomy is not to be recommended as a palliative measure in the treatment of cancer, but it is sometimes imperative when complete obstruction of the rectum threatens. The possibility of cancer high up in the rectum, or in the sigmoid flexure, must not be overlooked, and it can best be diagnosed by the aid of the electric sigmoidoscope. A growth in this location is best removed by the abdominal or the abdominoperineal route.

If the lowest portion of the growth is not more than two inches from the anus the perineal operation is the most desirable. A portion or all of the coccyx may be removed to give sufficient space. A preliminary colotomy may be required especially if the sphincters must be removed.

Fixation of the tumor need not prevent its removal if it is only of inflammatory origin.

In inoperable cases the tenesmus may often be relieved by castor oil or salts. If the hæmorrhage is profuse the ulcerated tissue may be curetted away, or the cautery may be used.

Irrigation of the rectum with 5 volumes per cent. of cold peroxide of hydrogen with chlorine water, may also be practised. The diet should be fluid, as far as possible.

Internally one may use perchloride of iron or potassium iodide, salol, creosote, phenacetin, and a variety of other drugs before resorting to morphine.

Prescribing Pharmacists and Dispensing Physicians.—At the March meeting of the Kings County Pharmaceutical Society, Dr. J. H. Droge, of Brooklyn, presented an interesting paper on *The Pharmacist and the Physician*, in which he dwelt on some of the sins of the pharmacist in his relations with physicians and of the shortcomings of medical men. Originally, said Dr. Droge, the pharmacist and the physician were one; but gradually a separation was brought about and we now have two distinct recognized professions. By legislation and through colleges with the various State boards of pharmacy, the standing and efficiency of both professions were being gradually raised. A large number of physicians wrote their prescriptions, depending upon the skill of the pharmacist properly to compound them. This should be so, as the doctor's time could be well occupied by the study and cure of disease, and not by compounding and dispensing his own remedies. But, asked Dr. Droge, What had become of our old time, reliable, competent manufacturing retail pharmacists and dispensers, and what were the causes that had driven them away from their noble profession? How many retail

pharmacists to-day prepared their tinctures, pills, ointments, elixirs, extracts, etc.? All these preparations were sold by the manufacturers and bought by the pharmacists, thereby saving time and money.

The manufacturers controlled the supply of drugs which they bought at the lowest prices, but the drugs were not always of the highest grade. By the use of machinery he could turn out better looking products, such as tablets, pills, tinctures, and ointments. No hand made pill could compare in shape, uniformity, and appearance with those made by the leading pill makers. Few retail pharmacists could make their own preparations as cheaply as they could buy them ready made, but it was a question whether they got the best grades of chemicals and drugs in these preparations and whether the physician obtained the desired result from his prescriptions.

Referring to the increasing competition which the pharmacist is compelled to meet on all sides, Dr. Droge said he was forced into giving a certain amount of medical advice and into counter prescribing whether he wished to or not. He was constantly called upon to treat emergency cases, to dress wounds and sores, treat coughs, colds, rheumatism, headaches, or other ailments, and the customer was willing to pay double the price for the drugs, in order to save a doctor's fees. There was no question that in many cases counter prescribing was overdone. The pharmacist had no legal right to make a diagnosis and to treat diseases; his function was to compound prescriptions and to sell drugs, not to treat illness. Dr. Droge said he considered it wrong to allow a person to suffer and perhaps die from want of temporary aid by a pharmacist in the absence of a physician and the courts would uphold the pharmacist in such cases. Yet the pharmacist did not only given temporary relief for emergency treatment, but he continued the treatment from day to day and from week to week. In many cases the practice obtained this way was much more lucrative than that of his neighbor, the physician, and he made more money than he would in adhering strictly to compounding and selling drugs. It was not likely that he would give up this part of his income for sentimental reasons only. Consequently the physician would endeavor to prevent his prescriptions being taken to a drug store where these objectionable practices prevailed, or he would dispense his own drugs. He also must earn his living and get it, in spite of all drawbacks; such as the prescribing druggist, the advertiser, the quack, and the manufacturer of ready made remedies. He would oppose all such in an endeavor to hold that which he considered rightfully his own. Medicine was a profession and the advice of a physician was given for the welfare of his patient and not for the sole benefit of financial gain on the part of the physician. The constant aim of the medical profession was to alleviate suffering, to reduce the amount of sickness, and by sanitary methods to prevent the causes and spread of diseases. What other profession or class of men constantly endeavored to take away from themselves the source of livelihood? Did they not try to prevent that from

which they made a living—namely, disease? And still the physician had to contend with a great many unscrupulous people who were constantly aiming to make money regardless of whom their treatment might injure. Whether the patient needed the goods or not, the quack or the charlatan, in his convincing manner, misled suffering humanity into buying his goods and the result in the majority of cases was injurious to the health of the patient.

Every day new remedies were put before the public by well worded advertisements, not alone by means of posters, circulars, and the public press, but, he was sorry to say, through the medical, religious, and pharmaceutical press. Innumerable sample packages or powders, pills, tablets, etc., were mailed to clergymen, school teachers, and prominent persons exploiting the wonderful effects of their remedies, endorsed in many cases by physicians!

One gross injustice to the doctor and a dangerous procedure by some unscrupulous druggists was the substitution of other articles than those ordered. High priced drugs of certain known strength were replaced by cheaper ones of variable quality, and thus the calculations of the physiological action were upset. The doctor failing to obtain the desired effect from the drug prescribed lost confidence in the drugs or druggist and resorted to dispensing or depended largely upon suggestion and hygiene. How many physicians knew that paregoric was often made from benzoic acid obtained from urine? Two samples could rarely be found to resemble each other in medicinal properties and therapeutic strength.

Three fourths of the salicylic acid sold was made from coal tar and not from true oil of wintergreen, often producing serious gastrointestinal inflammation. Cheap preparations of ipecac were inert. Sweet spirit of nitre, syrup of iron iodide, tincture of nux vomica, belladonna, digitalis, ammonium carbonate, etc., were all injured by age, yet they continued to be dispensed until the supply gave out.

Any number of preparations could be mentioned which required careful watching on the part of the conscientious druggist. The doctor who practised medicine blindly, and paid no attention to the important factor of pure drugs, was simply gambling on the case. With the physician quality was considered of primary importance, price a secondary matter.

A very unprofessional and injurious practice of a few druggists and doctors was the prescribing and dispensing of secret preparations by number or name known only to the pharmacist and the physician. The patient was thereby compelled to have the prescription compounded at that particular drug store, the chances being that the patient paid an extra high price for his drugs. Who knew that the doctor was not also a financial gainer by the transaction?

Dr. Droge made a plea for an extension of pharmaceutical teaching in the medical colleges, saying he did not think it out of place to mention this subject which to his mind was of great importance to both professions. Every medical student should be compelled to take a practical course in

pharmacy. He should know how to write a prescription intelligently, giving proper dosage and avoiding incompatibilities, and be familiar with the appearance of drugs and mixtures prescribed. During his own brief experience as a pharmacist he said he had the opportunity of learning the merits of properly prepared prescriptions. The scheme introduced by the Kings County Pharmaceutical Society some time ago of presenting to the physician samples of preparations compounded according to the National Formulary and the United States Pharmacopœia was, he thought, a very good one.

A great mistake some physicians made was to tell the patient to buy ten grains of antipyrine or five grains of quinine or some other drug, or some proprietary preparation, whereas if he would write a prescription for the patient, it would be of advantage to himself and the pharmacist from a financial point of view and oftentimes prevent serious results to the patient at a future date because of his taking the drug without consulting the doctor, possibly when it was not indicated.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending March 29, 1905:

- BAILHACHE, PRESTON H., Surgeon. Reassigned to duty at Stapleton, N. Y., effective March 8th.
- BLUE, RUPERT, Passed Assistant Surgeon. Relieved from duty at the Plague Laboratory, San Francisco, Cal., and directed to proceed to Norfolk, Va., and assume command of the service.
- BROWN, B. W., Passed Assistant Surgeon. Upon being relieved by Surgeon J. B. Stoner, to proceed to Louisville, Ky., and assume command of the service, relieving Passed Assistant Surgeon G. B. Young.
- COFER, L. E., Passed Assistant Surgeon. Reassigned as Chief Quarantine Officer of the Territory of Hawaii, effective December 1, 1904.
- CORPUT, G. M., Passed Assistant Surgeon. Upon being relieved by Passed Assistant Surgeon M. K. Gwyn, to proceed to New Orleans, La., and report to Medical Officer in Command for duty and assignment to quarters.
- CURRIE, D. H., Passed Assistant Surgeon. Directed to assume temporary charge of the Plague Laboratory, San Francisco, Cal.
- EAGER, J. M., Passed Assistant Surgeon. Upon being relieved by Assistant Surgeon A. J. McLaughlin, to proceed to Washington, D. C., and report at the Bureau for duty. March 24, 1905.
- FOSTER, M. H., Passed Assistant Surgeon. Detailed as inspector of unseviceable property at San Diego Quarantine Station.
- GRUBBS, S. B., Passed Assistant Surgeon. Upon being relieved by Passed Assistant Surgeon C. W. Wille, to proceed to Chicago, Ill., and report to the Medical Officer in command for duty and assignment to quarters.
- GWYN, M. K., Passed Assistant Surgeon. Upon expiration of leave of absence, to proceed to South Atlantic Quarantine Station and assume command of the service, relieving Passed Assistant Surgeon G. M. Corput.
- HERTY, F. J., Pharmacist. Granted leave of absence for four days from March 8, 1905, on account of sickness.
- KING, W. W., Passed Assistant Surgeon. Granted one day's leave, March 18, 1905, under paragraph 189 of the regulations.

KORN, W. A., Passed Assistant Surgeon. Granted leave of absence for seven days from March 29th.

LUMSDEN, L. L., Passed Assistant Surgeon. To proceed to Perth Amboy, N. J., for duty during absence of Passed Assistant Surgeon W. A. Korn.

McKAY, MALCOLM, Pharmacist. To report, April 3, 1905, to chairman of board for physical examination to determine his fitness for promotion to the grade of pharmacist of the first class.

McLARTY, A. A., Acting Assistant Surgeon. Granted leave of absence for thirty days from April 1st.

McLAUGHLIN, A. J., Assistant Surgeon. Relieved from duty in the Bureau, and directed to proceed to Naples, Italy, for duty in the office of the American Consul, relieving Passed Assistant Surgeon J. M. Eager. March 25, 1905.

STONER, G. W., Surgeon. Reassigned to duty in the Immigration Service, Ellis Island, N. Y., effective March 8th.

STONER, J. B., Surgeon. Relieved from duty at Norfolk, Va., and directed to proceed to Evansville, Ind., and assume command of the service, relieving Passed Assistant Surgeon B. W. Brown.

WILE, C. W., Passed Assistant Surgeon. Upon being relieved by Surgeon L. L. Williams, to proceed to Gulf Quarantine Station and assume command of the service, relieving Passed Assistant Surgeon S. B. Grubbs.

WILLIAMS, L. L., Assistant Surgeon-General. Relieved from duty in the Bureau, and directed to proceed to Baltimore, Md., and assume command of the service, relieving Passed Assistant Surgeon C. W. Wile.

YOUNG, G. B., Passed Assistant Surgeon. Upon being relieved by Passed Assistant Surgeon B. W. Brown, to proceed to Chicago, Ill., and assume command of the service.

Board Convened.

Board convened to meet at Chelsea, Mass., April 3, 1905, for the physical examination of Pharmacist Malcolm McKay to determine his fitness for promotion to the grade of pharmacist of the first class. Detail for the board—Surgeon R. M. Woodward, chairman. Acting Assistant Surgeon F. H. Cleaves, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 1, 1905:

BARTLETT, COSAM J., First Lieutenant and Assistant Surgeon. Relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., and assigned to duty at Fort Miley, Cal.

MUNSON, E. L., Captain and Assistant Surgeon. Granted ten days' leave of absence, with permission to apply for thirty days' extension.

SHORTLIDGE, E. D., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Miley, Cal., and ordered to the Army and Navy General Hospital, Hot Springs, Ark.

THOMASON, H. D., Captain and Assistant Surgeon. Advanced to the rank of captain.

WELLS, GEORGE M., Major and Surgeon. Ordered to proceed from San Francisco, Cal., to Hot Springs, Ark., and report to commanding officer, Army and Navy General Hospital, for treatment therein.

Births, Marriages, and Deaths.

Married.

FOARD—HACK.—In Baltimore, Maryland, on Wednesday, March 22nd, Dr. William R. Foard and Miss Flora Norris Hack.

O'BRIEN—McWILLIAMS.—In Baltimore, Maryland, on Thursday, March 23rd, Dr. Jerome O'Brien and Miss Kate McWilliams.

SAPPINGTON—PORTER.—In Baltimore, Maryland, on Thursday, March 23rd, Dr. Earl N. Sappington and Miss Hattie C. Porter.

TADDIKEN—TATE.—In Mount Upton, N. Y., on Tuesday, March 21st, Dr. Paul Gerald Taddiken and Miss Lena Millsbaugh Tate.

TANEYHILL—CRANSTON.—In Washington, D. C., on Saturday, March 25th, Dr. G. Lane Taneyhill, Jr., and Miss Ethel Cranston.

Died.

ARMSTRONG.—In St. Louis, Missouri, on Wednesday, March 22nd, Dr. George M. Armstrong.

BODENHAMER.—In New Rochelle, N. Y., on Friday, March 31st, Dr. William Bodenhamer, in the ninety-seventh year of his age.

BONESTEEL.—In Troy, N. Y., on Monday, March 20th, Dr. William M. Bonesteel.

CHAFFERS.—In Detroit, Michigan, on Sunday, March 26th, Dr. E. A. Chaffers, in the forty-third year of his age.

COOK.—In San Francisco, California, on Monday, March 20th, Dr. Fernando C. Cook, in the seventy-ninth year of his age.

CORSE.—In Gardenville, Maryland, on Thursday, March 23rd, Dr. George F. Corse, in the sixty-sixth year of his age.

CRANE.—In Kosciusko, Mississippi, on Friday, March 24th, Dr. C. A. Crane.

DANNE.—In New York, on Monday, March 27th, Dr. Frederick Danne, in the sixty-ninth year of his age.

DOLAN.—In Detroit, Michigan, on Tuesday, March 21st, Dr. Theodore C. Dolan, in the twenty-sixth year of his age.

DOREN.—In Columbus, Ohio, on Thursday, March 23rd, Dr. Gustavus A. Doren, in the sixty-eighth year of his age.

FILLER.—In Washington, D. C., on Wednesday, March 22nd, Dr. Charles W. Filler, in the forty-fifth year of his age.

FWOWLE.—In Milwaukee, Wisconsin, on Wednesday, March 22nd, Dr. Henry Fowle, in the seventy-sixth year of his age.

FOX.—In Baltimore, Maryland, on Wednesday, March 29th, Dr. Fabius Fox, in the forty-first year of his age.

GARLAND.—In Syracuse, N. Y., on Monday, March 20th, Dr. John J. Garland, in the thirty-second year of his age.

KLIPEL.—In St. Louis, Missouri, on Friday, March 17th, Dr. H. A. B. Klippel, in the thirtieth year of his age.

LEICK.—In Cleveland, Ohio, on Friday, March 31st, Dr. George F. Leick, in the fiftieth year of his age.

OLCOTT.—In Brooklyn, N. Y., on Thursday, March 30th, Dr. Charles A. Olcott, in the fiftieth year of his age.

PORTER.—In Paris, Tennessee, on Monday, March 20th, Dr. Joseph H. Porter, in the eighty-first year of his age.

REYNOLDS.—In Colorado Springs, Colorado, on Thursday, March 23rd, Dr. C. J. Reynolds.

RICE.—In Passaic, New Jersey, on Monday, March 27th, Dr. Frank H. Rice, in the seventy-sixth year of his age.

ROGERS.—In Elmer, New Jersey, on Monday, March 27th, Dr. Harry C. Rogers.

SITTEL.—In Cincinnati, Ohio, on Saturday, March 25th, Dr. Theodore Sittel, in the seventy-seventh year of his age.

SULLIVAN.—In Brooklyn, N. Y., on Monday, March 27th, Dr. Richard H. Sullivan, in the fifty-first year of his age.

TANSLEY.—In New York, N. Y., on Saturday, March 25th, Dr. John Oseroff Tansley, in the sixty-first year of his age.

THOMPSON.—In Washington, D. C., on Tuesday, March 21st, Dr. Richard Hamilton Thompson, in the eighty-seventh year of his age.

WARDER.—In Philadelphia, on Saturday, March 25th, Dr. William H. Warder, in the seventy-second year of his age.

WARDNER.—In La Porte, Indiana, on Friday, March 17th, Dr. Horace Wardner, in the seventy-sixth year of his age.

WHITEHEAD.—In Greenwood, Mississippi, on Saturday, March 25th, Dr. N. E. Whitehead.

WHITING.—In Janesville, Wisconsin, on Monday, March 27th, Dr. J. B. Whiting, in the eighty-third year of his age.

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WHOLE No. 1376.

Original Communications.

CASES OF ENTEROPTOSIS AND CARDIOPTOSIS WITH RETURN TO THE NORMAL.

By MAX EINHORN, M. D.

NEW YORK.

PROFESSOR OF MEDICINE AT THE NEW YORK POSTGRADUATE
MEDICAL SCHOOL.

In regard to the ætiology of enteroptosis and cardioposis, the last word has not yet been spoken. Some authors assume the existence of a congenital defect. Even if this be true in some cases, it certainly plays no part in the majority. Visceral ptosis is most frequently caused by states of inanition, no matter of what origin. Predisposing factors are the corset, constriction of the abdomen, getting up too soon after confinements, etc., although these are not really absolutely essential in bringing about this condition. A high degree of long continued subnutrition alone is sufficient to cause marked enteroptosis and cardioposis. This at once indicates the line of treatment to be pursued in order to cure visceral ptosis, viz., the rebuilding of the organism.

That a movable kidney may be entirely cured by medical means was first proved by Henderson.¹ I have since observed such cases.² Notwithstanding the importance of this subject, not much is to be found about it in literature, and the fact that the prolapsed kidney may be restored to a normal position has certainly not yet become generally known to physicians. For this reason I have deemed it proper to discuss the subject, and shall first describe some cases of visceral ptoses in which the displaced organs have returned to their normal places.

CASE I.—January, 1900, Miss H. M., 33 years old, seamstress, complains of lack of appetite, poor sleep, constipation, and occasionally palpitation of the heart. The patient is rather thin. Examination of the chest organs shows a normal condition. The stomach extends about a hand's

width below the navel. The liver dulness begins at the lower margin of the seventh rib and projects two fingers beyond the right costal margin. About two thirds of the right kidney can be palpated on deep inspiration. Diagnosis: Enteroptosis, gastroposis, hepatoposis, right nephroposis, neurasthenia.

January 14, 1905, patient presents herself again, having gained 30 pounds in weight. Examination now reveals normal conditions as regards the position of the stomach, liver, and kidney.

CASE II.—February, 1901, Miss A. R., a teacher, about 38 years old, complains of violent diarrhoea and some cough. Examination of the lungs shows slight dulness at the apex anteriorly on the right side and fine râles. Heart normal. On deep inspiration the right kidney can be entirely palpated, being, therefore, movable in the third degree. The stomach extends about a hand's width below the navel. Weight of patient, about 100 pounds. Diagnosis: Catarrh of the right apex of the lung, enteroptosis, right movable kidney, gastroposis, chronic enteritis. She was treated for some time, according to the usual methods and improved.

January 20, 1905, she again came to the office after a long absence. She now weighed 130 pounds, having gained 30 pounds in the last few years. Her stools were normal. She had complained occasionally of a slight cough and recently of pain in the epigastrium. She is now again examined. In the right lung we find anteriorly a few râles at the apex. Stomach extends to one finger's width above the navel. The right kidney cannot be palpated on deep inspiration. The marked enteroptosis has, therefore, disappeared completely.

CASE III.—C. D. H., 40 years old, merchant, has suffered from his stomach for the last twenty years. He feels bloated two hours after meals and has some nausea. He frequently brings up a little watery fluid, belches a few times, and then feels better. During the last years he has lost from 12 to 15 pounds. He has always been a very rapid eater all his life. He is troubled with palpitation of the heart, but does not get short of breath. He is very much depressed and melancholy. The relative dulness of the heart begins at the lower margin of the fourth rib; the apex beat is not plainly discernible. The heart sounds are loudest in the seventh intercostal space, but murmurs are absent. The stomach extends two fingers' widths below the navel. The upper boundary of the liver dulness begins in

¹F. Henderson: A Case of Movable Kidney Permanently Cured. *Glasgow Medical Journal*, Vol. XX, 1883, p. 329.

²Max Einhorn: Remarks on Enteroposis. *Medical Record*, April 13, 1901.

the right mamillary line in the seventh intercostal space and extends about four fingers' widths below the margin of the ribs. The right kidney is movable in the fourth degree, the left in the first. Examination of the stomach contents one hour after Ewald's test breakfast shows normal conditions. The diagnosis of enteroptosis, cardioposis, and neurasthenia was made. The patient was given *magnesia usta* with *feratin*, advised to wear an abdominal supporter, and told to eat frequently (five times daily).

March 30, 1904, patient says that he has gained 25 pounds. He feels perfectly well. Examination reveals that the heart dulness begins at the upper margin of the third rib. The stomach extends to one finger's width above the navel, the liver does not project beyond the lower margin of the ribs. Neither the left nor the right kidney can be palpated. Therefore the heart, stomach, liver, and kidneys are in their normal places.

CASE IV.—J. C. R., 31 years old, engineer, has never been sick, with the exception of scarlet fever. Until six years ago he always had a good stomach; at that time he noticed that he was losing in weight. Appetite was moderate, bowels constipated. He complains of an uncomfortable feeling in the abdomen about two to three hours after meals, as well as of belching. Present condition: The heart dulness begins at the lower margin of the fourth rib; heart sounds are normal; liver dulness begins two to three fingers' widths above the lower margin of the ribs in the right mamillary line and extends three fingers' widths below the navel. The stomach extends about one hand's width below the navel. The right kidney is movable in the third degree. Examination of the stomach about one hour after Ewald's test breakfast shows a high degree of acidity. The patient was told to eat amply, to wear an abdominal supporter and was given *alkalies* internally.

January 5, 1905, patient says that he has gained 10 pounds in weight. He feels much better. Examination of the chest organs shows that the heart dulness begins at the normal place (third rib); the condition of the kidney and stomach, however, has remained the same (kidney movable in the third degree, stomach two to three fingers' widths below navel). The liver, however, occupies a more normal position, the dulness beginning at the upper margin of the seventh rib and extending to about one finger's width below the margin of the ribs.

CASE V.—November 23, 1903, J. A., 44 years old, *méchant*, complains of frequent attacks of headache, rapid fatigue, frequent belching, and constipation. Examination shows that the heart dulness begins at the lower margin of the fourth rib. Heart sounds are normal. The liver dulness begins at the lower margin of the seventh rib, and extends in the right mamillary line two to three fingers below the margin of the ribs. The stomach extends a hand's width below the navel. Treatment consists in frequent feedings and the wearing of an abdominal supporter.

January 20, 1905, patient reports again, saying that he had gained 15 pounds and that he is feel-

ing perfectly well; he left off his abdominal supporter lately. Examination reveals that the heart dulness begins at the third rib, liver dulness in the right mamillary line at the lower margin of the sixth rib, and does not project beyond the costal margin. The stomach extends to a finger's width above the navel.

CASE VI.—March 21, 1904, Reverend Dr. R. G., 40 years old, complains of pains in his stomach about four to five hours after meals or shortly before meals, and of rapid fatigue when at work. When he partakes of food the pain is better. He sleeps poorly and suffers from constipation. Examination reveals: heart dulness begins at the lower margin of the fourth rib. Heart sounds are normal. Nothing abnormal can be discovered in the lungs. Liver dulness begins in the right mamillary line at the lower margin of the eighth rib and projects three fingers' widths beyond the costal margin. The stomach extends a hand's width below the navel. The diagnosis is: *Cardioposis*, *hepatoposis*, *gastroposis*, *gastral-gokenosis*. The patient is told to eat well, to wear an abdominal supporter, and is given one decigramme of *zinc valerianate* with three decigrammes of *ferratin* twice daily.

December 21, 1904, patient reports that he has gained 6 pounds, that he is feeling much better and sleeping well. He is again examined and the following is found: Heart dulness begins at the upper margin of the third rib. Liver dulness begins at the lower margin of the seventh rib and reaches two fingers' width below the right costal margin. Stomach reaches two fingers below navel.

Cases of this kind are not by any means so very rare, and I have simply selected the above from a large number of similar observations. I am convinced that nearly every clinician has seen cases resembling these. They illustrate two points: first, that a complete return to the normal of the prolapsed organs is possible; and, secondly, the importance played by an increase of the bodily weight. In all these cases after the patient had gained in weight, a better position of the organs resulted. The explanation for this process of restitution is not so easy. It seems, however, that an increase of fat around certain organs (kidneys, heart) as well as an improved general condition is an important factor.

According to some observations it seems to me, that the heart is the first organ to return to its normal location, even before a change in position can be discerned in the other organs. A return to the normal seems also to be more frequent in *cardioposis* than in *ptosis* of other viscera. As will be gathered from the above histories, the treatment consisted mainly in the wearing of a properly fitted abdominal supporter and ample feeding. That the last factor is the more important of the two may be inferred from the fact that the prolapsed heart returned to the normal after

an increase in bodily weight. The supporter under these circumstances can hardly have exerted an influence, and we must therefore attribute the favorable result to the improvement in nutrition.

In my article on enteroptosis I have already pointed out the importance of ample feeding in the treatment of this affection. Here I should like to emphasize this point once more and to add that in almost every case when desirable an increase of bodily weight can be established by a systematic augmentation of the quantity of food ingested. Practically this may be done according to the principles laid down by me in a recent paper.³

Even if the organs do not return to the normal in every instance, yet the prognosis is nearly always good. In almost all cases it is possible to relieve all the subjective symptoms by a rational treatment. But even to that end ample and proper feeding is the point of paramount importance.

20 EAST SIXTY-THIRD STREET.

DIETL'S CRISIS AND SOME CASES OF MOVABLE KIDNEY.

By L. W. ATLEE, M. D.,

PHILADELPHIA.

In making the selection of the following cases for publication there have purposely been omitted any representatives of that large class, the nervous female, presenting hysterical or neurasthenic symptoms, which, like the poor, is always with us. They present the usual motley array of symptoms so well known to every busy practitioner, and so difficult or impossible to deal with as to relief. It is not so long since that the ovaries bore the brunt of the blame for these manifestations; the sufferers were assured their ovaries were cystic, atrophic, or what not. They were advised to have the supposedly offending organs removed. Unfortunately the results were most disappointing, and, if one may judge by what is seen of the mutilated ones, not only do the original symptoms continue, but other and more serious symptoms are added. Hardly had the thinking men of our profession relegated spaying for the relief of this condition among the measures found wanting, when behold! the movable kidney comes to the relief of those of weak diagnostic and logical power of deduction. Now the discovery of a kidney that moves, in these cases, is fixed upon as the *fons et origo mali*. The offending kidney must be stitched fast, and all will be well. But is it? From our observation of the curative effects of this operation for the relief of the nervous symp-

toms in these cases the results have been absolutely nil.

"Far too much stress has been laid upon the condition of late years; if detected accidentally it is well not to let the patient know of its presence. The symptoms often date from the knowledge." Osler, *Practice of Medicine*, p. 847, 1903.

It is a very different matter when the movable kidney is producing symptoms due to the physical effects of its malposition. "Scarcely any mention is made of such symptoms, which were first described by Dietl in 1864, and a more widespread knowledge of their occurrence in connection with this condition is desirable." *Op. cit.*, p. 848.

These attacks come on suddenly and are characterized by severe abdominal pain, nausea, vomiting, and collapse, there are chills and sometimes high fever, I have seen the thermometer in an exceptional case show as high as 105° in a very hysterical subject. A practitioner who had seen this case just previous to my visit had made a diagnosis of typhoid fever with peritonitis; all the serious symptoms had subsided in twenty-four hours.

Among the more serious effects produced by a floating kidney is interference with the continuity of the intestinal tube, or stoppage of the bile duct. The circulation in the renal vessels, and the patency of the ureter may also be impaired, causing a temporary, or in time a permanent hydronephrosis. The kidney has also been looked upon as the cause of various grades of downward displacement of the viscera, but this requires confirmation. We see it cause a moderate grade of dilatation of the stomach due to pyloric and duodenal obstruction. Edebohls considers the kidney responsible for certain cases of appendicitis, but the explanation is not very satisfactory.

Before attributing effects to a kidney we have found to be floating, it is well to bear in mind that it is quite common to encounter considerable degrees of downward displacement of the viscera without any subjective symptoms at all. Subjective and nervous symptoms date usually from some cause injuring the general health, as severe nervous strain or shock. In the case of Mrs. McG., though no change could be made out as to the position of the abdominal viscera, all the subjective symptoms disappeared with the great improvement in the general health.

A reference to the literature on the subject will confirm the belief that a great variety of anatomical conditions are met with in the extreme grades of floating kidney—many different arrangements of bands, both cellular and peritoneal, passing from the kidney to various organs, thus in a way accounting for the many and varying effects on their functions.

³Max Einhorn: The Art of Increasing and Decreasing the Bodily Weight at Will. *Medical Record*, July 18, 1903.

Mrs. R. N., aged 42 years, laboring class, mother of five children. When seen first she was in bed, and had been under treatment by another practitioner during past five days for what he called appendicitis. She had been unable to retain anything in her stomach; the bowels were obstinately constipated. The woman had the appearance of being very ill, in a condition we call collapse, the pulse rapid, weak, and small, in the mouth the thermometer marked 102.5°, but the hands and feet were cold, and the finger nails cyanotic. The abdomen was tympanitic and distended by what seemed the cæcum and ascending colon. There was bitter complaint of pain extending from the right hypochondrium to the right groin. Rigidity of the right rectus muscle was not marked. The extreme tenderness prevented any thorough palpation, but a freely movable tumor was immediately recognized on palpating the right lumbar region. The thoracic organs were normal. The urine contained bile, but no other pathological ingredients. The treatment was merely symptomatic, opium, belladonna, and extract of colocynth being given internally (they did not cause vomiting), and turpentine stupes applied, as well as enemata containing turpentine administered. In the following twenty-four hours the bowels had freely moved and much flatus had been passed, the colonic distention having largely disappeared. The pain and nausea had ceased, the urine contained more bile pigments, and the conjunctiva and skin were decidedly bile tinged. At this time the movable lump was easily recognizable as a floating kidney, and could be pushed into its bed, and into the iliac region and almost across the middle line. A cough, or in fact any straining movement on the patient's part, made it quickly pop out again from its normal position. Pressure in the gall bladder region caused no pain. The further history of the case contains nothing of interest beyond the fact of her progressing uninterruptedly to the enjoyment of fair health. Some fourteen months after this she was seen again in a much milder attack which lasted only one day, and was not accompanied by symptoms indicating interference with the patency of the bile ducts. In this woman the abdominal walls were very lax, and there undoubtedly existed some downward displacement of the intestines and stomach. We may add that the usual means at our command were made use of to convince ourselves the lump was not an enlarged gall bladder. The existence of gallstones is only for conjecture, for it is conceded a floating kidney can and does at times produce such biliary interference as to cause jaundice. (Henry Morris, *Surg. Dis. of Kid. and Ureter*, Vol. 1, p. 128. London, 1901.)

However, Osler says "some writers have described pressure upon the gall ducts and bladder, with jaundice, but it is not very likely to occur." *Pract. Medicine*, p. 848, 1903.

"Transient attacks of jaundice are said not to be unfrequent, but I have never personally witnessed them." "Autopsy supports Landau's theory: A right floating kidney if carefully drawn forward or downward, causes traction in the duodenum at a point

2 to 3 cm. below the junction of the biliary ducts, and though it does not occlude the lumen it interferes with the contents of the bowel sufficiently to impair digestion and cause biliary obstruction." *Surgical Dis. of Kid. and Ureter*, Morris, Vol. 1, 113-114.

"In other instances intestinal obstruction has been attributed to renal pressure." Allbutt's *Syst. of Med.*, Vol. V, p. 344. "In Frank's case a peritoneal band from the upper portion of the kidney was attached to the duodenum in such a manner that, when the kidney was drawn down, the band dragged upon the duodenum and kinked it, thus practically occluding its lumen. Similar bands have been seen by Lenharz and Weisker, and I have been able to demonstrate the existence of folds of peritonæum of this nature in our dissecting room." "The drag of the peritonæum on the duodenum is probably the commonest cause of the temporary jaundice which often accompanies the gastric crisis." *Op. cit.*, p. 346.

In this case we have symptoms suggestive of gallstones, intestinal obstruction, and appendicitis, and on first approaching such a combination one may easily be led by a habit of "cocksureness," or snapshot diagnosis, to settle on any one of the three possibilities and proceed accordingly. "The Dietl's crises have been mistaken for appendicitis." Osler, *Op. cit.*, p. 526. It is necessary to have an accurate knowledge of the symptomatology of the diseases simulated, as well as of the disease presented for our diagnosis in this case, as in any other. For in these days of active surgical interference in all of these morbid conditions a laparotomy would be considered imperatively demanded.

Mrs. McG., widow, aged 41 years, cook. When first consulted by this woman my first thought was what a typical picture she presented of a case of cancer of the stomach, and the train of symptoms enumerated seemed to bear out strongly this first impression. She was very tall, emaciated, and of a ghastly complexion. No matter what she ate she vomited, in the course of one to three hours. After eating severe pain came on in the epigastrium, and was relieved only by vomiting. The vomitus was very sour and put her teeth on edge. The condition had been getting worse for the past eight months, though she stated she had been troubled with dyspeptic symptoms for years. She had left a hospital a few days ago; while there her stomach had been better on the diet she received, but all the symptoms immediately reappeared on her return to her home. She had been told she had gastroptosis, and advised to have an operation. The general condition was one of extreme inanition, the thoracic organs were normal, and the urine showed no morbid characteristics; it was scant and contained

lithates. In passing the hand over the abdomen in the recumbent position a tumor was felt in the right lumbar and iliac regions; it was very movable, pressure producing a sickening sensation of pain. It could be reduced into the kidney position in the right flank, where it remained until displaced by a deep inspiration or cough, or the assuming of the erect posture. The abdominal walls were relaxed, but there was no intestinal distention. It could not be made out that the body of the stomach was decidedly depressed, or that the organ was dilated. The symptoms suggested pyloric obstruction. There were no nervous symptoms of a neurasthenic or hysterical character. There had never been any severe crises of pain, vomiting, and prostration, nor were there complaints of pain in the back or lower thorax. Digestive disturbances, constipation, and the resulting weakness were the subjective conditions. This woman was given a simple abdominal supporter with a pad in the hypogastrium. This is especially mentioned, as she was much more comfortable with than without it; many of these patients cannot tolerate a supporter of any kind. The diet at first consisted principally of freshly expressed beef juice, relieved by occasional feedings of clam juice, or equal parts of milk and lime water. As her condition improved she gradually took up beefsteak, mutton chops, stale bread, eggs, and, lastly, vegetables of the starchy group. In three months she put on thirty pounds of flesh, felt strong and well, and returned to her work. She had to be very careful about certain articles of food, and needed always to take laxatives. Medication consisted of bismuth subnitrate with the digestive ferments, principally ingluvin, which acted like a specific in her case; to these strychnine in small doses was added. The improvement in this case was as unexpected as it was gratifying. She still continues in very good health for over a year now, working steadily. The only complaint she has had was a mild attack of sciatica in the right leg and hip, which was of long duration and yielded to antilithemics and counterirritation.

"The disturbances affecting the different parts of the digestive canal are sometimes very severe. Mathieu states that the percentage of cases of movable kidney in dyspeptics is very large; and it is well in cases of unaccountable disorders of digestion to search for the existence of nephroptosis. The symptoms are gastric pain, loss of appetite, frequent vomiting, and the other signs of gastric catarrh; the bowels are often obstinately constipated, the body becomes emaciated. The appearance in several cases has been suggestive of malignant disease of the stomach, as described by Lochhead." Allbutt, *Syst. of Med.*, Vol. V, p. 344.

CASE NO. 3.—Mrs. G., aged 28 years, mother of two healthy children, is rather short and thick set, well nourished. For the past year has at times been troubled with dyspeptic symptoms, eructations, and discomfort after meals, bowels

occasionally costive. Frequently has pain in lumbar region, right hypochondrium, and inguinal region. Pain in back sometimes very severe at night. Has had some half dozen attacks of most excruciating pain in regions described, accompanied by nausea and vomiting with straining. She had been told by an eminent practitioner the attacks were due to gallstones. There had never been any jaundice after these attacks. Examination of the abdomen showed the walls to be more relaxed than normal, but not greatly so. The right kidney was movable in a vertical line some four inches, but did not float. The lower pole of the left kidney was palpable and had the fancifully called "cinder-sifting" movement. No other organic lesion was found. The urine contained many oxalate of lime crystals and much epithelium showing irritation of the urinary tract. This woman was neither hysterical nor neurasthenic, and did not find the occasional pains and soreness of much moment, but she dreaded the attacks of pain, nausea, and vomiting, and felt at these times as if she were going to die. She was advised to get a supporter for the abdomen, and given directions as to diet and medication directed to aiding the digestion. During the following ten months she reported several times at the office and by letter that she was keeping comfortable. One evening at this time her husband called by telephone from their residence in the suburbs of Philadelphia for me to come as his wife had one of the terrible attacks. When seen her condition was such it was easy to understand her dread of these crises; the pain, nausea, and vomiting were accompanied with a condition bordering on collapse, great cardiac weakness, and cold extremities. Such examination as was possible showed great superficial sensitiveness all over the right side of the abdomen; it was not painful on deep pressure excepting the kidney. If the attention was withdrawn, deep pressure in the gall bladder region was not painful. A hypodermic of morphine, and a mustard plaster afforded relief, so that she slept most of the night and was able to resume her usual occupations on the following day.

Mrs. B. I., aged 27 years, Italian, mother of ten children, the youngest one year old. Has no distinct recollection when she first began to experience discomfort, but has always been nervous. She had occasionally, perhaps once in three or four months, severe attacks of pain in the right side of the thorax; these pains shot into the right iliac region also. When four months' pregnant with her last child she had walked to a nearby clinic of a large hospital. At this time she had some pain in the aforementioned region. She was advised to have her appendix removed. This was done, and she recovered quickly and returned home in a few weeks. While carrying her child she had no more attacks of pain, but a few months after its birth she had a return of the same pains. A second visit to the hospital brought forth the diagnosis of "inflammation of the ovary." She was urgently advised to have the ovary removed. About this time she was first seen by me. She is a well developed and nourished, rosy cheeked woman. A careful examination of the pelvic or-

gans revealed nothing out of the normal. She had a fairly good digestion, but was costive. She complained of an intercostal neuralgia, and there were the usual spots painful on pressure in this neuralgia. There was pain in the right loin at times, sometimes extending into the right groin. She had plenty of nourishment for her baby, which was big and fat. The right kidney was freely movable in a vertical direction and the fingers could be placed over the upper pole of the organ. She was mildly hysterical and very anxious about herself. The treatment was entirely symptomatic, and gave great relief. She was seen in a severe attack, later, of the intercostal neuralgia, with subjective symptoms of a hysterical character. There was no vomiting, fever, or urinary symptoms during the attack. Mild counter irritation and some potassium bromide and ammonium valerianate gave relief. During the past year she has been in my office frequently with relatives or friends to be treated, but makes no serious complaint about herself, and says she does not mind some occasional discomfort, so long as she knows there is nothing serious the matter.

"Symptoms of chronic appendicitis are considered by Edebohls to be a very frequent complication of movable kidney on the right side." Morris, *Op. cit.*, p. 114. In this regard Osler, who rarely misses a point, says: "In other instances the attacks of pain may be thought to be due to intestinal disease are due to recurring appendicitis." *Op. cit.*, p. 848.

George B., aged 28 years, at one time professional baseball player, now a moulder in plaster of paris, is well nourished, but sallow. He comes of a very neurotic family; his mother has spasmodic asthma, and two sisters suffer from severe neuralgias at times. He was at one time an enthusiastic baseball player, but has not played for the past three years. For some time he has complained of troublesome digestion, constipation, and palpitation of the heart. His relatives have noticed that he has become moody, talks but little, except of his health, and he has lost all interest in his family and work. He will sit about the house for days at a time brooding. He smokes a pipe a good deal, and drinks freely of tea and coffee, but not more than was usual heretofore. When first seen he was in bed and complained of feeling dizzy, of palpitation of the heart, and had some pain in the right lower thorax, right lumbar, and right umbilical regions. There was no tenderness or rigidity of the abdomen. His pulse was small, regular, and 140 per minute; temperature normal. Tongue coated, breath heavy. Examination failed to reveal any diseased organs. The lower two thirds of the right kidney was palpable, and could be pushed into its bed, but would descend again on forced inspiration or violent coughing. There was also a small reducible right inguinal hernia. The urine showed great quantities of oxalate of lime crystals, but there were no subjective symptoms of irritation of the urinary tract; there was no other abnormality about the urine. It is more than one year since this

man was first seen. Every effort has been made by treatment directed towards the correction of the stomach condition and the constipation, and general hygiene as to fresh air, bathing, and exercise to improve him, but beyond the fact of his being in apparently good general health, the condition of hypochondriasis is still the same. Many indefinite complaints have been made only to be changed for others at the next visit. However, this well known condition needs no further description, as it differs in no way in this case from the usual condition seen without movable kidney. (I have heard recently that this patient was much better and playing baseball as a professional.)

Of the nervous symptoms seen in nephroptosis, Osler says "in women the hysterical symptoms may be marked; and in men various grades of hypochondriasis." *Op. cit.*, pp. 847-848. No mention is made of this effect on the nervous system in the article on Nephroptosis in Allbutt's *System of Medicine*, but Morris says "during the course of the disease the general health of the patient is naturally much impaired; languor, debility, loss of flesh, hypochondriasis, great restlessness, great anxiety, hysteria, perversion of sensation, or of the special senses, and many other neurotic signs are some or other of them commonly present." Vol. I, p. 116. "So frequently are symptoms which are caused by the kidney referred to some other organ, so varied are the nervous and other disorders associated with the female genital organs, that it is often most difficult to say how much of the neurasthenic symptoms, how much of the abdominal pain and backache, how much of the gastroenteric disorder, or how much of the disturbed urinary functions is due to the movable kidney and how much to some other morbid condition, or indeed to a hysterical temperament." Morris, *Surgical Dis. of Kid. and Ureter*, Vol. I, p. 120.

2020 PINE STREET.

Testimonial to Dr. Lucy Bannister.—The resignation of Dr. Lucy A. Bannister as superintendent of the Mills Training School of Bellevue Hospital was distinguished by a gathering on April 7th, when a beautifully engrossed testimonial was presented by L. J. Rourke, on behalf of the students, while Walter M. Delevan, a recent graduate, made the speech which accompanied the presentation of a set of engraved resolutions from the graduating class. Dr. Nichols, of the medical division, also made a short address expressive of the general regret at Dr. Bannister's departure. Dr. Bannister is a graduate of the Pennsylvania Woman's College of Medicine. Before assuming the superintendency of the Mills Training School she held the position of superintendent in the Wisconsin General Hospital and Training School. She goes to Philadelphia to enter private practice.

INFLAMMATION OF THE GLANDS OF BARTHOLIN.

By CHARLES C. MILLER, M. D.,

CHICAGO.

A careful perusal of the literature upon acute inflammation of the gland of Bartholin will show that the condition described by the writers of to-day as an acute inflammation of the duct or gland is rather an inflammation subsequent to the occlusion of the duct of the gland, or one of its branches with the retention of secretions and discharges. Acute inflammation, without the retention of the secretions and pus formed, will differ widely from acute inflammation where secretions and inflammatory products are retained within duct and gland, both as to symptom complex and as to the subsequent outcome.

Where a woman develops an infection of the vulva, vagina, or urethra, accompanied by a profuse purulent discharge, the openings of the glands of Bartholin are constantly bathed in these discharges, which follow the line of least resistance. They are directed by the labia and by gravity toward the openings of the ducts of Bartholin's glands in the fossa navicularis. The imperfect, falciform, valvular fold, which can sometimes be demonstrated at the opening of Bartholin's duct cannot be expected to prevent an infection of the duct when the orifice of the duct is constantly bathed in a highly infectious discharge. All the tissues about the duct become inflamed and oedematous in many cases. This lessens the resistance to the invasion of the bacteria and the duct is lined with that variety of epithelial cells which are peculiarly favorable to the development of the gonococcus, the germ almost invariably responsible for the development of an acute vulvar, vaginal, or urethral inflammation.

When a woman is first infected with gonorrhœa she develops in not a few cases an acute vulvar inflammation, as well as a vaginitis and urethritis. In this case the entire genitalia become swollen, oedematous, and tender. A tingling, burning pain and more or less pruritus are noted. The mere gentle separation of the labia is painful. The gynecologist soon learns that these women have often but recently been violated. The introduction of the finger into the vagina causes severe pain, and but little information is elicited, so that the inspection of the parts and possibly the gentle separation of the labia is the extent of the examination made. Hidden among these acutely inflamed and exquisitely tender tissues are the infected, swollen glands, and ducts of Bartholin. There is no peculiar, striking, or distressing symptom to direct particular attention to them; they are inflamed, as are the tissues all about them, and inflammatory products, which

form in gland and duct, find free egress with the secretions of the gland into the fossa navicularis, where they mingle with the discharges from vulva, vagina, and urethra. It is thus not strange that an inflammation which has no symptoms to direct our attention to it should escape our notice.

I do not direct the attention of the profession to the frequent occurrence of acute inflammation of the duct and gland of Bartholin in order to propose some special treatment for this acute inflammation. The importance of recognizing acute inflammation lies in the fact that a very large number of such cases do not go on to complete resolution. The infection persisting in these structures contaminates the secretions of the gland and their discharge before and during intercourse exposes the partner to the dangers of infection. When the disease has quite disappeared from the remainder of the genital tract reinfection may occur from these discharges from the Bartholinian glands, and a pelvic inflammation ultimately developing may wreak irreparable damage in a patient who has previously escaped an ascension of the infection above the uterus.

Where there is a severe inflammation of the external genitals coupled with much swelling and tenderness, the palpation of the swollen gland of Bartholin is only possible with the patient under general anæsthesia. I have enjoyed the opportunity thus to examine several patients and have always found it possible to palpate the swollen gland. When the inflammation has somewhat subsided, it is also possible in quite a number of these cases to demonstrate the somewhat swollen and enlarged gland, if the patient is tolerant of pain. To palpate the gland the index finger should be introduced into the vaginal entrance and pressed somewhat backward; the thumb should then be pressed toward the vaginal finger, grasping the labium majus and intervening tissues. The tissues should then be allowed to slip through the fingers, and the gland will be felt, resembling very much a somewhat swollen lymphatic gland. If the gland is palpable, and an inflammation of the external genitals has but recently subsided, it is my opinion that the gland has been infected. Some anatomists have asserted that the gland when normal can be felt in the thin individual, but I do not believe this is correct if it has never been subjected to infection or trauma.

The inflammation sometimes subsides in the gland so rapidly that the gland cannot be felt when the acute inflammation has subsided, yet it remains infected. This is particularly likely to be the case in the woman who has more than the usual amount of subcutaneous fat. I have had one case of this kind where the woman had an acute inflammation

of the external genitals. The glands could not be felt during the acute inflammatory process owing to the swelling and tenderness interfering with a thorough examination. This patient was carefully treated, and after the inflammation of the parts subsided, efforts were made to palpate the glands without success. About a month after treatment had been discontinued, without any sign of a reinfection of the vulva, vagina, or urethra, an infection was demonstrated by the development of a purulent inflammation after retention of the secretions of the gland.

One would at first think that the presence of a purulent inflammation of the duct or gland might be demonstrated by expressing pus from the duct or gland by pressure, but this is not possible as a rule unless there is more or less obstruction to the duct allowing the retention of the pus in the dilated duct. Where it is possible to milk out a visible quantity of pus from the duct it is safe to infer that the duct is more or less strictured or that the secretions have become inspissated and have acted as a plug to the duct.

After an acute inflammation of the external genitals has subsided, we are able to palpate, in many of these cases, the gland in which complete resolution has not occurred. In others this will not be possible even though the gland is infected. If the patient is a woman fairly fleshy, the tissues will be well cushioned with fat, and if she has had no children, and the fascia and muscles are tense and resistant, palpation of the gland will be impossible unless it is very distinctly enlarged.

During an acute inflammation of the external genitals, the tissues all about the entrance of the duct of this gland are inflamed. When the inflammation of the vulva subsides and the tissues of the fossa navicularis gradually lose their congested appearance, if there has been an inflammation of the duct of the gland of Bartholin, we shall have the opening of the duct remain injected, if more or less inflammation persists in this duct. Pozzi has compared the opening of the duct with its purple red areolæ to a flea bite, and Sanger has called this the "gonorrhœal macule." This condition usually persists where the duct remains inflamed. In the absence of all other symptoms it is safe to infer that this woman has a condition which is a menace to herself and to any person who might have sexual relations with her.

The trauma incident to the birth of several children, and the trauma of frequent and violent intercourse or sexual abuse may result in the irritation and enlargement of the gland, where it is poorly protected by fat so that it becomes palpable, but I have never observed an acute inflammation

causing symptoms which could be attributed to trauma alone.

Mann, in his *System of Gynecology*, speaks of trauma as a factor in causing acute inflammation, but it is easy to see that the cases of which he is speaking are those in which a chronic infection of the duct and gland are complicated by stricture of the duct, the trauma merely favoring acute inflammation after cystic distention has developed.

CHRONIC INFLAMMATION OF THE DUCT AND GLAND WITHOUT OCCLUSION OF THE DUCT.

This is the condition which so often follows acute inflammation of the duct and gland. A few observers have recognized the frequency of this condition, but generally speaking gynecologists have overlooked it.

Reparative efforts are probably greater in the gland than in the duct, and in a percentage of cases, which it is hard to definitely estimate, the gland becomes entirely healthy, but the infection persists in the duct. It is sometimes easy to pronounce the gland infected, as one can easily palpate it as an enlarged, slightly tender mass. Where the woman is in good flesh, and the tissues are firm and resistant, even if it is enlarged and infected, it may not be palpable. In such a case, we are unable to say definitely as to the condition of the gland, even though we find conclusive evidence of the infection and disease of the duct. The opening of the duct will show as a purplish red injected point when the duct is diseased. In some cases the injection at the opening of the duct is very slight, in others it is easily apparent. A chronic inflammation of the duct will always be accompanied by more or less of a discharge. If there is no stricture of the duct, this will not accumulate in any considerable quantity in the lumen of the duct, and pressure along the course of the duct or over the gland may not serve to force out a drop at the opening of the duct, as a means of verification of the diagnosis. This is due to the fact that it is not easy to massage the duct and express a small accumulation from its lumen. Fascia, muscles, and fat protect it from the pressure.

For demonstrating the presence of pus in the duct, where pressure with the fingers fails to express a drop, a syringe of the type used in washing out the lacrymal passages in dacryocystitis is most useful. The fine point of this syringe can be introduced well into the duct, and a drachm or two of sterile water used to wash out the tract. The first portion of the fluid will contain more or less pus and shreds. This can sometimes be easily seen with the naked eye as the fluid escapes

from the duct, but in other cases it will be necessary to catch the fluid and hold it up to the light, as we do urine in examinations of the urine of patients with chronic gonorrhœa.

ANATOMY OF THE DUCT.

It will be necessary to consider the anatomy of the duct before a clear understanding of the treatment can be best acquired.

The orifice of the duct is found in the fossa navicularis, usually nearest the largest carunculæ myrtiformes, which represent the point of junction of the posterior and lateral vaginal walls above. The orifice is provided with an imperfect, falciform, valvular fold of mucous membrane on its outer aspect, which diminishes its size so that in some instances it is not more than one one hundredth of an inch in diameter, and when free from disease is not visible to the naked eye. It sometimes appears only as a minute opening; often, especially when diseased, it is surrounded by a lively red areola, and in many cases it may be noted as a small opening in the centre of a slight projection in the mucosa, due probably to a pouting of the mucosa of the duct.

The duct runs outward and upward toward the gland. Its course is easily estimated where the gland is palpable and the external orifice visible. It has been variously estimated as from one half to one inch in length and in the majority of instances it very closely approximates a length of three fourths of an inch. Its diameter probably varies from one sixteenth to one eighth of an inch. The duct is single until the gland is reached, when it usually divides into three branches. These branches continue to divide, the ultimate subdivisions becoming very minute. The duct is lined with cylindrical epithelium, and according to Kölliker its wall contains a delicate longitudinal layer of smooth, muscular fibres, and is two millimetres in thickness.

If the syringe used in the first examination passes readily into the duct, we can treat the case by daily irrigations with various antiseptic solutions. Of these the mildest is the saturated solution of boric acid. It will usually prove inefficient. Probably the best solution is the silver nitrate solution, beginning with a solution one fourth of one per cent. in strength. This is best used hot and from one to four drachms should be used for washing out the duct. The solution can be allowed to flow in rapidly, and will in this way be more likely to reach all portions of the duct. If the solution is used daily for two weeks in this way, we mechanically cleanse the duct a number of times and also bring in contact with its walls an active antiseptic. This solution is

irritating and we should soon substitute a milder solution, such as that of boric acid, and lengthen the interval between treatments to two days.

It is probably well in all cases to slit the opening of the duct before beginning treatment, and in a large percentage of cases this will be found necessary. This little procedure can be easily accomplished with a delicately pointed knife, such as is used in cataract operations. The cut should be made outward and backward, as it will then be more likely to divide the delicate fold of mucous membrane, which diminishes the calibre of the external opening of the duct. The cut should be free so as to insure that the external orifice will no longer be the smallest portion of the duct. The cut should be about an eighth of an inch in length. The calibre of the duct should then be tested with probes.

STRICTURE OF THE DUCT OF BARTHOLIN.

When an acute inflammation of any part of the body develops, the tissues involved become more inelastic than in the normal state. This we find to be the case in the wall of the duct of Bartholin. The duct if probed is found to be capable of less distention than when not inflamed. Now with the subsidence of the acute inflammation the plastic material, deposited in the walls of the duct, is more or less absorbed. If all inflammation subsides after persisting for only a short time, after an interval more or less variable in each individual, all the inflammatory material is ultimately absorbed, speaking from a practical standpoint, so that the duct is comparatively normal. Should the acute inflammation be followed by a chronic inflammatory process, only partial absorption of the inflammatory material in the walls of the duct occurs, and the remainder, as the result of persistent irritation and increased blood supply is augmented, and ultimately organized into firm connective tissue.

The inflammation has produced an inelastic and less distensible duct. Its lumen is further diminished by the contraction of the connective tissue, and by the encroachment upon the lumen of the canal of the connective tissue and the inflammatory tissue, which together in some cases form more or less of a distinct mass.

A chronic inflammation of the duct may have persisted for a considerable time without the formation of a distinct stricture at any point or points in the duct, but in the great majority of instances when we have slit the orifice of the duct, we are able to demonstrate a contraction somewhere along the course of the duct.

The course and importance of stricture of the duct of Bartholin and stricture of the urethra

must not be confounded. In urethral stricture we have a strong stream of irritating urine being forced past the stricture every few hours. The urinary stream in the urethra keeps up a constant irritation, and there is in a great many of the cases an extravasation through minute points in the urethral wall. These extravasations play no small part in increasing the pathological process.

If the stricture in the duct of Bartholin causes no appreciable damming back of the secretions of the gland or of the solutions used in irrigating the duct, such stricture is not likely to interfere with the success of the treatment. We must remember that it is most difficult to say that the stricture is not interfering with the passage of secretions, and as they are likely to become inspissated so as to plug the canal at this point, it is well whenever possible to overcome the stricture.

This dilatation of the stricture or strictures can be accomplished with probes of various sizes. Before using probes which pass only with resistance through the stricture, a four per cent. solution of cocaine should be injected into the duct. This permits us to probe more freely and with less discomfort to the patient.

In these cases the gland will almost invariably be palpable and the probes are directed from the external orifice of the duct directly toward the gland. No considerable amount of force should be used in these cases, as we may in probing the lacrymal passages, for here we have no bony canal surrounding the duct, and force will almost invariably result in the formation of a false passage. A false passage with the instruments at present at our disposal means that the stricture cannot be dilated successfully unless we wait until the false passage has healed, as the probes will invariably follow it.

The probes used by Theobald in dilating the lacrymal passages may be used, or graduated sizes of probes may be secured from the instrument dealer for the purpose. The tip of the probe should taper. We should continue the dilatation until a size is reached about an eighth of an inch in diameter. Sometimes a size one sixteenth of an inch in diameter cannot be exceeded. If such proves to be the case, the irrigations should be continued after this size has been reached, as has been previously described. After each probing the duct should be washed out with an antiseptic solution. The probing can usually be repeated every second day, but if much irritation is excited the interval should be lengthened.

Where the gland is not palpable, and the infection seems to be in the duct alone, it may be well to exercise considerable care in using irrigations of the duct, in order that an irritation and inflammation of a healthy gland be not excited. Milder solutions, such as the boric acid solution, should be tried first and they should be injected gently so as to avoid irritation of a gland which may be entirely healthy. If the agents fail which are unirritating, we should then try the effects of astringent and antiseptic solutions.

In probing the duct, we sometimes mistake the opening of one of the follicles found in the vestibule for the opening of Bartholin's duct. Five or six of these follicles are found on each side, and have been called "the glandulæ vestibulæ minores." If a very fine probe fails to pass more than one fourth of an inch, and there is no evidence of a retention cyst in the labia, we may safely assume that the probe is not introduced into the duct of Bartholin, but into one of these follicles. When the gland is distinctly enlarged and easily palpable, we can massage the gland gently before probing and before the injection of our antiseptic and astringent solutions. This massage should not be violent and painful and should only be used in the absence of an acute inflammation of the gland.

The use of the silver nitrate solution, or some of the other salts of silver, or astringent or irritating solutions of any kind, will keep up a discharge of stringy, not entirely colorless mucus from the walls of the duct or gland. After these irritating agents have been used for two or three weeks we should again revert to the boric acid solution. If after two or three weeks we find that the discharge persists, the patient is not cured, we must either return to the stronger solutions or take the more radical step of excising the affected gland.

(To be continued.)

The New Army Hospital.—Secretary Taft has approved the recommendation of Surgeon General O'Reilly for the erection of a new general army hospital on the Cameron tract on the west side of Brightwood Avenue, Washington, D. C., nearly opposite the Battle National Cemetery. Congress fixed the limit of cost of this hospital, including site, at \$300,000, and appropriated \$100,000, which was made immediately available, for the purchase of the site. The property acquired for the purpose contains about forty-three acres and cost about \$98,000, leaving \$2,000 of the appropriation to be devoted to other expenses in connection with the new building.

ATONY OF THE RECTUM AND ANAL SPHINCTERS: ITS ÆTIOLGY, PATHOLOGY, DIAGNOSIS, AND TREATMENT.

By WILLIAM BODENHAMER, A. M., M. D.,

NEW ROCHELLE, N. Y.

(Concluded from page 699.)

TREATMENT OF RECTAL ATONY.

In the treatment of defective muscular power of the rectum, it is of importance not only to be able to recognize the true nature of the malady, but, above all, to know also the most rational and effectual measures for its relief. The first consideration in the treatment of this affection is to enjoin a strict observance of regular habits respecting or regarding a daily evacuation of the rectum, and this desirable object in mild cases may be aided and often attained by simple means, such as the injection of from half to a pint of cold water of the ordinary temperature, into the rectum at the regular time of going to stool every day. This constitutes a most valuable remedy in atony of the rectum. Cold, being tonic, stimulant, and astringent, acts some what similarly to nux vomica by exciting the sensibility and contractility of the organ, but it should be discontinued as soon as the object of its use has been attained.

In the more obstinate cases, however, the chief remedies should be nux vomica alone or combined with some other drug, together with the employment of rectal injections composed of powerful astringents and tonic substances, with the intention of inducing contraction, corrugation, and condensation of the relaxed and weak muscular fibres of the rectum, by which they become shorter and firmer, and thus aid in diminishing the morbid organ to its normal dimensions and tone. The exhibition of proper aperients as adjuvants is indicated in some of these cases, and cannot be dispensed with, especially when atony of the colon exists with that of the rectum. But drastic purgatives should not be used in such cases. The smallest dose of an aperient should be given, so as to gently rouse the normal peristaltic action, and its use continued only until a habit of daily evacuation is induced. The object is by no means to excite watery stools, but to induce, as much as possible, an imitation of the normal action of the bowels; indeed, the best and only method of maintaining a regular action of the bowels, after the habit has been reestablished, is to compel them, if possible, to perform their own legitimate work, by withholding aperients, as well as all other artificial means generally used for this purpose. With regard to the ingredients composing the astringent and tonic injections to be used in the treatment of atony of the rectum, such sub-

stances abound, and may be varied indefinitely by the practitioner. These injections should not exceed in measure more than five or six ounces, and should not be administered until the rectum has been previously emptied of its fecal contents by a proper enema or an aperient. The astringent injection should be given once daily at least and retained for a few minutes, if possible, but if it cannot, and is passed at once, it will nevertheless do good. In obstinate cases it may be of advantage to add from half to a grain of nux vomica to each injection. The writer has used with good results in some of these cases, the decoction of galls, as well as the strong decoction of white oak bark and alum. He also used the following:

R Tannic acid.....30 grains;
Red wine.....4 ounces.

M. For an injection.

M. Bretonneau, in order to correct the morbid condition of the rectal pouch in these cases, which he called *rectal constipation*, and which he often found to be complicated with anal fissure, used with signal success, according to the testimony of his eminent pupil, M. Trousseau, the following injection, which not only restored the organ to its normal action, but also cured the anal fissure when both affections coexisted:

R Extract of rhatany.....2 drachms;
Alcohol.....5 drachms;
Distilled water.....5 drachms.

M. For an enema.

The writer has employed the injection of Bretonneau with success in a number of cases, and among them several in children, in which about one fourth of the quantity was injected.

In some of these cases the following pill, or a somewhat similar one, may be used with good results, especially if atony of the cæcum exists with that of the rectum, so as to excite the peristaltic action and soften, if possible, the hard fecal matter in the former, as it cannot in its entirety, be so easily reached by injections. These pills produce an easy evacuation. One pill should be taken daily at dinner or at bedtime:

R Extract of aloes.....30 grains;
Extract of nux vomica.....20 grains;
Extract of hyoscyamus.....15 grains;
Ferric sulphate.....10 grains;
Oil of cloves.....5 drops.

M. For 30 pills.

The extract of nux vomica may also be given alone with advantage, once daily, as a pill of from one half to one grain. The inspissated ox gall is also very valuable.

The writer will here give an interesting case of atony of the cæcum, coexisting with that of the rectum, in which these organs were found impacted with large collections of indurated fecal

matter, and which seemed to indicate some serious chronic disease in the right ilioinguinal region.

Mr. J. R., of New York, of a bilious and nervous temperament, consulted the writer in 1890. He said he was suffering from an almost constant dull ache in the right groin, which he was told indicated appendicitis, and that he discharged much turbid and offensive urine, which he feared denoted Bright's disease of the kidneys; and said he: "Doctor, with appendicitis upon the one hand and Bright's disease upon the other, I feel and fear that I am between the devil and the deep sea." He also said that he suffered much from obstinate constipation of the bowels, frequently having no evacuation for three or four days, and being a strong believer in homœopathy, he had declined to take purgative medicine for their relief. It was soon made evident, however, that all the afflictions of Mr. R. were the result of atony of the cæcum and rectum, together with the injurious effects of the long retention and distention of the impacted fæces in these parts of the large intestines. Careful palpation of the right ilioinguinal region, directly over the cæcum, disclosed a decided fullness and hardness or firmness with some unevenness of surface; upon firm pressure there was, however, but little soreness complained of. Nothing abnormal could be detected directly in that now much dreaded and fearful locality, the *appendix cæci*. The ensemble seemed, therefore, to indicate the commencement of some serious chronic affection, especially of the cæcum; and while reflecting upon the obstinate confinement of the patient's bowels, the idea occurred that it might be atony of the cæcum, as well as of the rectum, caused by cæcal impaction or repletion of fæcal matter; acting upon this impression, the patient was at once directed to take three ounces of castor oil in the morning on an empty stomach, and, should the oil fail to act in three or four hours, to repeat the dose, and in the meantime to remain in the house and wait for events. The result was that in eight hours after taking the oil his bowels were completely relieved of large quantities of indurated and offensive fæces. This somewhat obscure case was now made clear by the entire absence of the abnormal fullness, hardness, and unevenness of the cæcal region, as well as the dull ache complained of in the same locality. In order to prevent a similar recurrence, and to cure the affection, the aperient pills described above were used by the patient for some time with the most happy results.

MECHANICAL REMOVAL OF IMPACTED FÆCES.

In cases in which the rectum or rectal pouch is firmly distended and blocked by a large, hard fæcal bolus, or by a large, pulposus, and tenacious mass, which neither purgatives nor stimulating injections will have any effect toward softening the former, nor dissolving and removing the latter, the only remedy is the employment of mechanical means. After dilating the anal sphincters well under ether if necessary, the finger, with

the aid of the rectal curette, should be used to break up and remove as much of the impacted mass as possible, and the remaining fragments should then be completely washed out by stimulating injections. Mr. John Woodall, an English surgeon, two centuries ago invented a rectal scoop or curette for removing and cleaning the rectum of hard or soft or tenacious fæces, which he called *spatula mundans*, or *mundator ani*. To all these means in the treatment of atony of the rectum must necessarily be added as auxiliaries, a proper diet, claret, active exercise in the open air, on foot, horseback, or bicycle.

ATONY OF THE ANAL SPHINCTERS.

The loss of tone of the sphincters of the anus, like that of the rectum or rectal pouch, and from somewhat similar causes, sometimes occurs and consists of the loss of power to some extent of their muscular fibres. In such cases, although the sphincters lose a large portion of their tonicity, yet their functional power is not altogether destroyed, as it is in paralysis, the result of paraplegia, in which both their grasping and retentive functions are entirely lost, so that the dejections, if fluid, will, on reaching the sphincter, escape involuntarily. The anal sphincters are much less frequently the seat of atony than the rectum, but the affection in both may and does occasionally exist. When the sphincters are affected, the disease is more readily detected, being external; but when the rectum is the seat of the affection, it is much more liable to be overlooked, being internal.

Atony of the sphinctores ani frequently occurs in old age, and in such cases it is commonly called palsy, or local paralysis. It is a very troublesome and distressing malady, and is often attended by prolapsus recti and eversion of the anus, and sometimes it entirely prevents the aged patient from taking exercise on foot. In such cases, during the treatment the patient should evacuate his bowels just at bedtime, for if they are emptied in the morning the patient either moves about on his feet or remains in the sitting posture, by either of which irritation is kept up all day; whereas, when the evacuation takes place at bedtime, the patient remains in the recumbent posture for many hours, and is enabled in the morning to exercise without the parts protruding for hours. This, to repeat, is one of the worst forms of atony of the anal sphincters, if it may in reality be so called, being so closely allied as it were to partial paralysis that it is difficult to distinguish between it and such an affection. This form, however, in these cases is generally without any marked disease in the nervous cen-

tres affecting other functions also. Atony of the anal sphincters is often met with in some hysterical women, and also among hypochondriacs, and it occurs sometimes in infancy and childhood.

ÆTIOLOGY.

Among the causes of this affection may be mentioned exhaustion from protracted ill health; sedentary habits; immoderate use of alcohol and tobacco; excessive or repeated dilatation of the anus, produced by the straining efforts at evacuation in chronic dysentery; divulsion of the anal sphincters, either for therapeutic or diagnostic purposes. The affection is sometimes produced by a descent or a prolapsus of the rectum, or by hæmorrhoidal or other tumors of the same, which by their continued pressure within and their frequent passage out and in through the anal orifice, impair the contractility of the anal sphincters. It may be observed, however, that in such cases, as a general rule, the removal of the cause will restore the sphincters to their normal tone. Among the most fertile causes of anal atony, according to some authors, may be mentioned pæderasty. By the action of the external sphincter, the skin of the anus is disposed into radiated plaits, with intervening furrows, which extend some little distance into the anal canal, as well as out on the external surface. In the worst cases of atony of the sphincters, these folds almost or entirely disappear or become effaced; the margin of the relaxed anal orifice will be found loose and salient, so that the finger or bougie can be passed through the anal orifice and into the rectal pouch without meeting resistance. When the atony is the result of the vicious practice, the anus is much excavated, as it were, and presents the aspect or appearance of a funnel. In all cases of anal atony there is a slight escape or oozing of fecal matter for a short time after each evacuation, so that it is impossible to observe cleanliness.

TREATMENT OF ATONY OF THE SPHINCTERS.

In the treatment of the ordinary cases of atony of the anal sphincters, the cold water ascending douche is a most valuable remedy in restoring their lost tone. It should be applied to the anus forcibly for four or five minutes directly after each evacuation of the bowels, and once or twice besides, during the day. The following ointment or lotion may be used with advantage in such cases:

B. Sulphate of strychnine.....	10 grains;
Rosewater ointment.....	1 ounce.
M. For an ointment.	
B. Extract of nux vomica.....	8 grains;
Alcohol.....	2 ounces;
Ammonia water.....	1 drachm.
M. For a lotion.	

The writer will conclude by asking pardon for the length of his paper, which doubtless appears too prolix; and it may also seem that his descriptions, physiological, critical, operative, etc., are unnecessarily minute in their details. But the writer would remark here, that it is often the neglect of minuteness and the eagerness or fondness for generalization which involve a subject in obscurity. So long, however, as we adhere closely to facts we cannot be too microscopical, for facts or truths, however, simple, are just as essential to refute false opinions as they are to establish true principles.

23 EUCLID PLACE.

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Ireland Honors Professor Osler.—Dr. William Osler, Regius Professor of Medicine at Oxford University, has been elected an Honorary Fellow of the Royal College of Physicians of Ireland.

ERYTHEMA AND URTICARIA, WITH A
CONDITION RESEMBLING ANGIO-
NEUROTIC ŒDEMA, CAUSED
ONLY BY EXPOSURE TO
THE SUN'S RAYS.

By S. B. WARD, M. D.,

ALBANY.

Miss H., an American by birth, 47 years of age, native of the United States and residing in Albany, consulted me in October, 1904, on account of a very annoying eruption which appeared every time that she was exposed to the sun's rays.

In the *American Journal of the Medical Sciences*, for 1895, in Jacobi's *Festschrift*, and in the *American Journal of the Medical Sciences*, for January, 1904, Dr. Osler has brought together twenty-nine cases which he entitles On the Visceral Manifestations of the Erythema Group of Skin Diseases. The cases are in some respects very different, but all have in common the character of a skin eruption. In the course of his article, Dr. Osler points out that there appear to be three causes for the cases which he reports: first, a variety of poisons; bacterial, protozoal, vegetable, and metabolic; and in the second place he says that "the chronic forms of urticaria probably illustrate a morbid and persistent sensitiveness of the cutaneous vessels to poisons of either intestinal or tissue origin; and, thirdly, the importance of the local status is shown in that remarkable form of urticaria which comes on after the exposure to cold. So long as the face is at a temperature of above 60° F., the patient is all right; exposure at 40° is felt at once by an outbreak of urticaria."

The case which I am about to report gives no evidence of any serious intestinal trouble and no nephritis. The peculiarity of it is that since June, 1903, the eruption has appeared almost every time that her skin is exposed to the direct rays of the sun.

Previous History.—She had scarlet fever at three or four years of age; she has never had acute articular rheumatism, but has had several attacks of lumbago and rheumatism of other muscles. She has had many sorrows and anxieties; has always been "nervous," though apparently very calm. The menopause came on in 1900 and is only just now completed. She has long been conscious of irregularity and intermissions in the heart beat; never has become unconscious, but has faint feelings, without dizziness; has no serious indigestion, but there is occasional development of gas in the digestive tract and she has noticed that at those times her heart is more troublesome. She is stout and very strong, robust looking. She has moderate hypertrophy of the heart, with no murmur whatever. There is an occasional double beat, followed by an intermission, of which the patient is herself conscious.

On June 1, 1903, while working in the garden, there appeared on both arms and the back of the

neck markedly elevated white patches and streaks accompanied by very severe itching and burning. The next appearance was on the twenty-second day of the same month, when the eruption was confined mostly to the forehead. In August of the same year, while rowing an Adirondack boat, it appeared again, and this time on the ankles also, which were accidentally exposed by the skirt being pulled up a little. In the autumn of 1903 the itching began to come almost every time that she went out of doors. About one day in twenty during the past year she has been able to go out of doors without the eruption appearing; the nineteen other days it is certain to come. At times it appears also if clouds conceal the sun and the wind is blowing. It appears only on the exposed parts of the body and those covered by only one thickness of clothing; two thicknesses appear to prevent it. All last summer it would appear on parts protected only by a shirt waist, but a light jacket over the shirt waist would prevent it. A thick veil prevents its appearance on the face, and gloves protect the hands. Walking in the street, she saves herself a great deal by always walking on the shady side. If she remains out of doors more than about an hour, the eruption will gradually disappear and not return again during that exposure. On returning to the house after exposure, the eruption all disappears in a period varying from ten minutes to an hour, depending on the length and degree of the exposure.

On November 18, 1904, in order that we might have a good opportunity to examine the eruption, in the presence of Dr. H. C. Gordinier, of Troy, and myself, she voluntarily, after removing her dress waist and leaving the shoulders, chest, and arms exposed about as they would be in evening dress, sat near a south window, through which the sun was streaming in. Prior to the exposure the temperature under her tongue was 98.6°, pulse 88, respiration 16, and temperature of the surface of the arm 87.0°. The whole left arm and a portion of the front of the chest were then exposed to the direct rays of the sun for a period of five minutes. She then went into a front room where there was a good light, but no sun, and the following conditions were noted: temperature under the tongue was 98.6°, pulse 88, respirations 17; but the temperature of the skin of the exposed arm was raised to 96.8°, nearly 10°. The unexposed portions of the skin had undergone no changes whatever. The exposed portions were of a uniform brilliant scarlet color as if the subject of scarlet fever. The skin was swollen to such an extent that there was some impediment to flexion at the elbow joint. The hairs all stood up straight in marked contrast to the other arm, and the sensation of burning was complained of as intense. The condition was manifestly one of erythema. On parts of the arm, and especially on the front of the chest, there were present also about a dozen white, round wheals, like those of urticaria, varying in size from a large pin's head to a silver dime, accompanied by marked itching. These conditions of redness and wheals extended in a less degree downwards below the line of actual exposure, under one layer

of thin linen. Fifteen minutes later, the redness of the arm and burning sensation had markedly diminished, but the swelling was about the same, and the depressed orifice of every sweat duct was perfectly visible. On the front of the chest the redness had disappeared, the wheals had run together, and one large white patch, irregular in shape, some five inches long and two inches wide, showed the pores most plainly. The face, neck, and hands were of an almost uniform red color, somewhat blotchy, save that the neck showed a band of normal skin about two inches wide which had been protected by the shadow of the head; in other words, the parts of the skin usually exposed did not show the changes nearly as plainly as those that were usually covered. Tactile sensation and the perception of heat and cold were perfect. The conjunctiva of the left eye was injected, the small vessels becoming visible. After the lapse of an hour the skin everywhere resumed its normal appearance, except that on the front of the arm the capillaries remained dilated, but the sensations of burning and itching were all gone.

The blood count made at about this time showed 3,975,000 reds and 5,400 whites. The reds were somewhat crenated; hæmoglobin, 90 per cent.; color index, 1.1 per cent. Janeway's sphygmomanometer showed a systolic blood pressure of 160 mm.

The urinary examination showed sp. gr. 1017; acid; no albumin; a few leucocytes; much ropy mucus, and some cylindroids.

On January 18, 1905, the bare arm was exposed for ten minutes to the x rays at the Albany Hospital, under the supervision of Dr. E. A. Bartlett, who has charge of the apparatus belonging to that institution. The tube was a new one and the machine was in every way working perfectly. Absolutely no effect whatever was produced.

January 23rd, was the first perfectly clear, bright day that we had had for some time and Miss H. was exposed for an unusually long period. For the first time her lips became so swollen as to be very uncomfortable (angeioneurotic oedema) and the swelling did not disappear for some hours after returning to the house.

That this eruption is not due to heat alone is proved by the fact that the patient can sit in front of a hot open wood fire by the hour without the least inconvenience.

On January 28, 1905, the patient was good enough to allow me to try the effect of yellow and red glass, such as photographers use to cut off the actinic rays. The left arm was bared. The upper portion was exposed to the direct rays of the sun, shining in through a southern window at 2 p. m.; a band three inches wide was protected by filtering the rays through yellow glass; another three inches by red glass; and a third three inches by both red and yellow, and the arm below these three bands was exposed as it was above them. The exposure was stopped at the end of five minutes, and the arm examined in bright diffused daylight. The exposed skin presented precisely the appearances above described

of erythema, urticaria, and cedema, with intense burning and itching. The band shaded by the yellow glass alone showed a moderate degree of redness without burning or itching. The other two bands showed no change whatever. This would appear to show that this curious disturbance is caused by the actinic rays.

That it is due to an unusual form of vasomotor disturbance appears clear. With each exposure, if it is short, we have an erythema; if more prolonged, urticarial wheals appear; and if still more prolonged an angeioneurotic oedema.

This case and the one quoted by Dr. Osler, in which case urticaria appeared every time that the skin was exposed to a temperature of 40° F., remind me of certain other cases in which there is no eruption, but in which the skin remains remarkably sensitive to changes of temperature after having been once frozen. In the winter of 1880, a girl here in Albany had her cheeks frost bitten. For three or four years after that, it was impossible for her to go out of doors in winter without having her cheeks frozen again unless they were protected by a heavy veil. Thirteen years later, in the autumn of 1893, I was riding on horseback with her one afternoon when the thermometer was at about 35° F. We were riding in a wind which was not very strong, and a little squall of snow struck us. Within two minutes she said that her cheeks were becoming frozen. It did not seem to me to be possible; but examination showed that both cheeks were cold, perfectly white, and beginning to be stiff. Turning homewards, with our backs to the wind, the condition passed off in about ten minutes and the cheeks were flaming red. It would seem as if this must have been a case in which the vasomotor constrictor nerves had been rendered unusually sensitive by the first exposure and remained so for many years. They appear to have recovered now, for within the past two years she has been able to stand any ordinary exposure as well as most persons.

In conclusion, it would appear that in rare instances the vasomotor nerves may be so influenced by the actinic rays of the sun, or by moderate cold, as to be afterwards readily thrown into a condition of spasm or paralysis.

281 STATE STREET.

Bequest for a St. Paul Hospital.—The will of the late Edward Giboney has been filed for probate in the office of the clerk of the probate court. The will provides a bequest of \$1,000 to go to Mother Bernardine, of St. Joseph's Hospital, the money to be used in the building of a chapel at the hospital. The balance of the \$5,000 estate is to be divided between the natural heirs.

A CONTRIBUTION TO THE ALCOHOL
QUESTION.*By S. P. BEEBE, PH. D.,
NEW YORK.

The very large use of alcoholic beverages has a tremendous influence, physical, economical, and moral upon society, and this has led to a prolonged discussion as to the physiological effect of alcohol and its therapeutic value. It is of vast importance to the State that the truth in regard to its physiological effect shall be known and taught; not only because of the very large number of persons who knowingly drink moderately, and the smaller number who drink excessively, but also because of the widespread use of alcoholic preparations, such as patent medicines, by persons who presumably are not in vigorous health. Leach, chemist to the Massachusetts State Board of Health, analyzed many of these preparations advertised as entirely harmless, recommended for inebriates, containing no alcohol, etc., and found alcohol in quantities varying from 7 per cent. to 47 per cent. Again, Harrington's analyses of certain proprietary foods for the sick, by which he found a quantity of alcohol varying from a minimum of 10.6 to a maximum of 23 per cent. in foods which are prepared expressly for invalids or persons weakened by disease, the quantity to be taken in twenty-four hours in some cases equaling six ounces of whiskey, affords striking evidence of the mischief which may be wrought by unwittingly prescribing this substance.

It is the writer's purpose to give in this paper a brief review of the present status of the discussion in regard to alcohol together with the results of a series of experiments devised to afford further light on its physiological action. It may as well be stated at the outset that this discussion is chiefly concerned with the effects of the so called moderate use of alcohol. Excessive drinking is admitted to be harmful not only by physiologists, but by all sensible persons. The moderate drinker, however, enjoys a sense of security which has been fostered by medical and lay opinion for generations, and there are a great many physicians at the present time who believe and advise their patients that moderate drinking *per se* results in no bodily harm. It is of interest to note that the maximum quantity of alcohol which may be classed as a moderate quantity, has steadily diminished during the last fifty years. At the present time 70 cubic centimetres of alcohol in twenty-four hours, corresponding to about six ounces of whiskey, is considered by

most physiologists to be near the upper limits for the moderate drinker.

Many experiments have been made to determine the fate of alcohol in the body. It was believed up to a comparatively recent time that alcohol was not oxidized in the body, but was excreted unchanged by the lungs, skin, and kidneys. This view was held because no specific oxidation products could be found in the excretions. The same objections apply to sugar, which is undoubtedly oxidized in the body. The recent experiments by Atwater and Benedict with the respiration calorimeter have shown that when the daily dose of alcohol does not exceed 72.5 grammes not more than 2 per cent. leaves the body unchanged, the 98 per cent. being oxidized into carbon dioxide and water. Such being the case the potential energy of the alcohol must be available for use in the body for supplying heat, doing work, or in sparing body tissue. We can scarcely conceive of the simple molecule of alcohol being used in a synthetical process for building up body tissue so that whatever food value it has depends upon the energy liberated during its oxidation. The careful respiration experiments of Zuntz and Geppert have shown that the amount of energy used in its absorption is less than that yielded by its oxidation, leaving a net per cent. for body uses as great as that yielded by other forms of food.

The very careful experiments of the last few years by men who have approached the subject from opposite opinions have led to the following concordant results:

First, alcohol may take the place of some fat or carbohydrate in the food.

Second, when taken to replace isodynamically (i. e., a quantity of alcohol having the same potential energy as the food replaced) a given amount of fat or carbohydrate in a body unaccustomed to its use, it causes for a few days, three to six, an increased excretion of nitrogen. This may be due to what Neumann calls its action as a protoplasmic poison. During these few days the body gradually acquires a tolerance for this poison, as it does for a great many other toxic substances, and the energy from its oxidation is then available for bodily needs to the same extent as the food it has replaced. [As a good example of such a toleration being acquired we may cite the instance in one of Neumann's experiments where a perfectly healthy man took each morning for a period of sixteen days 100 cubic centimetres of alcohol diluted with 300 cubic centimetres of water. This caused during the first few days a period of marked intoxication, but by the eighth day such an effect was no longer pro-

* Read before the Section in Medicine, Academy of Medicine.

duced, and from the twelfth to the sixteenth day the experimental subject was only mildly exhilarated and took with some degree of pleasure the portion which was at first quite distasteful.]

Third, alcohol is an extraordinary food to be used only in certain conditions when its ease of oxidation may be of great benefit; but on account of its peculiar toxic effects it should not be taken except when needed. This last statement is worthy of some emphasis, because it is a point upon which all physiologists who have studied the matter agree and also because it is the one point of most caustic criticism by certain of the laity. The term food is in a sense a technical one for the physiologist, and the conclusion that alcohol may be under certain conditions a food substance, does not argue that it should be used widely and indiscriminately. A society of marine engineers might willingly grant that the furniture of a ship, together with its decks and stanchions, were fuel substances, yet no sane captain would use them for such purposes except in the direst need.

The foregoing conclusions have been derived from a very large number of feeding experiments in which the income and outgo of matter and energy were carefully determined. In such experiments the most important single factor is the accurate determination of the nitrogen balance, for by so doing we know whether body tissue has been built up or broken down during a given period. If we find an increased nitrogen excretion as a result of substituting alcohol for its energy equivalent in fat or carbohydrate in an animal in nitrogenous equilibrium, we know that body tissue has been broken down, and that the alcohol has not completely replaced the food for which it was substituted. All of the conclusions from experiments regarding the food value of alcohol depend upon the determination of the total nitrogen excreted in the urine. Such an estimation can be made at the present time by methods that are beyond reproach, yet the determination does not, in the opinion of the writer, tell the whole story of the effect of alcohol on the proteid metabolism in the body, for it gives no clue to the distribution of this nitrogen among the several normal constituents of the urine.

The nitrogen excretion of the urine is divided among several compounds; three of the most important being given in the following table. In health:

85-90 per cent. of the total nitrogen appears as urea.
2.5-5 per cent. of the total nitrogen appears as ammonia.
3-5 per cent. of the total nitrogen appears as uric acid.

Small quantities of a great many other nitrogenous substances are found even in healthy urine. In certain diseases of the liver, acute yellow atrophy,

or carcinoma, the same quantity of nitrogen may be excreted as in health, but a portion of it will be in the form of the amino acids, leucin, and tyrosin, compounds never found in healthy urine, and the detection of these may give proof that the liver is involved. This impairment in function may show itself in an abnormal distribution of the nitrogen among the several physiological constituents. Thus, in puerperal eclampsia there is a diminution in the urea and a corresponding increase in the ammonia nitrogen, both ammonia and urea being normal constituents, and the pathological condition is expressed by their being present in a different ratio than in health. May it not be that alcohol shows its toxic effect by impairing the metabolic functions of certain organs not to a sufficient degree to change the total nitrogen, but marked enough to show itself in the forms by which this total amount is excreted?

The writer has recently completed a series of experiments designed to throw some light upon this phase of the question. The subjects for the experiments were young men in good health unaccustomed to the use of alcohol in any form. The diet was carefully regulated to prevent error from that source, for we know now that the character of the diet has a vast influence not only upon the amount of nitrogen excreted, but also upon the form in which it appears. Neglect of care in this regard vitiates many of the older experiments. The habits of the subjects were uniform throughout, no unusual work or strain of any sort interfering with the normal routine. The quantity of alcohol taken was in no case excessive, and in nearly every instance it was within the limits of moderate drinking.

EXPERIMENT I.

In any such experiment there are three periods: The fore period which serves to establish the normal condition of metabolism, the alcohol period during which a known quantity of alcohol is added to the diet and the effect on the excretions noted, the after period during which no alcohol is taken, the object being to control the fore period and to determine how long the effect of the alcohol lasted. In this experiment 70 cubic centimetres of absolute alcohol suitably diluted with water were used during the alcohol period.

RESULTS OF THE EXPERIMENT.

	Daily averages.		
	Total Nitrogen.	Ammonia.	Uric acid.
Fore period (7 days).....	13.25	.640	.635
Alcohol period (6 days)....	13.46	.678	.755
After period (4 days).....	13.65	.542	.615

The results show that during the alcohol period there is a different distribution of the nitrogen than normally as evidenced by the increase in ammonia and uric acid.

EXPERIMENT II.

The next experiment was carried out in the same manner, the only change being that 150 c.c. of whiskey, containing 45 per cent. alcohol, was substituted for dilute absolute alcohol. The diet was uniform throughout, but was not the same as used in the previous case, less purin constituents being present in the diet.

RESULTS.

	Nitrogen. Per cent.	Ammonia. Per cent.	Uric acid. Per cent.	Urea. Per cent.
Fore period (7 days) . .	15.61	.741	.554	89.6
Alcohol period (7 days) .	15.73	.873	.604	87.8
After period (5 days) .	16.53	.717	.572	90.8

The distribution of the nitrogen was changed by the alcohol as evidenced by the increase in ammonia and uric acid and the decrease in urea. The significance of these changes will be discussed later.

There has always been a strong belief that the injurious effect of alcoholic beverages was not so much to be ascribed to the alcohol therein contained as to other substances; the organic acids, extractive substances, etc., found in wines, for example. For this reason experiments were made in which nearly the same quantity of alcohol as used in the previous experiments, 70 c.c., was taken in the form of ale and port wine.

EXPERIMENTS III AND IV.

The average figures for two experiments are given here. We used 1050 c.c. of ale containing 8.44 per cent. by volume of alcohol during the alcohol period. In this and the following experiments uric acid was the only constituent of the urine isolated and determined. This substance is one of the most conspicuous and important of the nitrogenous excretion products, and its elaboration has been the subject of a vast deal of study.

RESULTS.

	Nitrogen.	Uric acid.
Fore period	13.09	.460
Alcohol period	13.52	.628
After period	13.15	.480

It will readily be noticed that the increase of uric acid is proportionally much greater in this case than when a purer form of alcohol is used.

EXPERIMENTS V, VI, AND VII.

Probably port wine has the reputation of being the worst form in which alcohol can be taken. Three experiments were made in which 500 c.c. of port wine containing 15.5 per cent. by volume of alcohol were added to the test diet during the alcohol period.

RESULTS.

	Nitrogen.	Uric acid.
Fore period	14.47	.559
Alcohol period	14.68	.722
After period	15.86	.582

There was a marked increase in the excretion of uric acid, but no more noticeable than with the ale.

These figures are the average of three experiments. Single days during the wine experiments

show a much larger increase in uric acid than was obtained by any other substance.

The results thus far given show that alcohol causes a disturbance of those processes which make up metabolism, and this disturbance is evidenced by changes in the distribution of the nitrogen among the several physiological constituents of the urine. It is obvious that if the question of the food value of alcohol was to be decided merely by the income and outgo of energy, or by its efficiency as a sparer of proteid, these experiments would afford little ground for conclusions. These experiments were planned to afford some clue to the toxic effect of alcohol, and in order to determine more accurately the time relations of the phenomena already observed, a series of experiments were made during which the urine was collected hourly during twelve to fourteen hours out of the twenty-four, the balance for the day being one lot, so that the total output for the twenty-four hours was obtained. In these experiments the subject had on the day previous a light supper containing no purin food, and no breakfast on the experimental day, so that the hourly output of uric acid fell to a nearly constant level by 10 a. m. of the experimental day. At twelve or one o'clock on this day a test meal was eaten; on the control days without, and on the alcohol days with the addition of known quantities of alcohol in a variety of forms, in most cases 25 to 30 c.c. of alcohol being taken after the meal. Such an experiment required two days to complete, one day being for control. A number of different subjects served in these trials, and with one exception the same result was found in all. The alcohol caused an increase in the excretion of uric acid; the point of greatest increase being during the fifth hour following the meal. This coincides with the point of highest, normal postprandial increase. The total excretion for the twenty-four hours of the alcohol day was larger than the control day, showing that the increase following the meal on the alcohol day was not due to a mere hastening of the normal output for a few hours to be followed later by a drop below the normal.

The matter of idiosyncrasy enters here as it does in most questions of metabolism. Some healthy persons have an unusually high output of uric acid on a diet containing very little purin food. Others are found who can scarcely be made to gain weight regardless of the character of the diet. In these experiments one subject was found who gave no increased excretion of uric acid, even after considerable quantities of

alcohol had been taken. This subject had the local reputation of being able to take without showing its effect a quantity of alcohol that would intoxicate most persons. I am unable to give any satisfactory reason why this subject should differ so markedly from the others. It seems to be a matter of personal idiosyncrasy.

In one of these hourly period experiments after the subject had fasted for nearly twenty-four hours and the hourly output of uric acid had attained a uniform condition, 50 c.c. of absolute alcohol diluted to 200 c.c. were taken without the usual accompanying test meal. The diuretic effect of the alcohol was marked; the hourly volume of urine increasing from a normal of 30 c.c. to 465 c.c. the first hour and 565 c.c. the second hour after the mixture was taken. This quantity of alcohol was sufficient under the circumstances to produce the characteristic narcotic effect, but there was no increase in uric acid output, which held a nearly uniform level throughout until the close of the experiment. Such a result indicates that an altered metabolism of the purin constituents of the food is responsible for the increase. It agrees well with one of the metabolism experiments (whiskey experiment) in which a small quantity of purin material was taken in the food and the percentage increase in the output of uric acid was small.

This experiment affords evidence also that urates are not swept out of the body fluids by diuresis. The volume of urine excreted during the first two hours following the administration of the alcohol, 1030 c.c., was as much as the total twenty-four hours' output for the subject under normal conditions, yet the uric acid excreted during these conditions, 56 milligrammes, was not quite as much as had been excreted during the two hours previous to taking the alcohol when the volume of urine was only one sixth as large.

The three excretion products considered in these experiments, urea, ammonia, and uric acid, are the most important end products arising from the proteid metabolism in the body. With all the experimental work which has been done upon the relationship which these substances bear to one another and to the metabolic processes by which they are elaborated, we still lack knowledge. The relation which uric acid bears to the complex compounds found in the cell nuclei, its origin from these compounds during the processes of metabolism and its partial destruction by oxidation in the body tissues, are matters established with a high degree of certainty.

The recent work which has been done on the physiology of this substance has emphasized the

importance of other organs than the liver in its preparation, but it seems probable that the liver is an agent of the greatest importance in dealing with the exogenous portion, a conclusion which harmonizes very well with the results which have been obtained in this work.

The final steps in the formation of urea are still obscure, but there is certainly good experimental evidence to show that its immediate precursors are ammonium compounds, and that the hepatic cells are the active agents in its preparation from these compounds. In pathological conditions affecting these cells a much greater proportion of the total nitrogen is likely to appear as ammonia.

It seems to the writer that the experimental results may best be explained by supposing that the alcohol has by its toxic action on the liver cells incapacitated them to some extent. The rapidity of its absorption into the portal circulation exposes the liver to a higher degree of concentration of the alcohol than other tissues of the body, excepting the stomach mucosa. A portion of the alcohol is probably oxidized immediately on reaching the liver, but there must be an appreciable time previous to its oxidation, during which it may exhibit its toxic action.

Certain facts indicate that the oxidative functions of the liver have suffered as a result of the alcohol. For instance, alcohol taken without food causes no increase in the excretion of uric acid and purin bases. Taken with food it causes an increase in the excretion of these substances, which with constant quantities of alcohol in the same subject seems to be roughly proportional to the amount of purin material taken in the food. In such conditions the percentage increase in the excretion of purin bases is the same as for the uric acid, and the point of highest increase coincides with the point of normal maximum output following a meal, viz., five hours. The exogenous purin material has not been so completely oxidized as normally. In those experiments where the ammonia was estimated it invariably showed an increase during the alcohol period, and since the diet was constant this also indicates liver incapacity.

The liver stands as a guard to prevent the entrance into the general circulation of various toxic substances arising from intestinal putrefaction or fermentation, or indeed from the ordinary processes of proteid metabolism. Some of this protective action we know depends upon the oxidation of the toxic substance and if alcohol impairs the oxidative powers in one direction, it is probable that it does in others as well. These

results, it must be remembered, have been obtained with moderate quantities of alcohol and no digestive disturbance was noted, but it is well known that larger quantities and the long continued use of moderate quantities do cause such disturbances. In such cases the trouble caused by the increased quantity of toxic material is aggravated by diminished ability to dispose of it.

Although it must be granted that alcohol yields its energy by oxidation in the body and may so far resemble the non-nitrogenous foods as to spare proteid under certain conditions, yet, in the opinion of the writer, these experiments demonstrate that it cannot properly be classed with fat and carbohydrate. Furthermore, I believe it is physiologically both unwise and incorrect to advise that the continued use of moderate quantities of alcohol is harmless. I have elsewhere expressed the opinion that alcohol, like salt water in a steam boiler, should be used only in emergencies, and recent criticisms have confirmed my belief in the fitness of the analogy.

414 EAST TWENTY-SIXTH STREET.

PROPHYLAXIS IN PREGNANCY AND LABOR.

By T. AVERY ROGERS, M. D.,

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Many vicissitudes have occurred in the practice of medicine and surgery in past centuries. Persecution and even death have followed the searcher for medical knowledge. Comparatively few names of medical men have been handed down to our day from early times or the middle ages. The names of these few Immortals of medicine are preserved rather for greatness as philosophers and men, than on account of their greatness in the art of medicine. In fact, the science of medicine and surgery may be said to have had its birth in the eighteenth century. Education then became more general. Superstition was growing less. Sciences grew on a firm basis of reason and research. In medicine empiricism gave place to rationalism. Therapeutics received great assistance from chemistry. Human physiology and biology advanced hand in hand. Jenner at the end of the eighteenth century observed certain facts and followed them to their logical conclusions, applying in practice the great discovery of immunization as a preventive of disease. Anesthesia, asepsis, and serum therapy were among the great discoveries of the nineteenth century.

Surgery has made wonderful progress since Lister placed asepsis on a definite basis. Internal medicine has advanced rapidly. Diagnosis

has become easier and more certain, thanks to more perfect understanding of pathology, and the development of the many instrumental aids. The causes of disease have been investigated and become better known. These advances in the science and art of medicine have given supreme importance to the field of preventive medicine, which before had been of slight consequence. In obstetrics the great importance of prophylaxis must appeal to all who at any time practise it.

We all realize that puerperal infection can be prevented very much more easily than it can be cured. So it is in many other complications of the pregnant and puerperal conditions. Thousands of lives are yearly sacrificed because the obstetrician, either through criminal carelessness, thoughtlessness, or neglect, fails to comply with the simple rules of cleanliness.

From the beginning of pregnancy the patient should be under the observation of her physician. The urine should be examined monthly so that renal insufficiency if present may be early recognized and treatment instituted. The hygiene of the patient's surroundings is of the greatest importance. Fresh air both day and night with exercise in the open air is beneficial. Frequent warm bathing is necessary to maintain a healthy condition of the skin. Plain, nourishing diet is called for, and the occasional use of laxatives. During the last few weeks of pregnancy the breasts should be examined and retraction of the nipples or tenderness of the skin relieved by appropriate measures. An alcoholic wash of tannic acid is good to toughen the nipples. Such simple measures will conduce to the comfort of the mother.

Puerperal eclampsia is one of the most serious complications of pregnancy. Its cause has been a matter of some dispute. In the *Archiv für Gynäkologie*, Vol. LXXII, 1904, Zweifel gives his opinion of the cause of eclampsia, and its treatment in the wards of the Leipsic clinic. He believes its symptoms are due to a poison, probably an acid, circulating in the patient's blood and that the condition of the urine is due to an inefficient oxidation of albuminoid material in the system. He finds that the urea grows less and the albumin in the urine increases in an unfavorable case. Where the albumin decreases and the urea increases the case becomes more favorable. He believes the general practitioner should, in the presence of an eclamptic seizure, rupture the membranes at once and deliver as soon as possible. Dr. R. W. Lobenstine, of the Sloane Maternity Hospital, New York, in a study of fourteen cases reaches certain conclusions. These

are that in most cases of eclampsia an increase in the number of leucocytes is present and that this is favorable to recovery, providing the leucocytosis increases in as great a ratio as the toxicity. If the toxicity overcomes the leucocytosis the course of the disease is very unfavorable.

Sometimes a patient comes to us a few weeks or months before the expected confinement complaining of swelling of her feet or hands or puffiness of her eyelids or face. The first warning may be found in a low specific gravity of the urine or small quantity, with perhaps the presence of albumin. If albumin is found it is a most important danger signal and demands that energetic treatment be at once instituted. Examine the urine microscopically for the presence of casts which will indicate the condition of the kidneys. The diet of the patient in this condition of renal insufficiency should receive careful attention. Meat and eggs should be eaten sparingly if at all. Water should be drunk freely. If toward the end of pregnancy a milk diet should be established. Saline laxatives should be used, also hot baths that the system may be relieved of excrementitious matter, the products of metabolism, and the skin maintained in a healthy condition. Extra work must be removed from the kidneys as much as possible and the renal circulation stimulated.

Mrs. M. P., aged 24 years, in the eighth month of pregnancy, recently came to me with the following history: Four years before she had been attacked at the ninth month with puerperal eclampsia and for forty-eight hours had been unconscious and suffered at intervals of from ten minutes to half an hour from the most severe convulsions. In spite of energetic treatment her life was despaired of, but she finally recovered after intravenous saline infusions had apparently assisted nature in her fight against disease. When I saw her she had not profited much from her previous experience, and had not consulted any physician until she had progressed to a condition

of extreme renal insufficiency. She said she passed only four ounces of urine a day. It had a specific gravity of 1.004 and was loaded with albumin and granular casts. It became almost solid when boiled. Edema of the face, body, and extremities was extreme. She had great shortness of breath. She could not sleep well and had severe headaches. As only four weeks of her pregnancy remained prompt treatment was demanded to avert a recurrence of the previous disaster, eclampsia. She was placed on a milk diet. Daily hot baths were ordered with saline or other mild laxatives every day. She was urged to drink large quantities of water. A mixture of acetate of potassium 10 grains, and infusion of digitalis 2 drachms to the dose was given three times a day. The oedema gradually decreased. The urine increased in amount, as well as in specific gravity. In about three weeks the urine had a specific gravity of 1.020 and albumin was entirely absent. The patient in due time was delivered of a dead fœtus and made an uneventful recovery.

The frequency of eclampsia is given by the authorities as one case in 500 labors approximately. For some reason or other my own city of Plattsburgh and three surrounding country villages, representing in all a population of about eighteen thousand, have had, especially within the past four months, an extraordinary number of these cases. From September 15, 1904, to January 15, 1905, the births in this territory have been not over seventy-five. The physicians in the same area have reported eleven cases of puerperal eclampsia, two of which have proved fatal.

The detailed report of these eleven cases is herewith given. I should like to ask why this tremendous increase in the frequency of this disease in this vicinity, where for years eclampsia has been of quite common occurrence, judging from the records of the physicians. Is this disease possibly due to an infection? Do certain climatic conditions influence it? Is it not possible that the absence of frequent bathing among

Initials.	Age.	Date.	Period.	Pregnancy.	Convulsions.	Outcome.
1. J. E. D.....	.....	September, 1904	9th month	Primip.	2 Anti	Recovery
2. O. E.	29	October, 1904	9th month	Primip.	2 Anti	Recovery
3. R. E. H.....	27	October, 1904	8th month	Primip.	Anti and post	Recovery
4. M. B.....	26	October, 1904	6th month	.....	.....	Recovery
5. J. C.....	36	November, 1904	7th month	3 Para	Many	Recovery
6. M. E. M.....	28	November, 1904	9th month	5 Para.	Many	Death
7. M. L. N.....	23	November, 1904	8th month	Prim.	Many	Death
8. H. M.....	24	November, 1904	9th month	Prim.	3	Recovery
9. M. C.....	24	November, 1904	8th month	Prim.	8	Recovery
10. S. T.....	28	January, 1905	9th month	3 Para	6	Recovery
11. F. C.....	31	January, 1905	7th month	Prim.	4 severe	Recovery

Details of Eleven Cases of Eclampsia.

country people in cold weather has some influence in decreasing the excreting function of the skin and so throwing undue work on the kidneys and flooding the system with products which must be eliminated in large quantities in pregnancy to avoid toxæmia? The prevalence of this disease in this small section of country affords a fruitful field for an investigation into the predisposing causes so that its nature may be better understood and prophylactic measures applied in a greater degree than can be done at present. The people in this vicinity have not been sufficiently educated to the necessity of urinary examinations in pregnancy and other medical oversight. A change in this respect might decrease in a great measure the frequency of eclampsia.

It is stated that in Vienna eclampsia is unusually rare on account of the large quantity of tartrates of sodium and potassium which are present in the light wines generally drunk there. It is thought that these may combine with the bases in the food and prevent the formation of the poisonous acid in the blood.

Another serious condition of pregnancy where prophylaxis is of the utmost importance is in gonorrhœa of the pregnant woman. A neglect of proper precautions results in many cases in a tedious illness or rapid death of the mother, and often in blindness, which is worse than death, to the child. When this condition is discovered the patient should at once receive careful attention. Alkaline treatment will place the urine in good condition and local treatment to the seat of the disease in the vulva, vagina, urethra, or cervix will secure a healthy condition of the mucous membrane and destroy the gonococci lurking there. Daily hot antiseptic douches of mercury bichloride or carbolic acid solution will assist; also local applications of a one per cent. solution of silver nitrate, or of a two per cent. solution of silver albuminate. The frequent placing of a boroglyceride tampon or suppository is also beneficial.

A few months ago a young married man consulted me for treatment of an attack of gonorrhœa which he had contracted in forbidden paths. He also informed me that at about the time he first noticed the discharge he had intercourse with his wife, who was six months' pregnant. I informed him of the seriousness of the case and he had me institute treatment of his wife at once. She had already developed urethritis and vaginitis, which yielded nicely in the course of a few weeks' treatment, such as I have outlined. She was kept under observation until her confinement when she was delivered of a healthy child. On

birth the infant's eyes were treated after Credé's method, except that a one per cent. solution of silver nitrate was substituted for a two per cent. Many believe that this strength is equally efficient. A wash of boric acid was given the nurse to instill three times daily. No inflammation of the eyes resulted.

It is a safe precaution to use as a routine practice the instillation of a one per cent. silver nitrate solution after each delivery, as this results often in much benefit and can do no harm.

It is my habit to have a small tray ready in the lying-in room. In this is boiled water, some tape, and a pair of scissors to sever the umbilical cord. In the water has been dissolved boric acid. As the contents have been boiled the tape and scissors can be used for the cord when the warm boric acid solution remains for swabbing out the conjunctival sacs.

Gonorrhœal infection of the mother is no less dreadful in its results after delivery than it is in the case of the child in the absence of prophylactic measures. There exists a large raw surface in the uterus, besides excoriations of the vagina and perinæum. The gonococci thus find a ready entrance to the lymphatics. Some of the results are endometritis, salpingitis, peritonitis, and gonorrhœal arthritis. The victim stands a very good chance of becoming an invalid and undergoing tremendous suffering for lack of preventive treatment at the time it would be effectual.

Bacteria present in the secretions of the vagina have been found to be harmless in the absence of an infective disease, such as gonorrhœa. In these normal cases plain and antiseptic douches before labor are not advocated, but rather contraindicated, as they remove the protecting and lubricating mucous secretions normally found. The result is that excoriations of the mucous membrane are more liable to occur and autoinfection can more readily take place, as well as infection from unclean hands and instruments.

In conditions where a purulent discharge bathes the cervix and vaginal mucous membrane, whether it be gonorrhœal or not, the douche should be used frequently. Suspicious discharges should be examined microscopically after making a cover glass stain, and the presence or absence of gonococci established.

When entering the room of the woman in labor the physician should realize the tremendous responsibility which rests upon him. Two lives are intrusted to his keeping. The prospective mother lying in pain and helplessness trusts herself to him. The fate of her child also is in his

hands. How often this trust is basely betrayed! Certainly not with malicious intent. But none the less deadly is the criminal carelessness of many who attend a lying-in woman, and without any care, sometimes without even a hasty washing of the hands, go about their important work. The careful attention to the rudimentary rules of surgical cleanliness would save many lives.

If a nurse is in attendance she should scrub the patient's thighs, vulva, and anal region with hot water and soap, keeping up the mechanical cleansing for several minutes. Then the parts should be rinsed off with boiled water and afterwards with a one to one thousand solution of mercury bichloride. The preparation of the bed should be carefully supervised to see that all sheets and dressings are clean and freshly laundered. We are all familiar with the vicious habit in some families of placing an old piece of dirty quilt or carpet on the bed to come in contact with the mother and newly born child.

Puerperal infection, or child bed fever as it was called, was for two thousand years supposed to be due to suppression of the lochia. Later it was believed that the circulation of the milk in the blood was the cause.

In 1843 Dr. Oliver Wendell Holmes, that brilliant littérateur and distinguished physician, wrote a very powerful essay on Puerperal Fever as a Private Pestilence. He could claim the proud position of being one of the earliest physicians to recognize the true cause as an infection, and of pointing out the way to avoid this disease. Dr. Holmes had little scientific investigation on which to base his work, and yet he anticipated by many years the views of the profession. He struggled against many difficulties in his study of this subject and his position is very aptly expressed in a poetical way in the *Poet at the Breakfast Table*:

My life shall be a challenge, not a truce!
This is my homage to the mightier powers,
To ask my boldest questions, undismayed
By muttered threats that some hysteric sense
Of wrong or insult will convulse the throne
Where wisdom reigns supreme; and if I err,
They all must err who have to feel their way
As bats that fly at noon; for what are we
But creatures of the night, dragged forth by day
Who needs must stumble, and with stammering steps
Spell out their paths in syllables of pain?

Truly the path in the investigation of the cause of puerperal fever has been spelled out in syllables of pain for many thousands of poor suffering women.

In 1847, Semmelweis, of Vienna, after a large experience in the lying-in hospitals of that city,

stated that puerperal patients were chiefly attacked with puerperal fever when they had been examined by physicians who were fresh from contact with the poisons engendered by cadaveric decay. Ordinary washing of the hands afterward in plain water did not prevent the disease, but if, after washing the hands in soap and water, they were washed in a solution of chloride of lime the cases of puerperal fever were either absent or very rare. Here we find the first use of antiseptics in obstetrics. In 1850 James Y. Simpson published a paper on *The Analogy Between Puerperal and Surgical Fever*.

Dr. Rutson Mauray, after an investigation in New York city, found that one tenth of all the deaths in women during the child bearing period originated from diseases of childbirth. One half of these were due to puerperal sepsis.

Max Boehr states that one thirtieth of all married women of Prussia die in childbirth. The Puerperal Fever Commission of the Berlin Society of Obstetrics and Gynecology state that one tenth to one fifteenth of deaths of women from fifteen to forty-five years of age is due to puerperal infection. Women dying from this cause are taken away during the most useful period of their lives, and frequently leave children as well as a husband to mourn their loss.

All authorities now agree that the cause of this disease, in practically all cases, is surgical uncleanness. Probably infection from the hands of the physician is the most common cause. Other frequent causes are unclean instruments and dressings as well as infection from the patient's own body. Before making an examination of the patient the obstetrician should thoroughly scrub his hands with a hand brush and hot water and soap. This scrubbing should continue for three or four minutes, as the mechanical cleansing of the hands cannot be equaled by chemical disinfection, such as washing in bichloride solution. Particular attention should be given to the free borders of the nails. Soap and hot water wash away all oily and fatty material from the skin and dispose of bacteria which may be hidden away on the epithelial surface. After a thorough scrubbing of the hands, wrists, and arms they should be rinsed in pure boiled water, then in one to two thousand mercury bichloride solution or some equally good antiseptic. If the physician prefers, rubber gloves properly sterilized may be used on the hands. No precaution should be omitted in preparation of the field of operation, sterilization of hands, instruments, and dressings, as the outcome of these cases depends so largely on this preparedness.

The forceps should be used as a prophylactic measure in cases of unreasonable delay of labor; otherwise sloughing of the tissues may result.

In doing what he can to prevent laceration of the perinæum the physician can do much to lessen the after-effects which often send these patients to the gynecologist. Delivery of the patient on the side is probably best. Place a pillow between the knees. In this position the field of operation is under the eye of the surgeon. The head is controlled by one hand, the perinæum by the other. If any laceration of the perinæum occurs it should be carefully sewn up at once. Care should be taken not to overlook lacerations. Be sure the placenta is complete when delivered. If not, secure the remaining portion.

After the operation of delivery is finished carefully wash all the genital region with warm boiled water and afterward with a solution of mercury bichloride before placing a sterilized napkin in position.

This paper is presented not because it contains anything new, but because it will do us, as general practitioners, good to dwell on this subject of prophylaxis in pregnancy and labor. If it is the means of causing some one to pause and think, and so results in additional carefulness, some lives may be saved and the object of this paper will be accomplished.

Health in Connecticut During February, 1905.
—The following cases of infectious diseases have been reported to the Connecticut State Board of Health for the month of February: Measles, 180; scarlet fever, 120; diphtheria, 152; cerebrospinal meningitis, 14; whooping cough, 29; typhoid fever, 15; consumption, 42. The following is a list of towns whose health officers report that they have not been notified of any infectious diseases:

Andover, Ashford, Barkhamsted, Bethlehem, Bolton, Bridgewater, Brookfield, Brooklyn, Burlington, Canaan, Canterbury, Canton, Chaplin, Chatham, Cheshire, Clinton, Colchester (town and borough), Colebrook, Columbia, Cromwell, Danbury (city), Danbury (town), Danielson (borough), Durham, Eastford, East Haven, East Lyme, Easton, East Windsor, Enfield, Fairfield, Franklin, Griswold, Guilford, Hampton, Hebron, Huntington, Jewett City (borough), Killingworth, Lebanon, Ledyard, Lisbon, Litchfield (town and borough), Madison, Marlborough, Middlebury, Milford, Monroe, Montville, Morris, New Canaan (town and borough), New Hartford, Newington, Norfolk, North Branford, North Canaan, Orange, Oxford, Plainfield, Plainville, Pomfret, Portland, Prospect, Redding, Roxbury, Salem, Salisbury, Saybrook, Scotland, Shelton (borough), Sherman, Somers, Southbury, Stafford Springs (borough), Stamford, Sterling, Stonington, Suffield, Thomaston, Thompson, Union, Voluntown, Warren, Waterford, Watertown, Wethersfield, Wilton, Winchester, Windham, Windsor, Winsted (borough), Wolcott, Woodbridge, Woodbury, Woodstock.—Total, 95.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXVII.—How do you manage the alcohol habit? (Answers due not later than April 15, 1905.)

XXXVIII.—How would you prevent disease of the vermiform appendix? (Answers due not later than May 15, 1905.)

XXXIX.—How do you treat erysipelas of the face? (Answers due not later than June 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXVI has been awarded to Dr. Samuel Stalberg, of Philadelphia, whose article appeared on page 699.

PRIZE QUESTION NO. XXXVI.

THE DIET IN TYPHOID FEVER.

(Concluded from page 702.)

Dr. J. Preston Miller, of Washington, writes:

In the dietetics of typhoid fever three stages of the disease deserve consideration and different treatment in its thermic curves of abrupt acclivity, in early septic action to the summit of an undulating, prolonged plateau to a less abrupt defervescence declivity leading down to the level of the original plane, beyond which we often find a tail long strung out with many ups and downs. Each of the three directions of this line has significance as to kinds of diet. The age of the patient comes in for separate consideration as to character and amount of diet, and is quite as important as the stage of the disease. Temperament should be noticed, for the plump and plethoric should not be fed the same as the lean and skinny.

In the first decade of life the disease is infrequent and mild; under five years it is rare; and under two, good clinicians have failed to find it and believed it does not exist; but in severe epidemics it may be found at any age. Children

with typhoid have constipation in about two thirds of all cases, while in the adult this ratio is reversed and diarrhoea exists in about two thirds. Water, so important in typhoid, must be given warm or hot to the very young, but may be given ice cold to the adult. Milk is borne better by children and is more essential to them; starchy food we know a child under eight months cannot digest.

The child at the breast should have one grain of sodium bicarbonate and two grains of pancreatin given with each nursing if the stools are full of curds. If the curds remain large, ten drops of essence of pepsin may be given, with or without this powder, and hot water between nursings, with a bit of common salt in the water. If constipated, chicken tea may replace the water, and if curds then still remain I take the child from the mother's breast and give it peptonized milk, regulating the percentage of cream to suit the bowel conditions. A child of five will take chicken tea in addition to peptonized milk, and I give cold water at three years, later increasing the ratio to other food each year up to puberty. Kumyss or Matzoon can be given at any age that the child will take it. At six and eight years children will take chicken tea in preference to all meat broths. At eight years and later, when I give chicken tea it is prepared by breaking the bones by pounding with a hammer to expose the marrow, after the meat has been cut clean from the bone, the chicken having been cleft in halves from neck to tail. The meat chopped fine is added to the pounded bones of one half the chicken. This is put into a vessel with a tightly fitting lid containing three pints of cold water, brought gradually to a gentle boil, and kept constantly hot on the stove and fed as needed, after straining. It must be well salted. While this is a favorite food with children, it is from four to six times as rich in food products as ordinary chicken tea and is that much more valuable for a patient at any age.

The beginning of the second decade is the same as the last two years of the first. But when within one year of puberty and about five years after its beginning we are in that period of life to which typhoid is most fatal; the mushroomlike growth necessary to the rounding out of limbs and filling out the adult form of the body brings about a glandular development, especially of the lymphatics, which renders the system peculiarly vulnerable to sepsis. Peyer's patches, all the lymphatic glands, the mesenteric glands, and the lymphatics everywhere along the line of intestines aid the toxins of typhoid in their initial field. In the septic stage, especially in the plump youth,

metabolic disturbance is so profound that rapid tissue waste seeking sewerage through the lymphatics so thickens the fluid that this alone would render its flow sluggish, but the enlarged glands further obstruct this circulation; the thinner part of the fluid squeezes through the obstruction, the thicker remaining to distend vessels and plague the tissues, the stasis thus lending itself to a more perfect culture medium for the toxic process. We can produce further havoc here by the ingestion of proteids, carbohydrates, etc., rendering this septic fluid yet more mucilaginous and difficult of flow. If we recall the function of the lymphatics, that it is to remove effete matter from the tissues and also to take up superabundance of nutritive fluids not immediately appropriated to tissue building, holding the same in reserve, it will enable us to see wisdom in the epistaxis, or diarrhoea, or both, so frequent in the plump youth in the initial stage. Nature here understands her business and gives us anorexia. In no other fever is this so constant a symptom in the early stage. Rich foods are not needed in the first few days, and cold water is as much needed as it is craved. It may be objected that water is not a food, and therefore I deem it proper to give my reasons for using it almost to the exclusion of other foods if called to a typhoid patient in the stage of thermic acclivity. In the condition of lymphatics above described, water is not only food, it is diluent, eliminant, and antiseptic. Water, in small quantities, has definite effects on the cardiovascular system; cold water diminishes the pulse rate and increases the blood pressure, while hot water raises the pulse rate and lowers the blood pressure, the effect ceasing in about twenty-five minutes. Moreover, we know that in other conditions, such as the removal of calculi, patients have been put to bed and given absolutely nothing but water, a goblet every hour, for ten days without complaint of hunger or other inconvenience.

To plethoric patients I have given two ounces of cold water every twenty or thirty minutes for two or three days, replacing this with albumin water during eight hours of the night, giving an ounce to the hour, with the result that the dazed eye became clear, muttering ceased, and the stupor disappeared. To albumin water I add lemon juice or orange juice pressed from the fresh fruit to obviate the objection urged that it increases the difficulty of keeping the mouth clean. If called early, while the temperature is going upward rapidly, giving water freely, and avoiding proteids, carbohydrates, etc., in any considerable quantity, is the most important by far in the dietary at that stage, especially in young, plethoric patients.

All food in typhoid fever must be fluid for the first few weeks of the disease, and until the temperature has touched normal. The quantity for adults, with variations for reason, should be about eighty ounces in twenty-four hours. Albumin water, in the strength of white of fresh egg one part, water two parts, salt or fruit juice added, should be the only additional food during the period of acclivity in the thermic curve. On the fourth day of the septic stage I give peptonized milk if I ordered the dieting the previous days. If I am called at the acme of fever, when untreated milk, egg nog, carbohydrates, etc., have been given and of course passed through the stomach only partly digested, fermented particles and curds now producing intestinal havoc, tympanites, pyrexia, etc., I do not give milk, even if peptonized. If this occurs after the middle of the second week, there is danger of intestinal hæmorrhage, and if another week later it would greatly endanger the gravest accident of typhoid fever—perforation. If there are grave nervous symptoms, I give liquid food that will remain liquid throughout the gastrointestinal canal, matzoon or whey. The latter in albumin water is a good vehicle for brandy or whiskey, and may be given freely. When these grave nervous symptoms disappear, the stools are of good consistence, and the abdomen is soft, I give peptonized milk.

Milk is theoretically the paragon of food in typhoid cases at any age, containing the ideal combination of proteids, fats, carbohydrates, and salts in liquid form. But we may well bear in mind that milk is solidified before it can be digested. Moreover, there are many persons who cannot digest milk even in health or who cannot take it ten days without serious biliousness. Such persons will assimilate milk less well in the febrile state and are apt to have increased sepsis, meteorism, and the complications of swollen gums, thrombophlebitis, furunculosis, neuritis, etc. Milk in the natural state will produce curds in the stools, which are dangerous to swollen and ulcerated Peyer's patches, and particles of curds become buried in the folds of the intestines, affording a nidus for germs. But the scorbutic condition can be averted by the use of orange juice and lemon juice; thrombophlebitis by the copious use of clear cold water; neuritis by assisting digestion, and from personal experience I know how quickly curds disappear when milk is not given in any form until it is peptonized. *I permit no milk to be given, except peptonized, in typhoid cases at any age of the patient or stage of the disease, including that given in cocoa, coffee, tea, and other drinks. Matzoon, kumyss, and whey, are not included in this.*

Thus prepared, I give milk after the acclivity and during the prolonged undulating high plane—the plateau—of the fever chart, so long as there is no hæmorrhage of bowels, no curds, and tympanites is not extreme. I permit four, and insist on not less than three, ounces every two hours for sixteen hours and water two to four times between each portion of milk. In the eight hours of night sleep after ten p. m. I give albumin water, and when the heart's action is good and strong I add water to the albumin water, or give it separately at the same awakening, and permit the patient to sleep two or three hours between drinks. In asthenic patients I give water or food every hour, including brandy at alternate doses. Where there are serious nervous disturbances I increase the quantity of brandy and lengthen the intervals night and day, and I replace milk with whey. When intestinal hæmorrhage occurs, I permit no food from which débris could possibly pass through the stomach down into the bowels and excite peristaltic action or irritate the ulcerated mucous surface. I personally examine the stools not later than the middle of the second week for clots of blood even if hæmorrhage is not reported. If blood is found in any form, I give fresh beef juice. The fresh juice is best prepared by taking one third of a pound of round steak, nearly two inches thick, with the surface slightly broiled, simply to give it flavor, and pressing out the juice with a meat press or lemon squeezer into a small cup set in hot water. Flavor abundantly with salt, slightly with pepper, and feed it to the patient from a heated cup. It must not be hot enough to thicken the albumin in the meat juice or cold enough to become flat in taste. If it is permitted to congeal, from cold, the patient will not take it. From one and a half to two ounces of juice should be given, and this should be repeated three times a day, also about two pints of water in small quantities. This food should be continued six to seven days. Then barley water, containing carbohydrates, now much needed, may be given, and acidulated albumin water in lieu of beef juice, and when there is diarrhœa with no great amount of tympanites I prefer these to ordinary water in any stage after the acclivity.

In the third or fourth week, when defervescence begins, any of the foods mentioned may be given that patient may prefer when symptoms already indicated do not forbid. Artificial waters, forbidden in the early stage because of the excess of carbon dioxide, are now permissible and grateful to the patient, also an excellent vehicle for brandy, peptonized milk, and some of the fluid meats. Matzoon is especially valuable now if there is diarrhœa. As we get well down the line

of declivity, unless there is much tympany, I begin the use of mucilaginous foods, oatmeal *strained*, arrowroot, tapioca, etc. As soon as the normal plane is reached I give semi-solids, and the first of these will be a fresh egg boiled one minute, or poached equally soft, on dry toast or sparingly buttered if the butter is fresh. This done in early morning, if well borne is repeated at five p. m., and again the next morning, and followed at noon with scraped beef. *From the time the first egg on toast is given every meal as outlined above is immediately followed with a full dose of pepsin.*

There is a class of cases, fewer before maturity, called relapsing, deserving of special mention in the dietary. In these the temperature, after becoming normal or nearly so, will run up again, not usually very high, but persists in remaining uncomfortably above the normal, running a more or less erratic course. This is the tail to the deferrescent thermic line before referred to. In some of these lingering cases, much to be dreaded, the patients are profoundly asthenic, the temperature running low, 100° to 101° F., and loss of weight may exceed a pound a day, emaciation becoming extreme. In either of these classes I pay less attention to the temperature chart than to the gastrointestinal tract. I begin by suspecting curds of milk, and if they are found, even in small particles, I forbid milk absolutely in every form. In tympanites carbohydrates are often the cause. A dry tongue is a call for acids, fruit juice, and sodium chloride. The asthenic, when their condition is not due to diarrhea or indigestion, will do well on stimulants, black coffee, champagne, or very old port, if not too sweet. If the tongue is fairly clean, tympanites absent or slight, I should soon give junket and presently add to the list baked custard followed with pepsin and orange juice over milk sugar. If bowel distention follows, beef juice should be given for twenty-four hours, then dry toast and soft egg followed by pepsin, scraped beef or toast, and other food as before outlined with this class of food. Any patient with low, lingering fever after twenty-eight days, and sometimes after twenty-four days of the disease, is given such semisolid food as I have described when the tongue is moist and fairly clean, the abdomen soft, the stools nearly normal in smoothness, giving also mutton or beef broth, but chicken broth only when the stools are inclined to hardness. I should give gelatin food in the opposite condition—wine jelly, blanc mange, farina, boiled rice with beef juice, baked custard, junket, etc., giving these as an addition to the list when toast and soft egg are first given.

In the third decade typhoid, though less fatal than in the second, is yet very severe, each decade growing lighter until nearly sixty years is reached, when the disease becomes grave. Men especially fare badly after sixty with this disease. Alcohol, rarely given in the first decade and yet sparingly in the second, is gradually increased until about sixty years of age, when I give it more frequently. As to the form in which I administer it; brandy (French or California) or rye whiskey not less than five and preferably ten years old is given in the early stage. I prefer champagne or very old port, not very sweet, during deferrescence.

Dr. G. N. Murphy, of Paducah, Ky., writes:

As soon as I see a case of typhoid fever, I select a liquid diet that is easy to digest, that will leave the smallest amount of solid matter to form fæces. The selection is always made with due regard to any whims or idiosyncrasies of the patient as far as is consistent. Sweet milk with one fourth part of limewater, is the diet of choice if there is no valid objection against its use. This is given every four hours, and from three to six ounces are allowed at each feeding. The stools are carefully examined each day for milk curd, and if it is detected in any considerable quantity, the milk is predigested by peptonizing, and to prevent the patient from tiring of this restricted diet a change is frequently made to whey and buttermilk. Some patients reject a milk diet of any kind at the beginning, while others take it kindly at first but rebel against it later. In such cases a change is made to animal broths and extracts. Whiskey and brandy are also valuable adjuncts to the supportive treatment of typhoid fever, and in asthenic cases, where the vitality of the patient is at a low ebb, as is shown by a high temperature, rapid, weak pulse, low muttering delirium, etc., I administer these stimulants boldly, giving from six to twelve ounces during twenty-four hours to an adult and a proportionate quantity to children, according to age. Ice water, plain or as lemonade, is allowed from the beginning to the termination of the disease as frequently and in as liberal quantity as the patient desires. After convalescence is established I still advise the use of a liquid diet for a period of two weeks to prevent the possibility of solid particles of undigested food or hardened fæces doing violence to some delicate ulcerated surface of unhealed bowel.

In a general practice of fifteen years I have treated many cases of typhoid fever, and in the main have adhered to this dietary without cause to regret my course.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 704.)

Fercao is an iron-cacao dietetic preparation, which the makers state is prepared from pure cacao and iron saccharate.

Fermangol is an iron manganate preparation, which, according to the maker, contains 0.5 per cent. iron and 0.1 per cent. manganese, with glycerophosphoric acid, sugar, aromatics, etc.

Ferrocotin is the name given to a peptonized guaiacol-iron-albuminate combined with thymol in syrup, which is recommended for use in the treatment of scrofula, incipient tuberculosis, bronchial catarrh, etc.

Fibrolysin is a chemical combination of one molecule of thiosinamine and a half molecule of sodium salicylate. It forms a white, crystalline powder, which is readily soluble in cold and warm water. The solution is affected by light and air, and must be kept in small amber colored containers. It is administered hypodermically in all cases in which thiosinamine is used.

Fluinol, known previously as fluorinol, is an alcoholic fluid extract of fir and pine needles to which volatile oils have been added. It is recommended as an addition to baths, gargles, and sprays.

Formosapol is a saponified cresol compound, with a composition similar to lysoform.

Galbanic Acid, a substance extracted from Galbanum by Hirschsohn, has been studied by von Kuelenstierna (*Archiv für Pharmazie*, 1904, page 536). It crystallizes from dilute alcohol in magnificent long colorless needles, devoid of odor and taste, and melting at 155 to 156 degrees. Alcoholic solutions are very slightly acid to litmus paper.

Gelasepsin is a 1 to 2 per cent. sterilized solution of gelatin prepared with physiological salt solution.

Glidin, also known as Dr. Klopfer's wheat albumin, is a compound of albumin, salts, and lecithin, forming a fine yellowish powder free from odor or taste. It contains no nucleins, and the production of uric acid in the system is accordingly lessened. It swells in contact with water, and is recommended for the baking of bread intended for sufferers from diabetes and kidney diseases.

Goudrogenin is a dry preparation of pine tree tar, which appears on the market in the form of brown scales, which are readily soluble in water. The solution is said to possess all the properties of tar water and to possess strong antiseptic properties.

Graminin is a dry form of hay fever serum, which is intended for use as a snuff in the treatment of hay fever.

Griserin is loretin combined with sodium carbonate 4.25 per cent. or sodium bicarbonate 6.75 per cent.

Guaiacacodyl is another name for guaiacol cacodylate.

Guaiacolin is one of the lengthening list of sulphoguaiacol syrups.

Guaialin is a benzoic acid methylene diguaiacol ester, forming an amorphous, greenish gray powder, which is used in the same indications as guaiacol.

Guaiaresin is a compound of guaiacol and arsenous oxide.

Guaiaresin syrup contains in each 10 gm. 0.005 gm. of arsenous oxide and 0.2 gm. of guaiacol in combination with calcium chlorohydrophosphate and cinnamic acid.

Guatannin (guaiacoltannocinnamate) is a product of a Berlin chemical laboratory, the uses of which will be obvious from its chemical name.

Gymnostachyum febrifugum is the name of a root that is used medicinally in India, according to David Hooper. The root is boiled and given to women with garlic or pepper after their confinement. It is also used in cases of fever and bilious complaints. The rhizomes are brown in color, and from 1¼ to 2 inches long and ⅜ inch in diameter. They have a bitter, woody taste. A cross section shows a brown, almost reddish, outer skin, a thick, dark rind and a light colored wood, with hollow centre. The active principles are contained in the bark. The bitter principle is of an acid resinous nature, and is soluble in alcohol, ether, and water; its solution is colored yellow by alkalis. Cholesterin was present, but no alkaloids were found in the bark.

Herniarin, an Active Principle of Herniara Glabra, has been obtained in a pure form by Grein (*Pharmazeutische Zeitung*, 1904, page 258). Herniarin is easily soluble in absolute alcohol, and not at all soluble in ether. When triturated with sulphuric acid the crystals turn yellow, later pink, and finally dark red. On boiling with water the product is split into glucose and herniatic acid. This acid is regarded by Grein as the active principle of the herb *Herniara glabra*, which is used in the treatment of stone in the kidney, Bright's disease, etc., chiefly as a diuretic.

A Modification of Todd's Mixture for the Treatment of Grippe.—The following, according to *Répertoire de pharmacie*, for March 10, 1905, is a very agreeable modification of Todd's mixture, a preparation esteemed in France for the treatment of grippe:

R	Tincture of canella.....	5 parts;
	Infusion of Ceylon tea.....	75 parts;
	Syrup of lemon.....	75 parts;
	Jamaica rum.....	40 parts.

M.

This mixture is used not only in cases where it is desired to secure a tonic effect, but it is said to act on the kidneys in cases of grippe and lithiasis. The tea is an excellent diuretic, producing increased cardiovascular activity. On account of the theine and the theophylline it contains, it is an excellent stimulant in the cardiac adynamia so frequently observed in cases of exhaustion after the fiftieth year. The syrup of lemon is an excellent corrigent, being agreeable to the taste, and acts at the same time as an antiseptic and a diuretic.

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SLEEP AS AFFECTING RESPONSIBILITY.

It is a matter of common knowledge that both natural sleep, with its occasionally attendant somnambulism, and the allied conditions produced by hypnotism or the action of some drug do at times so impair the interpretation of one's sensory or illusory impressions as to lead to the most regrettable acts. The subject is of such interest in its bearing upon the question of responsibility that it has over and over again been dealt with by writers on forensic medicine. It has recently been considered anew in a Paris thesis by V. J. Leconte, a summary of which we find in the *Revue française de médecine et de chirurgie* for March 27th.

During the process of going to sleep, says M. Leconte, and during the gradual waking the senses of sight and hearing often give rise to illusions, and he gives a number of examples of their having led to tragic acts. A man in the process of waking, cited by Hofbauer, thought he saw a motionless spectre in his room, and struck at it with a weapon; the victim's groans roused him to full consciousness, and he found that he had killed his wife. In like manner a man sleeping in a room with others fancied he saw a wolf, and killed one of his companions, and a soldier, roused suddenly by something that he took for an alarm, wounded several of his comrades.

It is not always an immediate act that is the fruit of an illusory sensation perceived during sleep. A healthy man, it is true, puts away from him the remembrance of a dream, but he who is morbid and perhaps already on the verge of insanity cherishes it and broods over it till he comes to put faith in it as a truthful memory, and at some future time takes tragic revenge for a purely imaginary injury. There have indeed been occasions when a sane man could not with safety recount certain of his dreams, as when Cæsar had a man executed for having dreamed that he had murdered him (Cæsar), holding that the dream revealed the man's real intention.

We cannot of course justly hold a man morally responsible for an unlawful act committed under the influence of impaired or perverted consciousness, but necessarily it is not always easy to establish the fact of the impairment or perversion, and, as M. Leconte points out, we must hold a known somnambulist responsible if he fails to take measures to guard against the possible consequences of his peculiarity.

TYPHOID PERITONITIS WITHOUT PERFORATION.

There are on record a number of cases in which signs of general peritonitis have been observed in the course of typhoid fever, coming on suddenly and naturally leading to a diagnosis of intestinal perforation, but in which, on operative intervention or post mortem examination, no perforation was found. Such an instance is reported by Courtois-Suffit and Beaufumé in the *Bulletins et mémoires de la Société médicale des hôpitaux de Paris* for March 23rd. Though the onset of peritonitis in this case was fulminant, occurring on the twenty-first day of the fever, the lesions found indicated that the peritoneal inflammation must have existed for a considerable time and pursued a latent course. The fatal termination took place within twenty-four hours of the outburst of the symptoms attributed to perforation, but not until after laparotomy had been performed. Neither during the operation nor at the examination after death did the most minute exploration disclose either intestinal perforation or the fact that from any organ there had escaped material capable of

setting up peritonitis. A noteworthy feature of the case was the entire absence of tympanitis.

The authors, discussing the pathogeny of these cases, are inclined to treat Dieulafoy's theory of independent typhoid infection of the peritonæum as only an hypothesis resting on nothing more substantial than analogy. They suggest that in their own case the peritoneal inflammation was more probably propagated from the intestine by contiguity, since it was decidedly most marked in the peritoneal coat of those portions of the intestine that showed the most pronounced lesions of Peyer's patches; and contiguity does indeed seem sufficient to account for the peritonitis.

"SPERMATORRHŒA."

Strictly speaking, this bugbear of the victims of the advertising quacks who treat "diseases of men" has no existence. That is to say, there is no morbid condition that is correctly denoted by the word "spermatorrhœa," for the term would be applicable only to an almost constant flow of semen from the urethra, and there is no such condition, as is ably pointed out by Dr. Rochet in *Lyon médical* for March 5th. It is altogether probable that the quacks endeavor, and with too much success, to impress their victims with the idea that any involuntary discharge of semen is significant of a disease that they choose to term "spermatorrhœa" or "seminal weakness," whereas we all know that the occasional lascivious dream that culminates in an ejaculation of semen is strictly physiological. It is true that a man who has had gonorrhœa, and supposes himself cured, may lose a drop or two of glairy fluid from the urethra after micturition. It is also true that a like fluid, so far as gross characteristics are concerned, may be pressed out from the prostate during defæcation and escape from the meatus urinarius. But in neither case is it seminal fluid that is lost. Semen never dribbles; it is forced out by ejaculation.

But there is such a thing as the irritable urethra, among the symptoms of which may be undue frequency of involuntary emissions, ejaculations on slight material or emotional excitement of the genitals, and premature discharge of the seminal fluid during coitus. For lack of a better and well known name, we may conveniently speak of this

condition as "spermatorrhœa." M. Rochet properly insists that it is not a pathological entity, but may be dependent on various local diseased conditions or on any one of a number of morbid states of the nervous system. It may often be cured, but only by doing away with the particular cause on which it depends. Its treatment, therefore, requires all the resources of the skilled physician, and it is not to be overcome by any nostrum.

THE TRAUMATIC NEUROSES IN AND OUT OF COURT.

Were it not for the damage suits associated with the traumatic neuroses, the latter would not receive the consideration that they now do as a unique form of clinical phenomena. Every effort to establish cerebrospinal concussion as a distinct and separate disease entity has signally failed, and the attempt to do so is now practically limited to the environments of the court room. Here it will probably continue to be made so long as the pathology of these troubles remains a matter of hypothesis and logical deduction; for in a debatable field two opposing interests are struggling for supremacy and personal gain. The object of one side is to magnify and sharply differentiate the results of railway and other accidents; that of the other side is to belittle and deny the existence of those alleged results. As a matter of fact, these accidents have not been found to produce any form of functional or organic disease that the science of medicine has not long been familiar with. These accidents do provoke vascular and sclerotic changes of all kinds and functional disturbances of various degrees, but the pathology of these troubles and their symptomatology, when sufficiently marked to be detected, are in no sense different from the pathology and symptomatology of the same troubles when provoked by other than traumatic causes.

The traumatic psychoneuroses are to-day recognized to be nothing but hysteria, neurasthenia, and hysteroneurasthenia. Outside of the court room one hears now very little discussion of these traumatic neuroses, and in the textbooks there is absolutely no need of a special chapter upon them except for the discussion of their medicolegal aspect. Aside from the clash of personal interests involved in their consideration in the court room, there are

two influential factors that tend to keep up this medicolegal debate in regard to the traumatic neuroses. One is the court's insistence upon exact physical evidence; the other is the natural preconception, previous training, and dominant conservatism of the legal mind. Under these circumstances, mere opinion, especially when it is new and based upon hypothetical deductions, however expert it may be, is placed at a great disadvantage and usually at its lowest value. This is unfortunate, but under the present system will probably continue to be irremediable.

If every bit of scientific evidence could be made to correspond with the exactness and physical demonstration that ordinary evidence is made to exhibit, scientific expert testimony would not be held in the insignificant light that it too often is now; but one wonders what would become of the law of gravitation, the undulatory theory of light, the atomic theory, the nebular hypothesis, and other great and accepted scientific generalizations in view of such a demand for exact physical evidence. All human knowledge is relative. From the exact facts of mathematics all the way down to the silliest bit of gossip, the evidence rests upon the integrity and reliability of the five senses. Every tyro in physiology, however, knows what that means. And yet, strange to say, the court denominates some of the evidence afforded by these unstable and unreliable senses as exact and other evidence afforded by them as inexact. Five witnesses to a murder are credited with giving exact information; the testimony of five experts in astronomy who declare for the existence of the law of gravitation is looked upon as not sufficiently exact for the ends of justice. The whole scientific world may be united in their opinion of the nature of hysteria, but their testimony in court does not have the weight that the testimony of perhaps an excited and ignorant witness of a burglary has. This is extraordinary, but is probably necessary and inevitable in a system based upon trial by jury. A jury can understand what it is to view a burglary or a murder, even though the witness may have been most excited and his senses most unreliable, but it cannot understand why an hysteric may be blind, anæsthetic, and paralyzed, and yet recover in the twinkling of an eye. On account of his own ignorance and mental incapacity,

the average jurymen projects his shortcomings over on to the witness and regards the lay witness as the possessor of exact knowledge and the scientific expert as the holder of inexact knowledge. Scientific facts directly demonstrable through the five senses do not usually appeal so strongly to the average jurymen as do the demonstrations of the ordinary, commonplace doings of mankind. How much less, then, do the proofs and demonstrations that are based upon logical deductions, hypotheses, and mere opinions appeal to him!

In every case of a person seeking damages for injury the first thing that has to be determined in court is the presence or absence of malingering. The detection of this is sometimes a most difficult matter. The medical expert can often assist in unmasking the clinical simulations, but the detection of simulation is in general a police rather than a medical problem.

Malingering having been excluded from consideration in the case, the nature of the plaintiff's trouble, its ætiology, and its prognosis become purely a matter for the science of medicine to determine. These having been established, it falls to the court, again, to decide the amount of damages such medical testimony should bring to the plaintiff. Thus it is seen that in connection with the traumatic neuroses there are always two distinct and sharply defined lines of investigation—the civil questions of fraud and damages on the one hand and the medical questions of the nature of the plaintiff's trouble on the other. If the court would forbid the mixing up of these two well defined lines of testimony by the opposing counsel, much of the confusion and wrangling over the traumatic neuroses would be abolished.

It goes without saying that an expert commission of medical men is the most proficient to decide the medical character of the case, and that the average jury as now constituted is the least proficient. So true is this, though it is not often so frankly admitted, that the counsel usually employ their best efforts to avoid the full force of such expert opinion by all sorts of forensic tricks and subterfuges in order to keep the final decision of the question wholly in the hands of the uninformed jury. The lawyers put upon the stand nominal and unreliable experts who are expected to take a partisan view;

they pick all kinds of irrelevant flaws in the opposing expert testimony; they struggle to confuse and embarrass the jury in every possible way upon the abstruse scientific questions. One side is not less guilty than the other in this respect, for they both resort to the same tactics when they fear they are losing ground in the eyes of the jury. Even in cases where there is an honest attempt to get at the truth, the moment the balance of favor leans to one side or the other, the losing side instinctively resorts to the usual forensic tactics. In a word, the system is vicious, because it subjects scientific facts and generalizations to debate between two unscientifically prepared opponents, the merits of the debate to be ultimately decided by a still less scientifically prepared body of laymen. The whole trial thus becomes largely, from the medical point of view, a duel of wits before a most unsophisticated body of intelligences. So remote is such a course from the true scientific method of investigation that it is no wonder the system is the source of laughter and disgust to the scientific world. While expert testimony under the present system receives but scant honor in court, the scientific world balances the loss by the amusement which so childish, antiquated, and absurdly unscientific a method of getting at truth affords it.

The legal training is toward conservatism, the scientific toward radicalism. The former is such as to incline its recipient to exaggerate the value of precedent, retrospection, and authority; the latter is such as almost to force one to doubt mere precedent and authority and to look forward constantly to newer ideas and more recent discoveries. Here lurks the secret of the frequent clashes honestly provoked in the court room between the counsel and expert witnesses. Again, the untrained jurymen, both by instinct and to a certain extent by the instruction of the court, is led to look askance upon all evidence that he himself cannot comprehend or perceive directly through his five senses.

Upon all these accounts, it is amazing that expert testimony holds its own as well as it does in our law courts. It speaks volumes for the intrinsic value of such testimony. Until scientific data, directly or indirectly demonstrable and accepted as such the world over, are recognized in our law courts in the way that they are outside of the courts, and are presented and passed upon there

by those whose knowledge and special training render them the most capable of presenting and passing upon them—in a word, until the court room ceases to be an arena of debate and play of wits or a school of instruction upon great and abstruse scientific questions in the presence of and for the final decision of an ignorant and wholly unprepared and confused panel of jurymen, I see no likelihood of improvement in the management of expert testimony or of a cessation of the undignified and useless disputes that now so often rage around the traumatic psychoneuroses.

A traumatic neurosis in court is something more than a traumatic neurosis out of court, not, however, by reason of its medical characteristics. It is hysteria or neurasthenia merely with a damage suit attached to it and all that the latter involves in the way of legal bias, partisan debate, and the instruction of an unscientific body of laymen. It is the latter elements, the legal complications, that are responsible for the unseemly displays that sometimes attend the discussion of these troubles. The dignity of medicine and the positiveness of its knowledge are not disturbed by the legal battles which a vicious system in our law courts allows. The disgrace of expert testimony as it is now engaged rests entirely upon the legal fraternity and their antiquated methods. The nature of the traumatic neuroses has long been explained by the science of medicine. L. HARRISON METTLER.

THE PHYSICIAN IN RECENT FICTION.

What has become of the doctor in this year's fiction? A year ago scarcely a week passed that we did not feel called upon to draw attention to some clever tale either written by a physician or in which a physician was either the hero or the *deus ex machina*. Lawyers and burglars seem to hold the centre of the stage at present; perhaps the doctor is waiting in the wings, preparing for a triumphant reentrance. We are ready to applaud vigorously.

THE X RAY IN THE TREATMENT OF PYORRHOEA ALVEOLARIS.

Our dental friends seem to have met with some success in treating pyorrhœa alveolaris, a very serious affection, by means of the Röntgen ray. The most recent communication on the subject that has come to our notice is by Dr. Elizabeth C. Fields, of Lincoln, Nebraska, published in the

Dental Digest for February. Dr. Fields remarks that her attention was called to the matter by an article by a Dr. Price, published in some dental journal. She reports a case of apparent cure of the disease by means of the rays. She expresses some doubt as to the permanence of the cure, but adds: "Still, there is much to commend this method if it is even as satisfactory as the old, for it is absolutely painless and much easier than the mechanical."

THE EPIDEMIC OF CEREBROSPINAL MENINGITIS.

There are indications that the prevalence of epidemic cerebrospinal meningitis in New York is on the decline, and the indications may properly be interpreted at quite their apparent worth in view of the undoubted tendency to look upon various cases of brief and fatal illness in children as examples of the disease in question without a very searching inquiry into their real nature.

THE LONG ISLAND COLLEGE HOSPITAL.

We are glad to see that this school, one that for many years has stood high in the esteem of the profession, is taking pains to make Spanish-speaking students welcome. It has issued a circular printed in the Spanish language, and we do not doubt that many students from the West Indies and South America will be attracted to the Brooklyn school.

News Items

Society Meetings for the Coming Week:

MONDAY, April 17th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, April 18th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, April 19th.—New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, April 20th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, April 21st.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

SATURDAY, April 22nd.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 8, 1905:

	April 8.		April 1.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	422	13	470	21
Diphtheria and croup	339	27	317	31
Scarlet fever	250	7	224	20
Smallpox	4	..	1	..
Chickenpox	94	..	149	..
Tuberculosis	441	201	413	172
Typhoid fever	26	13	45	6
Cerebrospinal meningitis	191	110	189	131
	1,776	371	1,808	381

Work of the Health Department.—Six million pounds' weight of adulterated and harmful foods was destroyed by the Health Department of New York during the last twelve months.

Vacancy in St. Chrysostom's Dispensary.—The position of physician in charge is vacant in this dispensary, situated at Thirty-ninth Street and Seventh Avenue. Applicants should apply in person or by letter to the Reverend Thomas H. Sill, vicar of St. Chrysostom's Chapel, Thirty-ninth Street and Seventh Avenue.

For a Postgraduate Course in Anatomy.—The trustees of the New York Postgraduate Medical School and Hospital have rented the house at No. 303 East Twenty-first Street, one block from the main building, and will fit it up for instruction in practical anatomy, a contribution for this purpose of \$1,500 a year for two years having been obtained by a member of the faculty.

New York State Medical Association.—The New York county branch of this association will hold its annual meeting on Monday, April 17, 1905, at 8 p. m. An election of officers will be held and the following programme discussed:

Presentation of Clinical Cases or Reports, Pathological Specimens, New Instruments, etc.; papers: Galvanism as a Curative Agent in Nervous Diseases; the Importance of Equipment and Technics, by Dr. W. B. Pritchard; discussion by Dr. George W. Jacoby, Dr. J. J. MacPhee, Dr. W. J. Morton, and Dr. Milton Franklin; Clinical Features and Treatment of Epidemic Cerebrospinal Meningitis, by Dr. Francis Huber; discussion by Dr. Marris Manges, Dr. Harlow Brooks, Dr. Christopher Colles, Dr. Thomas W. Darlington, and Dr. Herman M. Biggs. William Ridgely Stone, M. D., secretary.

American Gastroenterological Association.—The eighth annual meeting of this association will be held at the Academy of Medicine, New York, Monday and Tuesday, April 24 and 25, 1905, when the following papers will be presented:

The president's address, by Dr. S. J. Meltzer, of New York; Recent Advances in the Knowledge of the Movements and Innervation of the Alimentary Canal, by Dr. Walter B. Cannon, of Boston, Mass.; Recent Advances in the Knowledge of the Chemical Processes of Digestion, by Dr. Lafayette B. Mendel, of New Haven, Conn.; Are the Milk Coagulating and the Proteolytic Effects of the Gastric Juice Due to One and the Same or to Two Different Enzymes? by Dr. John C. Hemmeyer, of Baltimore, Md.; The F. A. Hoffmann-Ostwald Method of Determining the Free Hydrochloric Acid of Gastric Juice by Dissociation of Methyl Acetate, by Dr. John C. Hemmeyer, of Baltimore, Md.; On the Determination of the Free Hydrochloric Acid in Gastric Contents by the Physical Method of Hoffmann, with Report of an Unusual Case, by Dr. John P. Sawyer, of Cleveland, Ohio; The Immediate Effect of Biliary Retention on the

Gastric Secretion, by Dr. Julius Friedenwald, of Baltimore, Md.; Neuere Untersuchungen über die Titration der Magensäfte und über die Fermente des Magens, Speziell über das fettspalende Ferment, by Dr. F. Volhard, of Giessen, Germany; Diverticulum of the Esophagus, with Report of Cases, by Dr. William Gerry Morgan, of Washington, D. C.; Further Remarks on Ischochymia and Its Treatment, by Dr. Max Einhorn, of New York; Sarcoma of the Stomach, with the Report of Two Cases, by Dr. Morris Manges, of New York; Two Cases of Epilepsy, Resulting from Gastro-intestinal Disturbance, by Dr. Frank H. Murdoch, of Pittsburgh, Pa.; On the Relations of Some of the Metabolic Diseases to Intestinal Disorders, by Dr. T. B. Fletcher, of Baltimore, Md.; Diagnosis of Gastric Area with Special Reference to Transposition of Viscera, Sling-Stomach and Hour Glass Stomach, with Case Reports, by Dr. A. L. Benedict, of Buffalo, N. Y.; Comparison of the Methods of Lavage with the Siphon Tube and Kuttner Bulbs, by Dr. John P. Sawyer, of Cleveland, Ohio; Occult Blood in Fæces, by Dr. J. Dutton Steele, of Philadelphia, Pa.; A Case of Gastrocolic Fistula, by Dr. J. Kaufmann, of New York; Ætiology and Serum Treatment of Dysentery: (a) by Dr. Simon Flexner, of New York; (b) by Dr. William H. Park, of New York; discussion by Dr. John Henry Huddleston, of New York, and Dr. I. Adler, of New York; Clinical Features and Medical Treatment of the Benign Stenoses of the Pylorus, by Dr. Henry L. Elsner, of Syracuse, N. Y.; Surgical Treatment of the Benign Stenoses of the Pylorus, by Dr. George Emerson Brewer, of New York; discussion by Dr. S. W. Lambert, Dr. Howard Lilienthal, Dr. Edward Quintard, Dr. Joseph A. Blake, and Dr. J. Kaufmann, of New York; On Onomatologia Gastrologica, by Dr. A. Rose, of New York.

PHILADELPHIA.

Personal.—Dr. David L. Edsall has been appointed assistant professor of medicine in the medical department of the University of Pennsylvania.

Wills Hospital observed April 3rd as donation day. The hospital was founded in 1832 for the treatment of the various diseases of the eye. During the past year 13,000 patients were treated in its various clinics.

Bazaar by Methodist Hospital Nurses.—The graduate nurses of the Methodist Episcopal Hospital will hold a bazaar on April 18th and 19th in order to complete the fund of \$10,000 necessary to endow a private room in the hospital. Many novel features have been promised.

The University of Pennsylvania Representatives on the American National Committee of the Fifteenth International Medical Congress who have been appointed by the trustees are Dr. John H. Musser, Dr. Charles H. Frazier, Dr. B. Alexander Randall, Dr. William G. Spiller, and Dr. Horatio C. Wood.

Philadelphia Polyclinic.—During March the following work was done at the Polyclinic Hospital: Patients admitted to house, 109; patients discharged, 89; new patients treated in dispensary, 1,866; total visits to dispensary, 8,964; accident ward, 672. The week ending April 8th was a special week devoted to diseases of the eye. The various lectures and demonstrations were well attended.

College of Physicians.—At the meeting of the College of Physicians held Wednesday, April 5th, Dr. S. Weir Mitchell, Dr. W. W. Keen, and Dr. John S. Billings gave medical reminiscences of the civil war. A portrait of Dr. Horatio C. Wood was presented to the college. The honorary li-

brarian announced the addition of seventy-four volumes to the library during March. Mrs. Harrison Allen, through Dr. Keen, presented the Mutter Museum with a number of surgical instruments which belonged to the late Dr. Harrison Allen. At the conclusion of the meeting an informal reception was held and a light supper was served at the University Club.

Scientific Society Meetings for the Week Ending April 22, 1905.—Monday, April 17th, Medical Jurisprudence Society; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, April 18th, Section on Ophthalmology, College of Physicians; Dermatological Society; Academy of Natural Sciences. Wednesday, April 19th, Philadelphia County Medical Society (business meeting for members only); Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital. Friday, April 21st, University of Pennsylvania Medical Society; American Philosophical Society.

Charitable Bequests.—In adjudicating the estate of James Carlisle, who died on July 17, 1902, Judge Ashman awarded the following amounts: Presbyterian Home for Aged Couples, \$500; Home for Incurables, \$500.

By the will of James Dundas Lippincott, who died recently, the property 1340 Lombard Street is bequeathed to the Visiting Nurses' Society of Philadelphia, to be known as the Alice Lippincott Memorial. The Home for Indigent Widows and Single Women of Philadelphia receives \$5,000.

The Children's Hospital of Philadelphia receives \$5,000 as a memorial to Agnes Dundas Lippincott, mother of the testator. The Episcopal Hospital and Colony Farm receives \$5,000. The Academy of Natural Sciences of Philadelphia receives \$5,000.

Medical Society Programmes.—The following was the programme of the Pathological Society of Philadelphia at its meeting held March 9th:

Dr. A. J. Smith and Dr. B. S. Veeder exhibited specimens of Solenophorus Megacephalus; Dr. H. R. Alburger, Secondary Sarcoma of the Liver, Hypertrophy and Atrophy of the Kidney, Amyloid Disease Due to Pott's Disease; Dr. H. Fox, The Nature of Paratyphoid Fever and Its Closely Allied Infections; Dr. D. Riesman will present a specimen of Ulcerative Endocarditis.

The following was the programme of the Philadelphia Pædiatric Society at its meeting held March 14th:

Dr. Eleanor C. Jones showed a Family of Five Children with Multiple Exostoses; Dr. D. J. Milton Miller, a Case of Chondrodystrophy Fetalis; Dr. Charles W. Burr, a Case of Stuporous Insanity at Puberty; papers: Dr. J. P. Crozer Griffith reported a Fatal Case of Chorea; Dr. R. Max Goeppe, a Case of Necrotic Stomatitis Following Pneumonia and Measles.

The following was the programme of the section in otology and laryngology, College of Physicians, at its meeting, March 15th:

Dr. George M. Marshall, a Case of Clonic Spasm of Laryngeal and Pharyngeal Muscles, following Cranial Injury; Dr. B. Franklin Royer, The Complications and Sequelæ Met with in Laryngeal Diphtheria.

The Health of the City.—During the week ending April 1, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	231	32
Scarlet fever.....	42	2
Chickenpox.....	50	0
Smallpox.....	1	0
Diphtheria.....	52	3
Cerebrospinal meningitis.....	5	4
Measles.....	50	1
Whooping cough.....	13	1
Tuberculosis of the lungs.....	62	58
Pneumonia.....	74	70
Erysipelas.....	12	3

The total mortality was 545, in an estimated population of 1,438,318, corresponding to an annual death rate of 19.70 per 1,000 population. The total infant mortality was 130; 102 under one year and 28 between one and two years. There were 41 still births; 24 males and 17 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 10; puerperal fever, 1; dysentery, 1; diarrhoea and enteritis under two years, 23. The temperatures reported by the United States Weather Bureau have been high; on March 29th the maximum temperature was 79°. The number of cases of typhoid fever reported, 231, was 75 less than the number reported during the previous week. The distribution of the cases is the same as heretofore described in these columns.

Proposed Legislation Concerning Milk Dealers.—A delegation of thirty members of the Philadelphia Milk Exchange went to Harrisburg on March 7th and appeared before the committees of public health and sanitation of the house and senate with the following requests: (1) That the food adulteration bill be amended to exempt milk and cream; (2) that a bill prepared by the exchange making special provisions against the adulteration of milk be enacted into a law; and (3) that the bill giving the Bureau of Health of Philadelphia arbitrary power over the milk dealers and compelling them to take out licenses subject to the rules of that bureau be defeated. The president of the Philadelphia Milk Exchange pointed out that his organization represents the handlers of the milk product of 8,000 farms, and that they are already under the jurisdiction of the Bureau of Health of Philadelphia, the Dairy and Food Commissioner, and the State Live Stock Sanitary Commission and subject to twenty-six State laws and six city ordinances. He feels as though his organization is already surrounded by enough restrictions. The bill which is now before the Legislature which will make the milk dealers take out licenses is objected to because it will impose an additional tax on the milk dealer who already pays a personal property tax, a property tax (if he has any property), and a mercantile tax. Its worst feature, however, is the arbitrary power it gives to the health authorities. It was pointed out during the session of the committees that only 8 per cent. of the samples of milk taken throughout the State were not absolutely pure, and that in the city of Philadelphia only 1 per cent. was not up to the standard. The

new bill which the milk exchange proposes to offer prohibits all forms of adulterants and all chemical preservatives; but provides that no person shall be liable to penalties if it can be shown that he could not, with reasonable diligence, have ascertained that the milk or cream was adulterated, impure, unwholesome, or preserved. It further provides that when a sample of milk or cream is taken for analysis one half shall be returned to the dealer with notice that the other half is to be analyzed.

GENERAL.

Change of Address.—Dr. W. W. Nelson, to Fairmount, Va.

The Kansas City Hospital Training School for Nurses has recently graduated the following young women: Mrs. Elizabeth Wayne Canfield, Miss Mary Pearl Hetrick, Miss Elva Maybeth Patton, Miss Nellie Holmes, Miss Lulu Hunt, Miss Emma Delia Fandell, Miss Josephine Reidy.

The Medical Association of the District of Columbia held its semiannual meeting April 4th at 8 p. m. Officers were elected for the ensuing year as follows: President, Dr. Clifton Mayfield; vice-presidents, Dr. D. Olin Leech, Dr. G. Brown Miller; secretary, Dr. D. W. Prentiss; treasurer, Dr. Frank Leech.

Johns Hopkins University.—Dr. William S. Thayer, who was elected to the chair of clinical medicine in the Johns Hopkins Medical School on April 3rd, has returned to Baltimore from Richmond. He will assume his new duties at the opening of the next scholastic year. With Dr. Llewellys Franklin Barker he divides the duties of the position held by Dr. William Osler.

Beaufort County, S. C., Medical Association.—This association was organized on March 29th with the following officers: President, Dr. H. M. Stuart, Sr.; vice-president, Dr. J. B. Thompson; chairman of county board, Dr. C. M. Guffin; secretary and treasurer and delegate to the State Association, Dr. M. G. Elliott; censors, Dr. M. B. Cope and Dr. W. R. Ewe.

The Banquet to Dr. Osler.—Dr. Joseph Ransohoff, Dr. C. A. L. Reed, and Dr. Fred Forchheimer, of Cincinnati, have taken great interest in the arrangements for the banquet to be given Dr. William Osler, of Johns Hopkins University of Baltimore, on his departure from America. Within the last few days correspondence has been had with many of the leading physicians in the country, who have responded enthusiastically to do honor to their colleague. The banquet will be held in the Waldorf-Astoria Hotel, in New York city, on May 2nd, as stated in a recent issue of this Journal.

Medical College of South Carolina.—The following graduates received their diplomas on April 5th:

Edwin Marshall Allen, of Florence; Charles Pinckney Bull, Jr., of Charleston; Zophar M. Bardin, of Charleston; Robert Black, of Bamberg; Edward M. Boykin, of Camden; E. M. Carson, of Sumter; James E. Daniel, of Charleston; J. D. Eady, of Johnsonville; O. D. Hammond, of Blackville;

Eugene L. Jagar, of Charleston; J. Martin Klink, of Charleston; Allen J. Jervey, of Charleston; Oscar LaBorde, of Columbia; R. E. Mathias, of Irme; McMillian K. Mazyck, of Charleston; J. C. Moore, of Lake City; Samuel A. Morrall, of Edgefield; W. Cyril O'Driscoll, of Charleston; E. W. Simons, of Summerville; A. C. Smith, of Glenn Springs; J. Lewis Smith, of Williston; Charles A. Speissegger, of Charleston; Elias Doar Tupper, of Summerville; John F. Wilson, of Dovesville; J. LaBruce Ward, of Georgetown; William Anderson Woodruff, of Pacolet; and H. H. Workman, of Woodruff.

Medical Graduates of Queen's Medical College, Kingston, Canada.—The following received their diplomas from this institution on April 4th:

H. J. Bennett, of Gananoque; Joseph Chant, of Chantry; J. H. Code, of Kingston; E. C. Consitt, of Perth; J. A. Corrigan, of Kingston; W. H. Dudley, of Pembroke; J. G. Dwyer, of Kingston; J. Y. Ferguson, of Renfrew; E. A. Gaudet, of Moncton, N. B.; A. W. Girvin, of Stella; M. E. Grimshaw, of Wolfe Island; R. W. Halladay, of Elgin; J. T. Hogan, of Perth; J. M. Hourigan, of Smith's Falls; A. H. Hunt, of Bridgetown, Barbadoes; M. Leses, of Kingston; M. Locke, of Brinston's Corners; T. D. MacGillivray, of Kingston; D. L. MacKinnon, of Lake Ainslie, N. S.; A. D. MacMillan, of Finch, Ont.; A. E. Mahood, of Kingston; P. A. McIntosh, of Dundela; C. R. Moxley, of Kingston; G. R. Randall, of Seely's Bay; M. E. Reynolds, of Athens; R. G. Reid, of Kingston; J. J. Robb, of Battersea; W. M. Robb, of Lunenburg; B. A. Smith, of Hartington; W. A. Smith, of Kingston; J. F. Sparks, of Kingston; A. C. Spooner, of Latimer; E. W. Sproule, of Harrowsmith; R. W. Tennant, of Belleville; John Turnbull, of Lowville; C. M. Wagar, of Enterprise; F. R. W. Warren, of Balderston; J. W. Warren, of Harper; H. J. Williamson, of Kingston.

American Medicopsychological Association.—

The sixty-first annual meeting of this association will be held at San Antonio, Texas, April 18, 19, 20, and 21, 1905. The following papers will be read:

The Unity of the Manifestations of Insanity, by Dr. H. A. Tomlinson, of St. Peter, Minn.; Perils of Psychiatry, by Dr. W. A. Gordon, of Winnebago, Wis.; Neuropsychic Asthenia and Its Psychiatric Aspects, by Dr. Charles H. Hughes, of St. Louis, Mo.; The Prevention of Insanity in Its Incubation by the General Practitioner, by Dr. J. T. W. Rowe, of Ward's Island, N. Y.; Final Report Upon the Relation of Insanity to Cardiac Diseases, by Dr. Arthur McGugan, of Denver, Colo.; Expert Testimony on the Doctor in Court, by Dr. D. R. Wallace, of Waco, Texas; Korsakoff's Psychosis, by Dr. A. W. Hurd, of Buffalo, N. Y.; The Therapeutic and Medicolegal Features of Drug Addictions, by Dr. George P. Sprague, of Lexington, Ky.; Melancholia, the Psychical Expression of Organic Fear, by Dr. J. W. Wherry, of Clarinda, Ia.; Psychoses of Anæmia, by Dr. Frank P. Norbury, of Jacksonville, Ill.; Mysophobia, with Report of Case, by Dr. John Punton, of Kansas City, Mo.; Cholemia; Its Relations to Insanity, by Dr. R. J. Preston, of Marion, Va.; A Case of Huntington's Chorea, by Dr. Harry W. Miller, of Taunton, Mass.; Nature of Practice in Neurology, by Dr. Arthur McGugan, of Denver, Col.; The Liver and Its Relations to Mental and Nervous Diseases, by Dr. Charles G. Hill, of Baltimore, Md.; As to Surgery for the Relief of the Insane Condition, by Dr. M. E. Witte, of Clarinda, Ia.; Observations on Some Recent Surgical Cases in the Manhattan State Hospital, East, by Dr. John R. Knapp, of Ward's Island, N. Y.; A Preliminary Report of the Gynecological Surgery in the Manhattan State Hospital, West, by Dr. LeRoy Broun, of New York city; Some Observations on the Relations of the Gastrointestinal Tract to Nervous and Mental Diseases, by Dr. Robert C. Kemp, of New York city; Tuberculosis Among the Insane, by Dr. C. Floyd Haviland, of Ward's Island, N. Y.; Masked Epilepsy, by Dr. Gershon H. Hill, of Des Moines, Ia.; Epilepsy as a Symptom, by Dr. Everett Flood, of Palmer, Mass.; Clinical Notes on Dementia Paralytica, by Dr. E. C. Dent, of Ward's Island, N. Y.

A Judicial Decision Interesting to Surgeons.—Hospital surgeons attending "emergency" cases

cannot subsequently recover payment from the patients is the substance of Judge Sutherland's decision of the case of Dr. N. M. Collins against John Meyer. Albert Meyer was injured in a factory accident and taken to the Homeopathic Hospital, of Rochester, N. Y. His father, the defendant, said he agreed with the hospital for care of the boy, not with Dr. Collins personally. The Municipal Court found against the physician, and the County Court has sustained that view of the general proposition involved. The learned judge said *inter alia*:

There is a statute which is quite suggestive, being chapter 893, L. 1896. It reads as follows:

"In any city . . . of this State wherein exists or is hereafter created an ambulance service, supported wholly or partly at public expense, or which is wholly or partly under the care, management, or control of public authority, no person in charge of the ambulance, hospital, or house or place of reception for the sick or injured shall refuse, in answer to a call or demand for the ambulance and which call has been answered by the attendants of the ambulance, to take such person or persons for whom the call may be made, to the hospital or place of reception for the sick or injured from which the ambulance came, for examination or treatment by the house authorities of the said hospital or place of reception for the sick or injured. Any person or persons neglecting or refusing to comply with the provisions of this act shall be guilty of a misdemeanor. This act shall apply to the drivers of or physician or physicians in charge of such ambulance."

Considering this act and the purpose for which the ambulance service is instituted in the city of Rochester, it seems that when an emergency case is brought to a hospital in an ambulance through a public call, the hospital is expected to furnish for such patient its house or staff physicians' immediate care, of a surgical or medical nature, which is at once necessary, until arrangements can be made for the further care of the case; and unless there is a promise to pay or some special arrangement, the first treatment in such emergency cases by the house physician or member of the staff whose duty as such it is to attend thereon, does not entitle him to claim compensation as he would in an ordinary case.

In this case the conversation between the superintendent of the hospital and the defendant, to the effect that the expense would be \$7.00 a week, is consistent with the contention that inasmuch as this was an emergency case, taken to this hospital because the accident occurred within that hospital district, it was not expected that the services of the physician in reducing the fracture were to be paid for by the boy's father.

Growth of Manitoba Medical College.—The needs of the Canadian Northwest and the growth of the population there are shown in the fact that the first Manitoba Medical College erected is no longer able to accommodate the yearly increasing student classes who assemble within its portals, nor is its equipment adequate properly to teach modern discoveries in surgery, and therefore the Manitoba college has found it imperative to build a new and larger college, in order not only to provide more room, but in order that the students may have the fullest advantage of the latest and best means for acquiring knowledge. The plans have now been completed, and the contract for the erection of the building will be let forthwith. The site of this college is on Emily Street, convenient to the General Hospital. Its structure will be three stories high above the basement

walls, and built of solid brick and stone. In the basement there will be a lounging room for the students, preserving room, toilet room, etc., the remaining space being used for ventilation apparatus, boiler and fuel rooms, and janitor's apartments. On the ground floor there is an office for the secretary, a room for the faculty, library, museum, spare room, storeroom, and toilet room. The first floor is divided into two lecture rooms, one having a seating capacity for 90 and the other for 130 students. On the second floor there is a dissecting room and prosecuting room. The floors throughout are of concrete on expanded metal, while the walls, staircase, and elevator walls are of red pressed brick. The stair frame is of iron with slate treads. The building will be heated with steam. The size of the structure is 60 by 100 feet.

Health in Michigan During March, 1905.—Reports to the State Board of Health, by representative physicians in active general practice, in different parts of the State, show the diseases which caused the most sickness in Michigan, during the month of March (five weeks ending April 1st), 1905, to have been as follows:

Diseases arranged in order of greatest prevalence in this month:	Mar., 1905.	Number of reports received for this month		Per cent of reports stating presence of disease.	Average for March, all 10 years, 1895-04.	Averages for March, 1895-04.
		296	296			
Rheumatism	68	67	69	62	62	62
Neuralgia	67	61	64	56	56	56
Indiuenza	63	72	73	49	49	49
Bronchitis	55	60	63	51	51	51
Anginalitis	49	56	54	45	45	45
Gonorrhea	30	28	28	25	25	25
Syphilis	12	11	10	9	9	9
Diarrhea	22	20	21	35	35	35
Consumption, pulmonary	22	20	24	23	23	23
Cancer	18	25	18	18	18	18
Inflammation of kidney	17	16	22	19	19	19
Pleuritis	15	20	23	16	16	16
Scarlet fever	14	9	13	11	11	11
Pneumonia	13	22	33	18	18	18
Smallpox	12	11	5	4	4	4
Typhoid fever—Enteric	7	7	6	12	12	12
Typhoid fever—Typhomalarial	0.7	2	0.0	2	2	2
Erysipelas	7	10	13	11	11	11
Intermittent fever	7	11	10	10	10	10
Inflammation of bowels	6	6	8	10	10	10
Measles	5	5	14	10	10	10
Whooping cough	4	3	5	6	6	6
Cholera morbus	3	3	3	10	10	10
Remittent fever	3	2	8	12	12	12
Diphtheria	3	4	4	5	5	5
Dysentery	3	0.4	3	10	10	10
Inflammation of brain	0.7	0.8	2	2	2	2
Meningitis	0.7	0.4	2	1	1	1
Pyoperual fever	0	2	3	2	2	2
Membranous croup	0	0	0.8	0.7	0.7	0.7
Cholera infantum	0	0	0.6	0.7	0.7	0.7

At the State Capitol for the month of March 1905, compared with the average for March in the ten years, 1895-1904, bi-daily observations show the prevailing direction of the wind to have been northeast and southeast, instead of northwest, the velocity 1.5 miles per hour less, the average temperature 4.62 degrees higher, the average daily range of temperature 2.48 degrees greater, the precipitation .16 of an inch less, the average daily range of atmospheric pressure .063 of an inch less, the absolute and relative humidity more, the day and night ozone less, and the depth of water in the observation well 12 inches less (the well was dry). For the month of March, 1905, compared with the average for March in the ten years, 1895-1904, smallpox was more than usually prevalent; and pleuritis, pneumonia, erysipelas, intermittent fever, inflammation of bowels, measles, remittent fever, diphtheria, inflammation of brain, and meningitis was less than usually prevalent.

THE MOST DANGEROUS COMMUNICABLE DISEASES.

Including reports by regular observers and others, meningitis was reported present in Michigan during the month of March, 1905, at 13 places; whooping cough, at 18 places;

diphtheria, at 59 places; measles, at 79 places; typhoid fever, at 95 places; smallpox, at 101 places; scarlet fever, at 133 places; pneumonia, at 144 places; and consumption, at 221 places. Reports from all sources show meningitis reported present at 6 places more; whooping cough, at 2 places more; diphtheria, at 5 places less; measles, at 11 places more; typhoid fever, at 2 places more; smallpox, at 5 places less; scarlet fever, at 28 places more; pneumonia, at 2 places more; and consumption, at 30 places less, in the month of March, 1905, than in the preceding month. Frank W. Shumway, secretary.

Statement of Mortality in Chicago for the Week Ending April 8, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	April 8, 1905.	April 1, 1905.	April 9, 1904.
Total deaths, all causes	512	577	562
Annual death rate per 1,000	15.40	15.11	15.21
By sexes—			
Males	304	323	319
Females	208	254	243
By ages—			
Under 1 year	104	134	97
Between 1 and 5 years	57	54	31
Over 60 years	90	122	130
Important causes of death—			
Acute intestinal diseases	22	30	30
Apoplexy	15	17	16
Bright's disease	44	56	42
Bronchitis	14	21	21
Consumption	67	69	65
Cancer	22	21	14
Convulsions	8	19	12
Diphtheria	9	6	4
Heart diseases	37	43	49
Indiuenza	2	4	3
Measles	16	11	1
Nervous diseases	16	20	17
Pneumonia	70	106	127
Scarlet fever	1	1	2
Smallpox	1	1	1
Suicide	9	11	6
Typhoid fever	4	6	5
Violence (other than suicide)	27	25	27
Whooping cough	14	10	6
All other causes	113	98	120

Measles and whooping cough are the two diseases giving the health department most concern at present. Notwithstanding the frequent warnings of the *Bulletin* they have been allowed to spread through sheer carelessness of parents and others until they are now well nigh epidemic. As recently pointed out these two scourges of childhood are as important to the student of preventive medicine as scarlet fever, or diphtheria, or even smallpox. Their prevention presents peculiar difficulties. For instance, the indifference of the public, shared by the profession, the failure of many patients to see a physician, their contagiousness at a time when they cannot be recognized, and the variable length of time that they remain virulent. They are officially classed as dangerous to the public health, but are dealt with more leniently than some of the communicable diseases, because of the prevalent apathy toward their spread. There is not sufficient unanimity among doctors as to the necessity of preventing these diseases. The schools offer the best opportunity for their spread. There should be a change of sentiment among parents and teachers in regard to colds. In catarrhal diseases of all kinds affecting the upper air tracts the child should be excluded from the school. The early communicability of measles and whooping cough must never be overlooked. Health officials and physicians must work together to isolate these diseases until the symptoms of the sequelæ and complications as well as of the primary disease are well passed.

Pith of Current Literature

PRESSE MEDICALE.

March 4, 1905.

1. Scopolamine as a General Anæsthetic in Surgery,
By F. TERRIER and A. DESJARDINS.
2. Mechanism of Epiphyseal Detachment, By A. BROCA.

1. **Scopolamine as a General Anæsthetic.**—Terrier and Desjardins give as the advantages of this method of inducing general anæsthesia absence of operative apprehension and of the excitation which precedes muscular relaxation, absolute loss of consciousness and of memory, a prolonged sleep (eight or ten hours), absence of vomiting, nausea, or malaise, quietude of the patient, who sleeps the following night without the aid of morphine, non-production of albuminuria, that it can be used in cases of tuberculosis, heart disease, and cachexia, and that the anæsthesia persists for a long time after the patients have awakened from the sleep. The disadvantages given are the uncertainty of its action, one patient going to sleep quietly and completely, another with difficulty and incompletely so that a certain quantity of chloroform needs to be given in addition. Second, a vasodilatation which renders very careful hæmostasis necessary. Third, a contraction of the abdominal walls which contraindicates the use of this method in abdominal operations. As the use of scopolamine for general anæsthesia has been denounced by some as dangerous to life, these authors analyze twelve fatal cases in which this drug was employed, reported by different surgeons, and try to show that death was due in each to other causes and not to the anæsthetic.

2. **Epiphyseal Detachment.**—Broca presents an interesting study of the mechanics of this traumatic lesion so often met with during the period of growth of the long bones. The article is illustrated by forty-five plates, to which reference is so constantly made that an abstract is difficult. In general, it may be said that two mechanisms are possible; the epiphysis may be detached by a directly applied violence, or by ligamentous traction.

March 8, 1905.

1. The Rôle of the Œsophagosally Reflex in Deglutition,
By Professor H. ROGER.
2. Iliac and Pelvic Glandular Phlegmon Following Lymphangitis of the Lower Extremity,
By M. SAVARIAUD.
3. History of a Palpebral Epithelioma,
By A. TROUSSEAU.

1. **Œsophagosally Reflex.**—From experiments on a dog Roger learned that excitation of the œsophagus stimulates the functional activity of the salivary and buccal glands. The abundant secretion thus produced stimulates the pharynx which calls into play œsophageal contractions.

2. **Iliac and Pelvic Glandular Phlegmon.**—Savariaud reports three cases of this nature, and draws the following conclusions:

1. An abscess of the iliac fossa or of the pelvis

frequently follows lymphangitis of the lower extremity.

II. Suppuration of the external or internal iliac glands is always preceded by inflammation and suppuration of the inguinal glands, which form the first focus of lymphangitic infection.

III. The seat of the retroperitoneal collection is sometimes in the iliac fossa above the crural arch, sometimes in the prevesical space behind the rectus. The development of the abscess is accompanied by frequency of micturition from irritation and compression of the bladder.

3. **Palpebral Epithelioma.**—Trousseau presents the history of a case of epithelioma of the lid. It was removed, recurred, was treated with the x ray without benefit, and finally an extensive operation was performed to remove all the diseased tissue. The author feels confident in the belief that this last operation will prove curative.

March 11, 1905.

Confined Air and Tuberculosis,

By RAOUL BRUNON.

Confined Air and Tuberculosis.—Brunon protests against the fear of air, aerophobia, which he says has possessed all the French people. He cites cases to show the effect of living in a closed room and then in the open air, and pleads for a more common habit of keeping the windows of the sleeping room open at night.

March 15, 1905.

The Struggle Against Ankylostomiasis in Germany,

By EDOUARD FUSTER.

Ankylostomiasis.—Fuster presents a table which shows that between the years 1896 and 1902 the proportion of this disease had increased among the miners of Rhenish Westphalia from 6.4 per mille to 52.9 per mille. This rapid increase attracted attention and caused the institution of measures intended to combat the disease. These measures may be divided into two classes, those devoted to rendering the mine hygienic and those directed to the health and habits of the personnel. The hygienic measures in the mines consisted in the establishment of dressing rooms, lavatories, and impermeable, covered, and movable closets, the exclusive use of which was rigidly enforced, and in the use of disinfectants. The measures directed to the personnel consisted in the examination of all workmen for the parasites and the refusal to allow them to work unless they had certificates stating that they were free from the disease. In one mine twenty per cent. of the workmen were found to be infected. The enforcement of these rules was carried out against great opposition and with much difficulty. The daily press raised a continuous howl of protest both against the medical treatment and the loss of wages which was occasioned. The workmen objected to paying the cost of the certificate of examination, an expense which was borne by some of the mines, but not by the majority. Most serious perhaps was the fact that among the workmen the treatment itself of this disease is considered a calamity. Legends are current which have convinced them of the evils which await the unfortunate one who enters the hospital to take "the great, black pills"

of extract of filix mas. But in spite of all these difficulties which have been encountered the system has been persisted in, and in the autumn of 1904 had resulted in a great diminution of the disease.

SEMAINE MEDICALE.

March 8, 1905.

1. Cure of Myxœdema by Thyroid Grafting,
By Professor H. CRISTIANI.
2. Provisory and Preventive Hæmostasis in Scapulohumeral and Coxofemoral Disarticulations and in Amputations of the Upper Limbs, By E. ESTOR.

1. **Cure of Myxœdema by Thyroid Grafting.**—Cristiani reports the case of a woman, 23 years old, on whom thyroidectomy had been performed and who was suffering from severe symptoms of myxœdema. Treatment by ingestion of the liquid extract of the thyroid gland was first instituted and a considerable amelioration of the symptoms obtained, but it was impossible by this means to cause the entire myxœdematous tumefaction to disappear. Finally tissue taken from a healthy thyroid was introduced subcutaneously through four incisions, three grafts being placed in one incision, four in all the others. The result was excellent.

2. **Hæmostasis in Disarticulations and Amputations.**—Estor describes in a well illustrated article the apparatus he employs to prevent hæmorrhage when performing the operations named in the title.

ZENTRALBLATT FUER CHIRURGIE.

February 18, 1905.

1. The Technics of Plaster of Paris Jackets,
By MAX HAUDEK.
 2. Intestinal Obstruction as a Late Result of Appendicitis,
By V. SUBBOTITSCH.
2. **Intestinal Obstruction.**—Subbotitsch reports the case of a young man of twenty years of age who suffered from intestinal obstruction ten years after an attack of appendicitis. It was caused by a strangulation of a coil of small intestine by a band arising in the region of the appendix and extending to the root of the mesentery of the small intestine.

ZENTRALBLATT FUER GYNAEKOLOGIE.

February 18, 1905.

1. Voluntary Production of Brachy- and Dolichocephaly of the Fœtal Head,
By G. WALCHER.
 2. The Bacillus Aerogenes Capsulatus in Puerperal Fever,
By H. M. LITTLE.
1. **Brachycephaly and Dolichocephaly.**—Walcher has made the interesting observation that one can influence the shape of the newly born child by maintaining certain positions. The infants which lie constantly on the occiput, become brachycephalic, those which lie on the side, dolichocephalic. Walcher says that this observation has a decided influence not only upon obstetric practice, but upon anthropological facts as well.
2. **Bacillus Aerogenes Capsulatus.**—Little has found this bacillus in ten cases of puerperal fever, nine times in pus from the uterus, once in a mammary abscess. In two cases it appeared alone, in eight associated with other bacteria (streptococci, staphylococci, gonococci). Little

observes a striking similarity between the gas bacillus and Pasteur's "septic vibrio." He also regards the gas bacillus as identical with the bacillus perfringens described by French authors.

ZENTRALBLATT FUER INNERE MEDIZIN

February 11, 1905.

1. Dyspnœa in Pneumothorax,
By L. HOFBAUER.
1. **Dyspnœa in Pneumothorax.**—Hofbauer says that in uncomplicated pneumothorax a pure expiratory dyspnœa is observed. In two fresh cases he has noted that while inspiration is entirely normal, the expiration is longer than normal, the chest is flattened and the auxiliary muscles of expiration are called into use. After the pneumothorax has lasted for some time inspiration becomes longer and more difficult, probably due to secondary changes in the lungs. At this stage the expiratory dyspnœa is not so apt to be called to the attention. Sauerbruch explains the dyspnœa of this condition by insufficient oxidation and consequent overloading of the blood with carbonic dioxide gas. The dyspnœa attendant upon mitral stenosis may be differentiated from that of pneumothorax by the fact that the expiration in the former is longer, but not so frequent, in the latter it is shorter and quicker.

February 18, 1905.

1. Lævulosuria and Diabetes Mellitus,
By G. GRAUL.
1. **Lævulosuria and Diabetes Mellitus.**—Graul says that there is an alimentary lævulosuria corresponding to alimentary glycosuria. If 100 grammes of grape sugar are taken on an empty stomach, they are not entirely converted in the intestinal tract. The condition is seen most frequently in those suffering from hepatic disease. The author narrates a case of a man with diabetes mellitus who also presented a lævulosuria, and in whom the liver was palpably enlarged and hard. When this patient took wine freely, lævulose could be found in the urine. This the author ascribes to disturbed function of the liver.

BERLINER KLINISCHE WOCHENSCHRIFT.

February 20, 1905.

1. A Case of Paralysis from Fright, By E. VON LEYDEN.
 2. Clinical Use of Streptococcus Serum, By F. MEYER.
 3. Dialyzed Diphtheria Toxines, By P. H. ROEMER.
 4. A New Case of Intrauterine Skeletonization,
By A. HIRSCHBERG.
 5. A Case of Congenital Pulmonary Stenosis, with Remarks on the Diagnosis of an Open Botallo's Duct,
By G. ARNHEIM.
 6. The Disinfecting Power of "Grisein,"
By E. FRIEDBERGER and W. OETTINGER.
 7. Local Anæsthetics and Analgetics, By G. FINDER.
 8. Treatment of Trachoma with Radium, By H. COHN.
2. **Clinical Use of Streptococcus Serum.**—Meyer used a serum derived from human infections prophylactically to avert erysipelas and scarlatina, and curatively in cases of sepsis. Improvement was noted in cases of angina with severe local and general symptoms and septic cases of diphtheria improved after simultaneous injections of diphtheria antitoxine. Severe cases of erysipelas likewise improved. Scarlet fever

was favorably influenced by the serum in so far as the fever and the general symptoms were concerned. In cases of puerperal sepsis it was of greatest use in puerperal endometritis. The use of the serum is contraindicated in cases in which vital organs are affected, such as ulcerative endocarditis, mixed tuberculous infections, and acute articular rheumatism.

4. Intrauterine Skeletonization.—Hirschberg reports such a case in a multipara. A four months' fetus became skeletonized, the bones being removed piecemeal from the uterus. The author regards the process as one of maceration rather than one due to putrefaction.

6. Griserin.—Friedberger and Oettinger have made numerous experiments to determine the internal disinfecting power of griserin. The experiments were made with special reference to tuberculosis and the drug was given in large doses. As far as the disease was concerned, all the results were negative, so that the claims for it as a powerful and harmless internal disinfectant—at least, so far as tuberculosis is concerned—must be disregarded.

7. Local Anæsthetics.—Finder recommends for submucous nasal anæsthesia, two c.c. of a one half per cent. solution of cocaine, to which four drops of adrenalin are added. In cases in which the contractile power of cocaine is not desired, he has found yohimbin (a one per cent. solution) useful. The treatment of ozæna seems to be enhanced by interstitial paraffin injections. The author remarks that patients with ozæna seem to be subject to tuberculosis.

February 27, 1905.

1. Isoform and Its Action in the Organism,

By F. ROCHMANN.

2. The Nature of the Hay Fever Poison and Its Specific Antitoxine,

By C. PRAUSNITZ.

3. Neumann's Orcin Reaction for the Determination of Sugar in the Urine,

By G. MANN.

4. Bismuth Poisoning,

By W. MAHNE.

5. Permanent Results After Bloodless Reduction of Congenital Dislocation of the Hip,

By G. JOACHIMSTHAL.

6. Recent Work on the Bacteria of the Tubercle Bacillus Group,

By KUTSCHER.

1. Isoform.—Rochmann describes isoform as a colorless, crystalline substance, not poisonous, and can be taken in doses of from two to four grammes daily. It is said to have an antiseptic action in the intestines, but too great stress is not to be laid upon this. It is, however, an excellent antiseptic for surgical purposes.

2. Hay Fever.—Prausnitz says that Dunbar's work has proven beyond doubt that hay fever is due to the pollen of graminaceæ, which float in the air in enormous quantities during the hay fever season. The toxine is probably of proteid character. It is likely that the antitoxine of Dunbar acts by causing an actual diminution of the toxins. The practical results of the use of the serum are excellent.

3. The Orcin Reaction.—Mann has used Neumann's test in many different sugar solutions. In the urine of diabetics he obtained a more decided reaction for dextrose than by Trommer's or Nylander's tests. It gives a reaction for levulose as well. There is one disadvantage in that albuminous urines do not always give a reliable test for dextrose. Urates and phosphates, however, do not seem to disturb the test.

4. Bismuth Poisoning.—Mahne reports the case of a delicate woman who was treated with a ten per cent. bismuth salve for a burn. After a few weeks she began to show signs of bismuth poisoning and a nephritis. The case ended fatally. At the autopsy, the mucous membrane of the entire colon was found to be stained black. The cause of the poisoning in this case is ascribed by the author to the extensive areas on the body to which the salve was applied.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

February 19, 1905.

1. The Electroactivity of the Human Body,

By G. GARIBALDI and F. MARIANI.

2. Atheroma from Adrenalin and Atheroma in General,

By NICOLÒ MARINI.

3. Some Notes on the Gastroenteric Infections in Nurslings,

By VIRGLIO MAGGIONI.

4. The Ætiology of Little's Disease,

By ORESTE BROGLIO.

5. Contribution on Diverticular Vesical Herniæ,

By ALDO CERNEZZI.

6. An Apparatus for the Retention of Habitual Dislocations of the Shoulder,

By GIUSEPPE CAJOZZO.

7. A Case of Internal Metrorrhagia,

By GIOVANNI GENNARI.

8. Albargin,

By FRANCESCO GIRARDI.

1. Electric Resistance of the Human Body.—Garibaldi and Mariani found that the resistance of the human body to electric currents passing from one hand to the other was between twenty and twenty-five ohms. The hands were immersed in salt solution at a temperature which was constantly 25° C., and the same surface of skin was always immersed. A very sensitive galvanometer was used to measure the current, and the tension used was about 2.20 volts. The resistance did not differ much when the patient's foot was immersed, instead of the opposite hand. In febrile patients the resistance diminished somewhat, but this was not constant. The resistance differed to the extent of eight or ten thousand ohms in different individuals. It differed to the extent of about ten per cent., according to the temperature of the surface exposed, and varied from seventeen thousand ohms in children to twenty-seven thousand in adults. From day to day it differed to the extent of twelve or fifteen per cent. in the same person. These variations are such that the measurement of the resistance of the body to electricity cannot, in the author's opinion, be made use of in pathology.

2. Adrenalin and Atheroma.—Recent studies on adrenalin have shown that eight doses injected into rabbits give rise at times to dilatation of the left ventricle, and to atheromatous patches in the aorta. Twenty doses produce a hypertrophy of

the ventricle and diffuse atheroma of the whole thoracic aorta, and ultimately aortic aneurysm (Josué). Marini does not believe that this atheroma is caused by the local irritant action of adrenalin on the wall of the artery. This is impossible, as the drug passes through the whole of the circulation without elsewhere irritating. It may be that the mere increase of tension which adrenalin produces gives rise to atheroma. Martin offers the theory that atheroma results from a sclerosis of the vasa vasorum feeding the arterial walls. The author inclines to the belief that hypertension is the cause of the malnutrition, and of the consequent atheroma in the arteries, both in adrenalin atheroma and in "clinical atheroma." In the latter the hypertension is due to toxic substances in the blood.

RIFORMA MEDICA.

February 25, 1905.

1. A Case of Diplococcic Septicæmia, By E. TEDESCHI.
2. A Case of Congenital Anomaly of the Heart (*To be continued*), By F. SICURIANI.
3. A Case of Hemiplegia in Pneumonia (*Concluded*), By CARLO FEDELI.
4. Surgical Intervention for Cirrhosis with Ascites (*III. Conclusion*), By ORESTE CIGNOZZI.
5. The Biology of Certain Anaerobes, and an Easy Method of Growing Them in Cultures (*III. Conclusion*), By GIULIO TAROZZI.

1. **Pneumococæmia.**—Tedeschi, of Genoa, adds a case to the collection of reports of generalized pneumococcus infection which appeared since Bozzolo first spoke of "pneumonia without any pneumonia." The patient was a girl aged nineteen years, who was first seized with what appeared to be an attack of acute articular rheumatism, except that salicylates did not affect the symptoms. Afterward the patient developed effusions and other inflammatory signs in the various large serous sacs, including the pleura and the peritonæum. The intraserous effusions were serofibrinous in character, and were rapidly absorbed. A noteworthy feature was the mildness of the general symptoms, and the absence of local symptoms and the normal or almost normal temperature. Pneumococci were found in the blood, the serous cavities, and the pharynx. The organs which are known to be especially predisposed to pneumococcus infection—i. e., the lungs, escaped in this case. The author thinks that the pharynx was the original port of entry, and that the rheumatic symptoms were also due to the pneumococcus which was found in the blood.

4. **Surgical Treatment of Ascites.**—Cignozzi concludes that surgical intervention is justified, and is apt to give good results in cases of ascites due to portal stenosis induced through various mechanical causes, such as pressure of enlarged glands, of cicatrices, of periphlebitis, endophlebitis, etc. On the other hand, in cirrhosis due to alcoholism, etc., in which the lesions are of the atrophic type, the type of Laennec, etc., there is less chance of a good result by artificial anastomosis of veins, and the mortality of the operation is far greater. In such cases the operation should be performed early, if at all, i. e., when the liver is still functionally active.

Severe hæmatemesis and enterorrhagia demand surgical interference. More encouraging results may be attained in hypertrophic cirrhosis, because the ascites in this form is apt to be mechanical in origin. Good results are obtainable with surgical treatment in cardiac cirrhoses, as well as in the infectious forms (Budd's and Banti's types), but in the latter the laparotomy assists the omental fixation in producing the desired effects. In acquired and congenital hepatic syphilis, the deviation of the portal blood by means of surgery can give good results, if the age of the patient, his general condition and his freedom from other lesions permit. In malarial cirrhoses, due to splenic hypertrophy, surgical treatment gives good results, especially when combined with splenectomy.

There is no such thing as "curing" a cirrhosis by means of surgical operations for the ascites. The results of the operation include a disappearance of the ascites which sometimes does not return. In some cases it also produces an improvement in the hepatic function. The operation also checks hæmorrhages from the stomach and intestines and generally improves the condition of the heart, the kidneys, and the blood of the patient.

5. **Anaerobes in the Intestines.**—TaroZZi cultivated certain germs, found in the intestines of man and of some animals, which have not been hitherto grown on the ordinary media. These germs are characterized chiefly by the formation of a terminal spore, making them look like drumsticks. The expedient which the author used to make them grow on ordinary media consisted in adding to these media sterile pieces of animal tissue, preferably from the parenchyma of the internal organs. Similar germs may be cultivated from putrefying tissues in the human cadaver. Other pathogenic germs, such as the bacillus of tetanus, the bacillus of symptomatic anthrax, etc., which hitherto have been considered anaerobic in the strict sense can be cultivated in the same manner.

March 4, 1905

1. On a Case of Resection of the Liver for a Tumor, By R. CALIRNI.
2. On the Influence of Natural Hypotonic Solutions of Sodium Chloride on the Secretion of the Stomach, By P. CASCIANI.
3. On the Action of Strychnine as a Cardiac Stimulant, By CARLO GENNARI.
4. The Transmission of Murmurs, and Relative Diagnostic Criteria, By GIUSEPPE CATTANI.
5. A Case of Congenital Anomaly of the Heart (*Concluded*), By F. SICURIANI.

1. **Resection of the Liver.**—Calirni reports a case of resection of the liver in a woman aged 36 years for a large malignant tumor of the right side of the organ. The symptoms were acute in character, and in all respects resembled those of a septic cholecystitis. This diagnosis having been made, the abdomen was opened with the intention of opening and draining the gall bladder; but, instead, a tumor composed of solid masses of easily bleeding tissue was found. The tumor was of the size of the head of a fœtus, and was continuous with the liver, without any pedicle. The gall bladder lay on one side of it, and was per-

fectly normal in appearance. The gall bladder was removed after preliminary ligature of its neck, which was fixed to the abdominal wall by means of a suture. The tumor was then surrounded with a rubber tube drawn tightly around its base, and removed with a scalpel. A stump as thick as a man's arm was left in the hepatic tissue, and this was surrounded with iodoform gauze, which was left between the hepatic stump and the margins of the incision. After a careful toilet of the peritoneal cavity, the lower part of the abdomen was closed. The stump gradually shrunk away and the rubber tube was removed after fifteen days. The gauze was gradually withdrawn and the stump allowed to granulate. The biliary fistula remained open for some time, but finally healed, and the patient was discharged cured. Histologically, the tumor proved to be a carcinoma derived from aberrant suprarenal glandular tissue.

2. Influence of Sodium Chloride Solutions on Gastric Secretion.—Casciani experimented on dogs with gastric fistulæ, according to Pawlow's method, with a view of determining the influence of mineral waters containing varying percentages of sodium chloride upon the gastric secretion. He found that hypotonic sodium chloride waters increase the secretion of hydrochloric acid, and of the gastric juice. Hypotonic mineral waters containing calcium bicarbonate, on the other hand, have no appreciable effect on the gastric secretion, or the excretion of hydrochloric acid in the stomach. The first class of waters mentioned are, therefore, indicated in diseases with diminished gastric secretion, while the last named class are suitable for cases with an increased secretion of hydrochloric acid, merely as mild stimulants to the stomach. One of the author's students, Coleschi, experimented clinically in patients with the same results as were obtained on dogs. The results obtained by Coleschi showed that hypotonic sodium chloride waters were more efficient as regards the increase of gastric secretion than hypertonic waters of the same class. Therefore, waters containing sodium chloride and hypotonic to the blood serum of normal man are especially adapted to the treatment of gastric diseases associated with a lack of gastric secretion or of hydrochloric acid secretion.

3. Strychnine as a Heart Stimulant.—Gennari concludes from a study of this question that strychnine is not a direct heart stimulant, and is contraindicated in erethistic and non-compensated cases. In these conditions strychnine either does not act at all or else, developing its cumulative action, makes the erethistic condition worse and increases the subjective discomfort of the patient. The action of strychnine upon the nervous system is to produce a vasoconstriction with an increase in the blood pressure, and therefore the drug is indicated in the adynamic and depressive forms in which the tone of the blood vessels is impaired. In debilitated or neurasthenic individuals it produces a noteworthy improvement in the general condition and increases the appetite and the strength of the patient.

4. Transmission of Murmurs as a Diagnostic Criterion.—Cattani has made a study of transmissions of murmurs, and declares that this element in a murmur is the most important of its diagnostic features. He found that both pericardial and cardiac sounds could be heard in many cases at a great distance from the heart, as, for instance, over the forehead, the arms, the abdomen, the iliac bones, the ankles even. Pericardial murmurs are transmitted along the bones, while aortic murmurs are transmitted along the blood vessels. He found also that the great difference between endocardial and exocardial murmurs becomes evident when we auscultate behind, over the vertebral column, at the level of the heart. He regards, in fact, the retrocardium as of the same importance as the præcordium in the diagnosis of cardiac lesions. The transmission of murmurs is modified also by the character, amount and location of pericardial exudates, as well as the presence or absence of hypertrophy in the heart muscle. Hypertrophy of the heart facilitates the transmission of murmurs. Pericardial murmurs (friction sounds) are distinguished by their superficial character, their diffuse transmission, and their variability with the position of the patient. When the pericardial exudate lodges chiefly anteriorly, the transmission takes place through the sternum and cartilages. When, on the other hand, the exudate is situated posteriorly, the sound is transmitted through the spinal column. Non-pericardial murmurs are transmitted also to the retrocardial region. Mitral murmurs may be heard posteriorly at the angle of the left scapula or in an oblique line from the spine towards that angle. Aortic murmurs on the other hand are heard in the suprascapular fossa, between the spine and the oblique line of the scapula.

ROUSSKY VRATCH.

February 10, 1905

1. On the Surgical Treatment of Affections of the Biliary Passages (*Concluded*), By M. M. KOUZNETSOFF.
2. On the Secretory Function of the Parotid Gland in Man (*To be continued*), By E. A. ZHERBOVSKI.
3. On the Pathology of the Kidneys (Preliminary Communication), By A. N. GECHTMANN.
4. The Treatment of Morphine Habitués, Alcoholics, and Smokers by Means of Hypnotic Suggestion (*Concluded*), By M. I. BEREZINSKI.

1. Surgical Treatment of Biliary Affections.—Kouznetsoff pleads for a more prompt surgical treatment of affections of the biliary passages and for a wider recognition of the value of surgery in these conditions on the part of the general practitioner. In most cases of simple gallstone disease or cholecystitis the establishment of a gall bladder fistula and drainage of the gall bladder, after the removal of the stones, effect a cure of the catarrhal condition, and rid the patient of his painful condition. Cases of chronic stenosis of the common duct due to the presence of stones, complicated with chronic jaundice and cholangitis, demand cholecystectomy or else choledochotomy with drainage of the common or the hepatic duct. Cholecystectomy is the most radical operation and offers the surest guarantee against a

recurrence of gallstone disease. The writer recommends the incision of Kehr as the most practical mode of reaching these structures and believes that the removal of the gall bladder, accompanied by ligation of the gall bladder artery and a separate ligation of the cystic duct, is a perfectly rational procedure. He obtained good results with tamponage after removal of the gall bladder by Kehr's method, and recommends the more extensive use of bacteriological methods in detecting the causes of gallstone disease during operations.

3. Studies in Renal Pathology.—Hechtmann's preliminary paper deals with researches, undertaken with a view of determining the very important question as to how much renal tissue can be removed in an animal without causing death. A second part of the work is devoted to the investigation of nitrogenous metabolism in dogs, together with clinical observations in the same animals after various operations on the kidneys. Sixteen experiments were performed in all, of which five related to the amount of renal tissue which could be removed without killing animals. The whole kidney or various portions of the organ were removed in different dogs. In the second series of eleven experiments, various operations were performed; for example, the removal of one half the medullary layer in one kidney and of the whole cortical substance in the other kidney. The results obtained were briefly as follows: The removal of three quarters of the total renal tissue available is not fatal, but so soon as this limit is overstepped the animal dies. The removed renal tissue is partly regenerated, partly compensated by hypertrophy, and partly becomes degenerated. After removing the greater part of the medullary substance, the clinical picture becomes one of interstitial nephritis, three to five months after the operation, and sooner or later some of the dogs develop uræmic symptoms. The nitrogenous metabolism always suffers after these operations, and the nitrogen of urea diminishes after the procedure to the extent of from eight to ten per cent.

4. Hypnotism as a Cure for Morphine Users, Drunkards, Etc.—Berezniitsky strongly advocates the employment of hypnotism in the treatment of drunkenness, the morphine and tobacco habits. The author argues that there are no drugs which can be hoped to cure these habits, and that modern medicine has found the most efficient means of combating them by means of mental suggestion. In connection with alcoholism and the combat against it in various countries, he mentions the prohibition laws existing in some of our States, but adds that such laws would be impossible in European countries. The governments of the American States which prohibit the sale of liquor, rightly calculate that the loss in revenue which is entailed by such laws is compensated to the State by the increased healthfulness of the population. On the other hand, the government monopoly of the liquor traffic as it exists in some countries (e. g., Russia), not only does not diminish the evil, but prevents its proper control. He advocates the establishment of outdoor services

where alcoholics can be treated hypnotically and of sanatoria, etc., where the worst cases can be confined for a time also under hypnotic treatment. As regards the treatment of the tobacco habit he advises that tobacco be prohibited entirely as soon as treatment is begun. No bad effects result from such a sudden removal of this drug as are noted in the case of opium. Hypnotism easily cures the tobacco habit, but the cures are not often permanent, as smokers resume the habit more easily than other drug habitués. They do not regard this habit as seriously as do morphine eaters. The results of treatment with hypnotism in alcoholics have been variously stated at from twenty to eighty per cent. of cures. The author thinks that thirty per cent. is the correct estimate and that the high figures given by some observers are due to enthusiasm over a new method of treatment. But even thirty per cent. of cures is a satisfactory result in alcoholism, a condition which so stubbornly resists treatment by other means.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 8, 1905.

1. Hepatic Insufficiency in Obstetric Practice,
By J. CLIFTON EDGAR.
2. Ocean Bathing,
By PHILIP MARVEL.
3. How May Typhoid Fever be Eliminated? By A. ROBIN.
4. The Surgical Aspects of Major Neuralgia of the Trigeminal Nerve. A Report of Twenty Cases of Operation on the Gasserian Ganglion, with Anatomical and Physiological Notes on the Consequences of Its Removal (*Concluded*),
By HARVEY CUSHING.
5. Normal Salt Solution and Other Local Analgetics in the Office Treatment of Anorectal Diseases,
By J. RAWSON PENNINGTON.
6. The Application of Laboratory Methods to the Diagnosis of Variola,
By WILLIAM TRAVIS HOWARD.
7. Treatment of Intestinal Amœbiasis in the Tropics,
By W. E. MUSGRAVE.
8. Dissemination of Streptococci Through Invisible Sputum in Relation to Scarlet Fever and Sepsis,
By ALICE HAMILTON.
9. Immunity. Chapter XI.

1. Hepatic Insufficiency.—Edgar places himself in that small class of obstetricians who believe that all the pathology of pregnancy and of the puerperium, apart from that due to malformations and traumatism, has its origin in hepatic insufficiency. The autotoxic state due to this insufficiency calls into being such affections as hyperemesis, acute atrophy of the liver, eclampsia, polyneuritis, etc. It is also probably responsible for such affections as gastric disorders, headaches, pruritus, chloasma, etc., so commonly seen in pregnancy. From this the author concludes: (1) The preventive treatment of much of the morbidity and mortality of pregnancy and of the puerperium depends on the early recognition of the autotoxæmia of pregnancy, as it shows itself in the clinical picture of hepatic insufficiency. (2) No one who has had an extensive obstetric experience can fail to observe that a large number of pregnancies are really pathological in their nature. That a specific toxæmia of pregnancy exists will probably soon be admitted on all sides.

It is, of course, very easy to attribute to the auto-toxic state certain symptoms of the pregnant woman which proceed from other sources; and it is by no means impossible that pregnancy may predispose to more than one toxic condition. In any case, however, the presence of the hepatic toxæmia must be borne in mind—whether it be the principal state or accessory to other facts. (3) Our present knowledge of the pregnant state demands that women at this time should be constantly under the observation of a competent physician. Pregnancy cannot be treated through the mails or over the telephone. It is not enough that a monthly or bi-monthly examination of the urine be made for symptoms of hepatic or of renal insufficiency, as such urinary analysis often fails completely to indicate the presence of toxæmia. A pregnant woman should be seen frequently by her physician and watched for general symptoms of the overcharging of the blood with toxic material, such as nausea and vomiting, headache, physical and mental lassitude, high arterial tension, alterations in character and disposition. Thus, and thus only, shall the physician do his whole duty by his patient.

7. **Amœbiasis.**—Musgrave's paper is founded on a large personal experience with amœbic dysentery and on 150 autopsies. The paper is very complete and makes many suggestions regarding the treatment and prophylaxis of the disease. Perhaps of special interest are the great variety of pathological conditions due to amœbiasis, which are capable of simulating appendicitis. Surgical intervention in most of these cases is contraindicated, and it is therefore of great importance that the subject should be well understood. In the 150 necropsies there were two cases in which an operation for appendicitis would have prolonged life. One of the these was amœbic appendicitis without extensive ulceration of the cæcum, and the other a pericæcal amœbic abscess.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 6, 1905.

1. The History of the Boston Society of Psychiatry and Neurology for Twenty-five Years,
By WALTER CHANNING.
2. Surgical Treatment of Nephritis. A Résumé,
By PAUL THORNDIKE.
3. Diet in Nephritis,
By HENRY JACKSON.
4. Some Further Observations on Leucocytotoxines,
By HENRY A. CHRISTIAN AND THOMAS F. LEEN.

2. **Renal Decapsulation.**—Thorndike concludes his résumé of the surgical treatment of nephritis with the following, not very encouraging, deductions: (1) The bulk of available evidence goes to prove that a new capsule is formed within a few weeks after decapsulation, and the establishment of a collateral circulation sufficient in degree to materially affect the renal tissues is not probable; (2) whatever may be the explanation of certain clinical facts adduced to justify decapsulation, they do not seem to offer a very promising foundation on which to base a sanguine hope that renal surgery has much of a future along the lines developed by Edebohl and his followers.

3. **Diet in Nephritis.**—Jackson, for the purpose in hand, divides nephritis into three types: acute, subacute, and chronic. No hard and fast rules can be laid down with regard to diet, yet, in a general way, it may be said: (1) In acute nephritis cut down the proteids and allow a fair amount of carbohydrates. Two or three pints of milk and some bread or cereals will be sufficient. (2) In subacute nephritis most patients need to be properly nourished, as they lead more or less active lives. They must have a fairly abundant proteid diet. The author believes that it is better to give the proteids in the form of eggs and meat than to strain the digestive organs with large quantities of milk. (3) In chronic nephritis the author advises a plain mixed diet.

4. **Leucocytotoxines.**—Christian and Leen report their method of studying leucocytotoxines. If the serum tested was capable of arresting the amœboid movements of leucocytes in five minutes, it was held to be leucocytotoxic. The leucocytotoxic sera were obtained by injecting emulsions of various tissues into animals of a different species. These experiments show the ease with which leucocytotoxines can be produced by the injection of a variety of somatic cells, as those of the spleen, liver, kidney, and cardiac muscle. Leucocytotoxic sera so produced are also hæmolytic and the specificity of such sera is analogous to that of hæmolytic sera. Cultures in bouillon of various bacteria contained no substance which was cytotoxic for the leucocytes of the guinea pig when tested by this method.

MEDICAL NEWS.

April 8, 1905.

1. Further Notes on the Function of the Parathyroid Glands, By W. G. MACCALLUM AND C. F. DAVIDSON.
2. Two Cases of Pernicious Anæmia Due to the Dibothriocephalus Latus, By ALFRED MEYER.
3. A Case of Dibothriocephalus Latus Infection, Causing Pernicious Anæmia; with Complete Recovery, By W. GILMAN THOMPSON.
4. Symptoms and Diagnosis of Cerebrospinal Meningitis, By HENRY L. ELSNER.
5. Eye Symptoms of Cerebrospinal Meningitis, By A. EDWARD DAVIS.

1. **The Parathyroid Glands.**—MacCallum and Davidson record in detail a number of experiments they have conducted upon animals for the purpose of further elucidating the functions of the parathyroid glands. They conclude: "On the whole, although the cases reported by Lusena and others in the literature have shown a milder course after thyreoparathyroidectomy than after parathyroidectomy, we cannot support this as a general rule, for in half of our cases the symptoms were of the maximum severity. Nor can we support Lusena's statement that subsequent thyreoidectomy stops the tetany, for in four out of six of our cases it had absolutely no effect and the dogs proceeded to a more and more violent tetany and died. We therefore regard the tetany not as the result of a disturbance of the thyreoid from the loss of the influence of the parathyroids, but as the direct result of the loss of parathyroid function, especially since it may be directly cured

by injection of parathyroid emulsion in the absence of the thyroid."

2. **Pernicious Anæmia.**—Meyer's patients both recovered. One of the patients was a Finn, the other a Russian Pole. The parasite was recovered from the first case, but not from the second. In both cases the diagnosis was based on an examination of the stools.

3. **Pernicious Anæmia.**—Thompson's case of pernicious anæmia due to the dibothriocephalus latus recovered, although the head of the parasite was never found in the stools. The patient was a Finn. The literature of the disease is rather extensively reviewed.

AMERICAN MEDICINE.

April 8, 1905.

1. The Significance of the Urinary Examination in Women, By GUY L. HUNNER.
2. The Optic and Ocular Factors in the Ætiology of the Scoliosis of School Children, By GEORGE M. GOULD.
3. The Advantages of Tendon Transplantation, By H. AUGUSTUS WILSON.
4. Extrauterine Pregnancy at Full Term; Total Extirpation of Uterus and Placenta by a New Technique: Recovery, By HIRAM N. VINEBERG.
5. Pathological Changes Resulting from Prostatic Enlargement, By CHARLES E. BARNETT.
6. Enterostomy, By J. W. LONG.
7. Two Cases of Landry's Paralysis: One Terminating in Recovery, the Other in Death, By THEODORE DILLER and C. L. BILLARD.

1. **Urine Examinations.**—Hunner pleads for more frequent examinations of the urine in cases of abdominal and pelvic disease. His paper concerns itself more with the importance than with the significance of urinary examinations in women.

3. **Tendon Transplantation.**—Wilson reviews the development of tendon transplantation from the time of Nicoladoni. The method is applicable to those cases in which function is faulty because of ill directed voluntary movements, and it aims to restore the balance of power as far as possible. It is applicable in traumatic loss of function of muscles and tendons; spastic paraplegia, infantile paralysis, and congenital deformities. Some of the earlier failures were due to the fact that too much was expected of the method. The advantages to be obtained from tendon transplantation are often greatly enhanced by producing ankylosis in an appropriate joint. The accepted methods of inserting transplanted tendons are conveniently grouped under four headings: 1. Dividing a tendon of a healthy muscle and suturing its central portion to a paralyzed tendon. 2. Dividing the tendon of a paralyzed muscle and attaching its peripheral portion to a healthy tendon is called ascending transplantation by Vulpius, and by Hoffa the passive method. 3. Splitting the tendon of a healthy muscle and transplanting only a part into the tendon of a paralyzed muscle. Vulpius calls this the descending method and Hoffa calls it the active method. In suturing tendons together the quilt suture of Goldthwait has many advantages. 4. Attaching the tendons of trans-

planted active muscles directly to the periosteum was proposed by Drobnik and advocated by Lange. The last method is greatly to be preferred when possible, as the resulting bond of union secured by this means is much stronger and enduring. When the tendon to be transplanted is too short for periosteal attachment Lange's method of using strands of silk to elongate the tendon may be advantageously employed.

4. **Extrauterine Pregnancy.**—Vineberg removed the placenta in his case of extrauterine pregnancy by the following method: He first ligated the uterine and ovarian vessels on the free side, he then cut the uterus across at the level of the os internum without making any attempt to separate it from the mass to which it was most intimately united, and then ligated the uterine artery on the involved side. In this way he cut off the main blood supply before making the attempt to enucleate the enormous placental mass. As a result of this procedure, he was able to separate the placenta from its extensive attachments with comparatively slight hæmorrhage. Even with this preliminary ligation of the main blood vessels, the loss of blood was sufficient to depress the vital powers of the already exhausted patient to such an extent that intravenous saline infusion had to be resorted to twice during the operation.

5. **Prostatic Hypertrophy.**—Barnett, after reviewing the usual consequences of prostatic hypertrophy, concludes: (1) The general practitioner should be prepared at least to make a rectal examination of the prostate whenever symptoms point to that region, and if hypertrophic changes are found, and after careful treatment if the tumor does not diminish in size, surgical intervention should be advised and insisted upon. (2) If infection has not preceded catheter life, it is sure to follow. (3) Early prostatic operations are not dangerous; late ones are always dangerous, and frequently fatal. The general practitioner has the fate of the prostatic in his hands, either to guide him over his trouble, or to advise him to continue a life of miserable suffering which intensifies itself toward the end. (4) We are examining old rather than young men, for prostatic enlargement, and in so doing, are getting the big rather than the little end of the dilemma.

6. **Enterostomy.**—Long gives the following as the most important measures accomplished by enterostomy: (1) Drainage of gas and fæces from the intestines. (2) In mechanical obstruction, relief of the distention, pain, vomiting, and toxæmia. (3) In septic conditions, depletion of the inflamed bowel and peritonæum; also the intestinal paralysis and sepsis are overcome. (4) Protection to the peritonæum, as in typhoid perforation. (5) Nourishment to the patient by making an artificial mouth. From this he concludes: (1) Enterostomy is always a life saving measure, never an operation of choice. (2) Enterostomy is not indicated when a more ideal surgical procedure is feasible. (3) In the hands of an experienced, carefully trained abdominal surgeon, ca-

pable of dealing with grave emergencies, an enterostomy is rarely resorted to; but the better the surgeon, the more quickly will he adopt any measure that will save his patient. (4) Every abdominal surgeon, according to the abundance of his material, must find cases in which only an enterostomy can with propriety be done. (5) When an enterostomy is indicated, to hesitate is to lose your patient; to operate promptly, dextrously, and with celerity means to tide your patient over the imminent peril and spare him for future consideration. Eight personal cases are reported.

MEDICAL RECORD.

April 8, 1905.

1. The Treatment of Pyelitis, By HOWARD A. KELLY.
2. Ætiology of Enlarged Prostate, By L. BOLTON BANGS.
3. Microscopical Examination of the Fasting Stomach Contents and Its Diagnostic Value, By WILLIAM ACKERMAN and LOUIS M. GOMPERTZ.
4. Acute Cholecystitis in the Puerperium. Report of Two Cases. Cholecystotomy. Recovery, By HIRAM N. VINEBERG.
5. Conservative Treatment of Protracted Cases of Acute Otitis Media Purulenta, with Its Complications, By ALFRED WIENER.
6. A Modification of the Heller Test for Albumin in the Urine, By ABBOTT SMITH PAYN.

1. **Pyelitis.**—Kelly reviews the general subject of pyelitis and illustrates the principal types of the affection by means of short histories of personal cases. He emphasizes the fact that mild types of pyelitis are not infrequent, and that if they are unrecognized or improperly treated they may lead to very serious consequences. The practical deductions to be drawn from the paper are: (1) It is important to take cognizance of a pyelitis of any grade whatever, as it may, at any time, become a menace to the functional value of the kidney, or even to life itself. (2) The severer grades of the affection are often the sequelæ of a milder pyelitis of long standing. (3) The first step in the investigation is to determine the extent of the affection by estimating the amount of pus in the urine and the relative number of organisms. (4) It is important to determine the cause of the infection, which is often of a mechanical nature, and therefore easily relieved. (5) By removing the cause, the disease may either be cured, or be so far benefited that a subsequent complete relief by means of local treatments is easily brought about. (6) The milder forms are best treated by rest, abundant water, and urotropin. (7) If there is not a speedy improvement, the next simplest plan of treatment is the catheterization of the kidney every two to four days for the purpose of evacuation, distention of the pelvis, irrigation, and instillation. Boric acid and nitrate of silver are the best drugs in this connection. (8) Improvement should be measured by the disappearance of pus from the urine and the diminution in the organisms, taking, say, three platinum loops as the measure in conveying the infected urine to the agar. (9) A patient improved, but not cured (complete absence of bacteria), should be watched

in the intervals of treatment, and guarded with especial care in case of any intercurrent disease. Should such a disease supervene, urotropin is a good prophylactic. (10) The severer forms of the disease may be treated by irrigation, which often brings great temporary relief. As a rule, however, the kidney must be opened and drained; if it has been extensively diseased, it should be removed.

2. **Enlarged Prostate.**—Bangs asserts that the theory that inflammation is the cause of enlargement of the prostate is the one to which he gives adherence. Gonorrhœa may be a factor in some cases of enlarged prostate, but in most cases other factors are of more importance. According to the author, masturbation, coitus reservatus, or coitus interruptus, and in general sexual excitation without normal satisfaction, must be regarded as the chief ætiological factors of prostatic hypertrophy. The following prophylactic rules should therefore be observed: (1) Sexual instruction in boyhood; (2) chastity in youth; (3) sexual restraint in early manhood, and (4) physiological sexual relations in the married state.

3. **The Stomach Contents.**—Ackerman and Gompertz assert that with the aid of the microscope alone it is possible to reach a correct diagnosis in the majority of stomach affections. They give in detail their method of conducting an examination and illustrate the microscopical appearance of the chief objects of diagnostic significance which are to be specially noted. They claim that: (1) The presence or absence of hydrochloric acid can be determined by a microscopical examination of the fasting stomach contents. (2) The origin of mucus can be determined only by a microscopical examination. (3) By the microscopical examination, mild cases of pyloric stenosis can be differentiated from simple gastrosuccorhœa. (4) Constant presence of pus, blood; and possibly infusoria in the fasting stomach contents is absolute evidence of extrapyloric carcinoma. (5) Benign obstruction can be diagnosed early by the finding of sarcinæ, yeast cells in chains, or food remnants. (6) The early diagnosis of malignant obstruction of the pylorus can be made by the finding of the Oppler-Boas bacilli.

4. **Cholecystitis.**—Vineberg thinks it is strange that so few cases of acute cholecystitis, as complications of the puerperium, have been placed on record. A careful search of the literature for the past ten years brought to light only four cases. Both the cases reported by the author were seen in consultation, and in both the attending physician had made a diagnosis of puerperal sepsis.

LANCET.

March 25, 1905.

1. Industrial Anthrax (*Milroy Lectures, II*), By T. M. LEGGE.
2. The Physiology and Treatment of Surgical Shock and Collapse (*Hunterian Lectures, II*), By J. P. L. MUMMERY.
3. On the Relation of the Parasitic Protozoa to Each Other and to Human Disease, By E. J. McWEENEY.

4. The Treatment of Pleuritic Effusion by Paracentesis and Incision in Serous Effusion, Empyema, and Pyopneumo Thorax, By G. WEST.
5. A Case of Intrapelvic Extravasation of Urine, By D. LOWSON.
6. Premenstrual Pregnancy in a Girl Aged Thirteen Years, By A. W. ADDINSELL.
7. A Case of Chronic Intestinal Obstruction with Perforation of the Sigmoid Flexure, By G. A. CLARKSON.

2. **Shock and Collapse.**—Mummery, in his second Hunterian lecture, states that the degree of shock produced by an operation is dependent upon the amount of traumatism to the nerve elements of the part operated upon. Traction upon or injury to important nerves, and injury to parts richly supplied with nerve endings, such as crushing of the feet and hands, are very liable to cause shock. Of all injuries, burns and scalds involving a large area are most frequently followed by shock; burns of the second and third degrees more often cause death from shock than those of the third and fourth degrees, because in the latter the nerve endings are destroyed and can no longer send impulses to the nerve centres. The first effect upon the blood pressure by injury is a rise, followed later by a fall if the injury is continued. There may be an initial fall if the injury is severe. In abdominal operations the degree of shock depends upon the area of peritonæum exposed and the duration of the exposure. Any form of manipulation of the peritonæum causes a fall in blood pressure. Turning the intestines out of the abdomen is always followed by a sudden and dangerous fall in blood pressure. In elderly patients a very high initial blood pressure is generally observed, largely accounted for by arteriosclerosis. A relatively slight fall of blood pressure in such patients may cause shock. Shock is the chief risk of severe operations in children, due to the fact that the blood pressure is not sustained nearly so long as in adults. Children have no special liability to shock—the question is one of time. Ether anaesthesia almost always causes a rise in blood pressure, which elevation is usually maintained. Chloroform anaesthesia, on the other hand, is usually accompanied by a fall in blood pressure during the whole period of anaesthesia; it seems as if chloroform has a direct toxic influence upon the vasomotor centres, and that bad effects, due to its use, are due to such influence rather than to toxic effects upon the respiratory or cardiac centres. The author believes that the so called gas-ether-chloroform sequence for long operations is a mistake, and that the chloroform-ether mixture is certainly the best from the point of view of subsequent shock. Symptoms of shock frequently do not show themselves until some time after an operation. The condition of the patient prior to operation is an important factor, persons in relatively vigorous health being less liable to shock. The changes in temperature which occur are probably entirely secondary to the deficient circulation resulting from the fall in blood pressure. All the secretions of the body are arrested or markedly decreased; the intense thirst is due to absence of saliva and to the call of the tissues for fluid. Diabetes may follow shock, no matter how

produced. There is usually no loss of consciousness. The most popular means of treating shock hitherto has been by means of stimulants, but the author is opposed to their use. Strychnine may contribute to the fatal result by stimulating the exhausted vasomotor centres and so preventing their recovery. Digitalis is of but little value in shock. The methods of treatment to be recommended are those which mechanically raise the blood pressure. Position has a marked influence, the best being with the foot of the bed raised and the patient's head lower than his buttocks. Simple manual pressure upon the abdomen will raise the blood pressure in all conditions of shock and collapse, by driving the blood out of the splanchnic area. A tight abdominal binder acts in the same way, and is very simple and effective. The raising of the external air pressure, and so substituting an artificial peripheral resistance for the lost peripheral resistance caused by the exhaustion of the vasomotor centres promises to be the most effectual method of treating shock. Unfortunately it is not, as yet, a practical method.

4. **Pleuritic Effusion.**—West discusses the treatment of serous effusion, empyema, and pneumothorax by paracentesis and incision. In cases of serous effusion where the pleura is full of fluid, and the respiratory movements are abolished, the sooner paracentesis is performed the better. Even a small effusion is better tapped if it has existed for some time and shows no signs of disappearance. The duration of the pleurisy is not shortened by tapping; the temperature remains high and continues raised until the inflammation comes to a standstill. Dyspnoea coming on suddenly is of grave significance and calls for immediate paracentesis, being the result of functional breakdown or incompetence. There are no indications against paracentesis; the temperature is unaffected, and there is practically no risk of the conversion of the effusion from serum to pus. The best method is by siphonage—the aspirator should not be employed, for it may cause the lung to rupture and so produce pneumothorax or pyopneumothorax. A general anaesthetic is unnecessary. Free incision for refractory serous effusion is rarely required. It necessarily leads to empyema, but this is easier to cure than the recurrent serous effusion. Empyema should be treated by free incision. A needle should always be passed first, and when pus has been found, used as a guide for the knife. The best seat of incision is just in front of the postaxillary border and on the transverse level of the nipple. Resection of rib should not be performed as a matter of routine. If free drainage can be obtained without it, it is not necessary. There is no risk in washing out the pleura, and it should be done wherever the pus is curdy, flaky, or offensive. The mode of cure of an empyema cavity is by expansion of the lung and falling in of the side. The tube should not be removed too soon, and the cavity should be examined with a probe every few days. Pyopneumothorax should in all cases be treated like empyema—the side being freely laid open and drained so soon as the presence of pus has been established.

BRITISH MEDICAL JOURNAL.

March 25, 1905.

1. Affections of Some Joints as Met with in General Practice, By E. OWEN.
2. Industrial Anthrax (*Milroy Lectures, III*), By T. M. LEGGE.
3. A Short Note on the Nose and Nasopharynx, By S. PAGET.
4. The Opening of Periamygdalar Abscesses, By ST. C. THOMSON.
5. Soft Fibroma of the Larynx and Neck, By F. T. PAUL.
6. Commonly Overlooked Factors in Vocal Mechanism, By R. F. E. AUSTIN.
7. Some Observations on the Pathogenesis and Loss of Voice in Singers, By J. HORNE.
8. Preliminary Note on Renal Activity During Anæsthesia, By W. H. THOMPSON.
9. Transillumination of the Antrum of Highmore, By A. B. KELLY.

1. **Joint Affections.**—Owen states that the family physician often makes mistakes in not recognizing early and treating promptly diseases of joints. He is too often satisfied with the use of arnica or iodine—two of the greatest impositions in the pharmacopœia. Wasting of the muscles which control the joint is an early and interesting sign of joint disease, but it can be clearly seen only when both sides of the body are seen at the same time. In the case of a fat child the eye alone may fail to make out the wasting; grasping the limb with the fingers will always demonstrate it. The sound side should always be examined first, in order to gain the patient's confidence. If the skin is not hot, if there is no bulging and no tenderness on pressure, then the trouble has quite passed off, and movements may be restored to the joint. But this must be done gradually. Inflammation of the shoulder is more apt to escape being found out than inflammation of other joints. A good evidence is that when the patient raises both arms to the level of the shoulder the angle of the scapula on the bad side begins to move with the humerus long before the other. When the disease is active, it will be well to protect the shoulder by moulding on a leather shield. In affections of the wrist there is always a great temptation to use the hand; in most cases therefore the hand should be fixed in a splint, preferably moulded of undressed leather. It is almost certain that when the joint of a child or young adult is the subject of a quiet lingering inflammation, the cause is a tuberculous affection; this is especially true when there is a history of tuberculosis in the family.

2. **Anthrax.**—Legge, in the third of his Milroy lectures, discusses anthrax in relation to the wool and worsted trades, to hides and skins, and to horsehair. Woollorter's disease, or internal anthrax, is certainly much less prevalent than formerly. This is due to the regulations requiring care in the opening of the bales and removal of the damaged wool or hair, fallen fleeces, etc. Further, none of the dangerous specified wools—alpaca, pelotage, Persian, camel's hair, and mohair—may be opened or sorted, except at a place where a constant draught of air maintained by a fan carries the dust away downwards. Cases are

now more frequent in the rooms where carding and combing processes are carried on. The most dangerous foreign wool at present is Persian, followed next by camel's hair. Steam sterilization, were it possible, would be the best method of disinfection of wool. More careful and thorough washing of the wool would be the next best thing. Of hides and skins, those from China are the most dangerous. It is doubtful if there is any way in which hides to be afterwards tanned could be effectively disinfected. There seems no reason for doubt that anthrax can be conveyed by completely tanned material. As regards horsehair steam disinfection is the only effective means of removing the danger from manipulation of dangerous horsehair; but even here, absolute reliance cannot be placed on the destruction of all anthrax spores. Steam cannot be used for white hair, as it turns it yellow.

3. **Diseases of the Nasopharynx.**—Paget suggests that the inside of the nose and back of the throat, like the teeth, are with succeeding generations and in the general order of things, tending to become ill developed and enfeebled. This is especially true among the poor inhabitants of great cities. And the development of postnasal catarrh, hypertrophic rhinitis, ozæna, and adenoids and polyps, is fostered by this degeneration. Crowded, irregular, and carious teeth; crowded and irregular air passages lined with a mucous membrane which is liable to general atrophy at puberty; crowded stores of lymphoid tissue which is liable to an irregular sort of hypertrophy—surely all three of these conditions may have a common origin in gradual change of type.

4. **Periamygdalar Abscess.**—Thomson states that while the operation for the evacuation of a periamygdalar abscess (quinsy) is simple, safe, and satisfactory, yet many surgeons complain that it is difficult to find the pus, and that the operation is dangerous. The pus never forms in the tonsil itself, but is always in the areolar tissue between the tonsil and the pharyngeal aponeurosis. Frequently it is met with posteriorly in the prolongation of the posterior faucial pillar. But in the majority of the cases—over ninety per cent.—the abscess forms above and in front of the tonsil. The tonsil frequently shows signs of lacunar amygdalitis, and may be raised from its bed. Left alone the abscess generally bursts spontaneously into the mouth, the site of rupture often escaping detection. The site of election for opening the abscess is just external to the intersection of an imaginary horizontal line across the base of the uvula and another vertically along the anterior faucial pillar. The best instrument with which to open the cavity is a pair of Lister's sinus forceps—the blades being readily forced into the cavity, then opened widely and withdrawn—thus producing a vertical opening through which the pus escapes into the mouth. There is no risk of wounding a large vessel, and the patient more readily permits the operation. Pus may frequently be found as early as the third day. The writer has only failed once to open a quinsy by this method.

8. **Anæsthesia and the Kidneys.**—Thompson's

experiments on animals show that when anæsthesia is induced by ether and chloroform, the early effect is usually an increase in the secretion of urine, lasting up to the period of complete insensibility. But during full anæsthesia, however prolonged, the secretion of urine is almost completely arrested. By full anæsthesia is meant a degree just beyond the loss of conjunctival reflex. Upon removal of the anæsthetic the kidneys rapidly recover.

Proceedings of Societies.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting of March 1, 1905.

The President, Dr. ARTHUR V. MEIGS, in the chair.

The Relief of Uræmic Hemiplegia and Other Uræmic States by Lowering Intracranial Pressure was the subject of a paper by Dr. ROBERT N. WILLSON.

The Famous Controversy Concerning the Internal Use of Cantharides was the title of a paper by Dr. T. L. COLEY.

Gallstone Obstruction of the Bowel; Report of a Case; Removal of the Stone by Operation; Recovery.—Dr. ALFRED C. WOOD reported the case of a woman, aged fifty-eight years, who was admitted to the University Hospital for obstruction of the bowel of five days' duration, with pain in the abdomen and vomiting. This was preceded by diarrhœa, lasting a week. For three months prior to this the patient had alternating periods of constipation and diarrhœa, lasting three or four days. The only other illness having any possible connection with the case occurred eight months before her admission to the hospital. At this time she complained of pain in the chest, the attack being called pleurisy. All purgatives administered by the mouth were promptly vomited, and enemata were ineffectual. An operation was performed for the relief of the obstruction, and a gallstone found, completely filling the lumen of the ileum about six inches from the ileocæcal valve. This was removed by incising the bowel and the wound closed with Lembert sutures. As the stone was faceted at either end, an examination was made to determine if any others remained in the body. When the hand was passed through the abdominal incision to the region of the gall bladder, another calculus could be felt in a mass of adhesions. The first incision was then closed with sutures, and a second made over the region of the gall bladder. In the centre of a mass uniting the pylorus, liver, gall bladder, and ducts another stone was found and removed. This wound was drained with gauze. The patient made a good recovery, being able to leave the hospital six weeks after the operation. The wound had closed one week previously.

Dr. J. ALLISON SCOTT reported the removal of a gallstone two inches long and an inch thick from the duodenum with a suppurative condition for six or eight inches on either side, in the case of a woman over sixty years of age. The bowel was resected and the woman died. He regarded the

intermittent attacks of pain as having important diagnostic significance. He had found in literature reports of two cases of aged women whose gallstones had been made to pass by the administration of half a pound of metallic mercury.

Dr. JOHN B. ROBERTS referred to a case in which he had removed a large intestinal calculus, two inches and a half long, from a woman who had been suffering many years with the symptoms presented in Dr. Wood's case. There were evidences of old adhesions in the region of the liver, and the stone was covered with intestinal concretions. In the case of another patient a stone, an inch and a half long, was passed after an attack of severe pain.

The Gardener's Spade Deformity and the Silver Fork Deformity in Fractures of the Carpal End of the Radius.—Dr. JOHN B. ROBERTS said that these lesions continued to be badly treated by a great number of practitioners, and that it seemed impossible to convince the profession that restitution of the normal concavity of the palmar surface of the lower part of the radius was essential for comfortable convalescence and perfect cure. This must be accomplished, even if great force was required to disentangle the fragments and thrust the lower piece into its normal relation with the upper one.

The so called "silver fork deformity" of the fracture, with displacement of the carpal fragment backward must be absolutely overcome before the fragments could be assumed to have been properly coaptated. Fracture in the same part of the radius with displacement in the opposite direction, namely, forward, was frequently unrecognized, and was therefore imperfectly reduced. In this fracture the general deformity, which Dr. Roberts called the "gardener's spade deformity," was very characteristic. It was very different from the "silver fork deformity," with backward displacement of the carpal piece. The planes of the forearm and hand were related to each other almost exactly as were the planes of the handle and blade of the gardener's spade. In both lesions the styloid process of the radius was apt to be carried upward toward the elbow. As a result, an imaginary line joining the ulnar and radial styloid processes crossed the axis of the forearm at nearly a right angle or with the radial end nearer the elbow than the ulnar end. In the normal arm this interstyloid line was farther from the elbow on the radial than on the ulnar side. The ulnar head was very prominent at the back of the wrist in fracture with forward displacement, but not so in the break with backward displacement. In both forms of injury, however, this ulnar head might be very prominent at the ulnar edge of the wrist, because the shortening of the broken radius might give a displacement of the hand and carpus toward the radial side of the limb. Examination with the x ray Dr. Roberts believed to be of aid in diagnosis, though usually it was not needed. The treatment of both fractures was easy, if the surgeon would only use force enough to disentangle the carpal end and compel it to assume its normal position. A light straight splint on the dorsum of the forearm and hand, or a convex splint on the palmar

surface, was usually the proper retentive dressing after reduction had been thoroughly accomplished.

Dr. ALFRED C. WOOD agreed fully with Dr. Roberts that the fracture under discussion was one of the most badly treated of all fractures. He believed that in the large majority of cases the shaft was impacted in the lower fragment. He approved of giving an anæsthetic to secure reduction when there was much deformity.

Dr. FRANK WOODBURY referred to the inability at first to give a true prognosis, owing to the possibility of comminution of the lower fragment and of the presence of synovitis. He called attention to the recommendation of Dr. Thomas G. Morton to make frequent examinations of fractures, especially of the radius, and as to the application of hot douching and massage. In the cases he had treated he had not made special effort to reduce the fracture completely at the beginning, but had relied on the later manipulations, and had had satisfactory results.

Book Notices.

Transactions of the American Dermatological Association at its Twenty-eighth Annual Meeting. Official Report of the Proceedings, by CHARLES J. WHITE, M. D., Secretary. Pp. 204.

The volume opens with the address of the president, Dr. Joseph Zeisler, of Chicago, who suggests a change of the time of year for holding the meetings from the close of spring or the beginning of summer to the Christmas holidays or to a late date in September, before the opening of the college courses. He seems to have been led to this suggestion by having observed that many of the members had shown a proneness to presenting their papers before the dermatological section of the American Medical Association. We are inclined to think that the president's suggestion is well founded. It is true that those who elect to appear before a section of the enormous national organization get a larger audience, but the discussion of their papers is undoubtedly far inferior to that which might be looked for in the special association. The president also betrays some impatience of the plan of meeting in Washington every three years, in connection with the Congress of American Physicians and Surgeons, "on account of the absence of clinical material there," but that point does not seem to us so well taken. The association has generally met in places where there is a dearth of such material, and surely there can be little advantage in converting an annual meeting into a clinic.

Almost the whole of the remainder of the volume is taken up with the formal papers presented at the meeting, with condensed reports of the discussions. In the appended matter there is a valuable table showing the reported prevalence of numerous skin diseases in various American cities during the year 1903. The volume is copiously illustrated with excellent half tone pictures. It is a valuable addition to the literature of dermatology.

Miscellany.

A Japanese Emergency Hospital.—Mr. George Kennan, in his story of Port Arthur in the *Outlook*, for March 11, 1905, thus describes the arrival of wounded Japanese from the front and their reception at an emergency hospital:

The arrangements for their reception were everything that could be desired. Several hundred Chinese stretcher bearers and ambulance men were waiting for them at the station, and those who could not walk were carried up out of the railway cut to a series of large closed sheds, where they were promptly examined by a corps of Red Cross surgeons, and furnished, when necessary, with hot food from a neighboring kitchen. Every man brought with him, from the field hospital at the front where he had been treated, not only his identification tag, but a complete medical record of his case. The surgeons in the sheds read these papers, examined the patients, decided what should be done with them, made additional notes on the records, and, after giving them time for rest and refreshment, sent them to steamers lying at the piers, or to one of the forwarding hospitals in the city. The slightly wounded and convalescent sick went directly to Japan, while the more serious cases were held in Dalny for further treatment. Everything was done with perfect order and system, and in half or three quarters of an hour after the arrival of the train the sheds were empty and all the men were either in hospital or on their way home. In order to get room for new arrivals from Port Arthur and the north, the resident surgeons made a partial clearance of the Dalny hospitals every day, by sending to Japan all patients who were able to stand the sea voyage. Half a dozen Red Cross steamers were constantly going back and forth, and every one of the larger transports, such as the *Tosa-maru* and the *Aki-maru*, had accommodations for wounded, and carried a regular staff of thirty surgeons and nurses. When, therefore, a man reached Dalny, he had no more severe hardships to anticipate. It is unnecessary, perhaps, to compare the treatment of Japanese sick and wounded with that received by our soldiers in eastern Cuba and on some of the transports that brought them home; but we may profitably think about the matter and take notes. The bringing of disabled men in open flat cars from Liao-Yang to Dalny is bad, and causes unnecessary sufferings; but it must not be forgotten that the Japanese had to change the gauge of two hundred and fifty miles of road, and import all the rolling stock for it from Japan, while at the same time they were carrying on a great war and sending to the front provisions and ammunition for an army of two or three hundred thousand men. It was virtually impossible, in such circumstances, to equip the railway with hospital trains, and they had to do the best they could with freight cars. If fighting continues in the north through the winter, the transportation of wounded from Liao-Yang to Dalny in open flat cars may become impracticable, on account of the severity of the Man-

churian climate; but the soldiers at the front have been abundantly supplied with warm clothing, and by the time the cold becomes intense the Japanese will probably have brought over closed cars enough to make up two or three ambulance trains, warmed by hibachis or sheet iron stoves. Meanwhile their facilities for treating and transporting the wounded seem to be fully adequate, and although they have sometimes had to handle as many as twelve thousand disabled men in a week, they have never been overwhelmed. At a single bandaging station I have known them to pick up and give first aid to two thousand wounded men in eight hours.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from March 21 to April 1, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Florida—Jacksonville	Mar. 18-25.	3	
Florida—West Tampa	Mar. 18-25.	5	
Illinois—Chicago	Mar. 18-25.	18	2
Illinois—Danville	Mar. 21-25.	7	4
Louisiana—New Orleans	Mar. 18-25.	16	
Four imported.			
Michigan—Detroit	Mar. 18-25.	1	
Missouri—St. Louis	Mar. 18-25.	35	4
Nebraska—Omaha	Mar. 18-25.	1	
Nebraska—South Omaha	Mar. 18-25.	1	
Pennsylvania—Philadelphia	Mar. 18-25.	1	
Pennsylvania—Steelton	Mar. 18-25.	1	
South Carolina—Charleston	Mar. 11-25.	6	1
South Carolina—Greenville	Mar. 11-25.	4	3
Tennessee—Memphis	Mar. 18-25.	11	
Tennessee—Nashville	Mar. 18-25.	2	

Smallpox—Insular.

Philippine Islands—Manila	Jan. 28-Feb. 11.	2	
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Smallpox—Foreign.

Africa—Cape Town	Feb. 11-18.	1	
Brazil—Pernambuco	Feb. 1-15.	49	105
Brazil—Rio de Janeiro	Feb. 12-26.	19	19
Brazil—Victoria	Feb. 7-18.	19	1
Chile—Valparaiso	Feb. 1-18.	1	
China—Shanghai	Feb. 4-11.	2	
Epidemic, 1 case for eign, 14 deaths native.			
Denmark—Copenhagen	Feb. 25-Mar. 11.	2	
France—Nantes	Mar. 3-17.	38	8
France—Paris	Mar. 4-11.	10	1
Great Britain—Birmingham	Mar. 11-18.	2	
Great Britain—Glasgow	Mar. 10-17.	1	
Great Britain—Leeds	Mar. 4-18.	17	4
Great Britain—Leith	Mar. 4-11.	1	
Gt. Britain—Newcastle-on-Tyne	Mar. 6-13.	3	
Great Britain—Nottingham	Mar. 11.	1	
Great Britain—South Shields	Mar. 6-13.	1	
India—Bombay	Feb. 21-28.	148	
India—Calcutta	Feb. 13-15.	7	
India—Karachi	Feb. 19-26.	21	3
India—Madras	Feb. 18-24.	11	8
Italy—Catania	Feb. 23-Mar. 16.	8	
Italy—Lecco Province	Feb. 23-Mar. 9.	9	
Italy—Palermo	Feb. 11-25.	24	10
Japan—Kobe	Feb. 15.	1	
Japan—Matsuyama	Feb. 15.	1	
Japan—Nishiwagun	Feb. 11.	16	
Russia—Moscow	Feb. 25-Mar. 4.	8	2
Russia—Odessa	Feb. 18-Mar. 11.	13	4
Spain—Barcelona	Mar. 1-10.	9	2
Straits Settlements—Singapore	Feb. 4-11.	2	
Turkey—Constantinople	Feb. 26-Mar. 12.	5	
West Indies—Grenada	Feb. 23-Mar. 9.	8	

Yellow Fever.

Brazil—Rio de Janeiro	Feb. 12-26.	23	6
Panama—Panama	Jan-Mar. 13.	40	17

Cholera.

India—Calcutta	Feb. 18-25.	1	15
Russia—Baku	Jan. 31-Feb. 10.	1	
Russia—Erivan	Jan. 23-30.	1	
Russia—Ural Territory	Jan. 31-Feb. 10.	1	
Turkey in Asia—General	Jan. 21-Feb. 4.	1	
Turkey in Asia—Van	Jan. 21-28.	2	4

Plague—Insular.

Philippine Islands—Manila	Jan. 28-Feb. 11.	5	5
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Plague—Foreign.			
Africa—Cape Colony	Feb. 4-11.	1	
Arabia—Aden	Feb. 18-25.	269	242
Australia—Brisbane and vicin	Jan. 2-Feb. 11.	9	3
Australia—Bundaberg	Feb. 3.	1	
Australia—Clarence River dist. Jan. 10-28.		3	1
Brazil—Rio de Janeiro	Feb. 12-26.	4	6
Brazil—Taubete	Feb. 18.	1	
Chile—Arica	Mar. 4.		Present.
Chile—Iquique	Mar. 4.		Present.
Chile—Pisagua	To Feb. 23.	104	
Egypt—Suez	Feb. 8-23.	7	5
Egypt—Tulk	Feb. 16-23.	1	
India—General	Feb. 18-25.	31,053	27,837
India—Bombay	Mar. 28.	1	
India—Calcutta	Feb. 18-25.	1	130
India—Karachi	Feb. 5-12.	65	63
India—Madras	Feb. 18-24.		3
India—Rangoon	Feb. 9.	13	

The following cases have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending April 8, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington	Mar. 18-25.	3	
Florida—Jacksonville	Mar. 25-Apr. 1.	5	
Illinois—Cairo	Mar. 28.	1	
Illinois—Chicago	Mar. 18-Apr. 1.	36	3
Kentucky—Covington	Mar. 25-Apr. 1.	1	
Missouri—St. Louis	Mar. 25-Apr. 1.	40	9
New York—New York	Jan. 6-Mar. 31.	66	2
Ohio—Toledo	Mar. 18-Apr. 1.	7	
Pennsylvania—Altoona	Mar. 25-Apr. 1.	1	
Pennsylvania—Steelton	Mar. 25-Apr. 1.	1	
Tennessee—Memphis	Mar. 25-Apr. 1.	8	
Tennessee—Nashville	Mar. 25-Apr. 1.	3	

Smallpox—Foreign.

Brazil—Rio de Janeiro	Feb. 28-Mar. 12.	16	9
Canada—Hamilton	Mar. 1-31.	1	
China—Shanghai	Feb. 11-Mar. 4.	3	

3 cases for
eigners, 18 deaths
natives.

France—Paris	Mar. 11-18.	22	1
France—St. Etienne	Feb. 19-28.	1	Present.
Great Britain—Bradford	Feb. 25-Mar. 11.	4	
Great Britain—Cardiff	Mar. 4-11.	1	
Great Britain—Hull	Mar. 11-18.	3	
Great Britain—Leeds	Mar. 11-18.	13	2
Great Britain—Leith	Mar. 11-18.	2	
Great Britain—London	Mar. 11-18.	9	
Gt. Britain—Newcastle-on-Tyne	Mar. 11-18.	2	
Great Britain—Nottingham	Mar. 11-18.	2	
Great Britain—Sheffield	Mar. 11-18.	2	
Great Britain—South Shields	Mar. 11-18.	3	1
India—Bombay	Feb. 28-Mar. 7.	186	
India—Calcutta	Feb. 25-Mar. 7.	12	
India—Karachi	Feb. 26-Mar. 5.	4	1
India—Madras	Feb. 25-Mar. 3.	3	
Italy—Catania	Mar. 2-23.	7	
Italy—Palermo	Feb. 25-Mar. 18.	42	8
Japan—Formosa	Feb. 1-28.	1	
Mexico—City of Mexico	Feb. 11-Mar. 25.	22	9
Russia—Moscow	Mar. 4-11.	4	2
Russia—Odessa	Mar. 11-18.	6	3

Plague—Insular.

Philippine Islands—Manila	Feb. 11-18.	2	1
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Yellow Fever.

Brazil—Rio de Janeiro	Feb. 26-Mar. 12.	31	12
Mexico—Coatzacoalcas	Mar. 18-27.	1	
Mexico—Merida	Mar. 18-23.	1	1
Panama—Colon	Jan. 23-Mar. 29.	4	1
Panama—Panama	Jan. 1-Mar. 18.	42	18

Cholera.

India—Calcutta	Feb. 25-Mar. 4.	39	
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Plague—Foreign.

Africa—Brazil—Cape Colony	Feb. 18-25.	1	1
Africa—East Africa	Feb. 11-18.	25	25
Arabia—Aden (corrected)	Feb. 11-18.	254	244
Arabia—Aden	Feb. 28-Mar. 10.	299	268
Australia—Brisbane	Feb. 11-18.	5	
Australia—Clarence and Richmond River districts	Feb. 4-11.	1	
Australia—New Castle	Mar. 27.		Present.
Brazil—Rio de Janeiro	Feb. 26-Mar. 12.	4	1
Egypt—Suez	Feb. 25-Mar. 4.	1	
India—General	Feb. 18-25.	34,154	29,465
India—Bombay	Feb. 28-Mar. 7.	1	850
India—Calcutta	Feb. 25-Mar. 14.	213	
India—Karachi	Feb. 26-Mar. 1.	60	58
India—Rangoon	Feb. 6-13.	10	8
Japan—Formosa	Feb. 1-28.	177	169

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 5, 1905:

BAILEY, C. W., Acting Assistant Surgeon. Granted leave of absence for four days from April 10th.

BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for two days.

BILLINGS, W. C., Passed Assistant Surgeon. Granted leave of absence for one day, March 23rd.

BILLINGS, W. C., Passed Assistant Surgeon. Granted leave of absence for six days from April 5th.

BROWN, B. J., JR., Acting Assistant Surgeon. Granted leave of absence for two days from April 4th.

COLLINS, G. L., Assistant Surgeon. Granted leave of absence for seven days from March 31, 1905, under paragraph 191 of the regulations. Granted five days' extension of leave of absence from April 6th.

GODFREY, JOHN, Surgeon. Granted leave of absence for one month from April 15th.

KEATLEY, H. W., Acting Assistant Surgeon. Granted leave of absence for four days from March 29th, under paragraph 210 of the regulations.

MAGRUDER, G. M., Surgeon. Relieved from duty at Cincinnati, Ohio, and directed to proceed to San Francisco, Cal., assuming command of the service, and relieving Passed Assistant Surgeon W. G. Stimpson.

MCCORMAC, J. T., Acting Assistant Surgeon. Granted leave of absence for five days from April 4th.

NYDEGGER, J. A., Passed Assistant Surgeon. Granted leave of absence for one day, March 6, 1905.

PARKER, H. B., Passed Assistant Surgeon. Granted leave of absence for six days from April 2, 1905, under paragraph 191 of the regulations.

ROBINSON, D. E., Passed Assistant Surgeon. Upon the arrival at Port Townsend, Wash., of Passed Assistant Surgeon W. G. Stimpson, to report to him for duty and assignment to quarters.

STEVENSON, J. W., Acting Assistant Surgeon. To assume temporary charge of the service at Cincinnati, Ohio. April 3, 1905. Granted leave of absence for thirty days, on account of sickness, from February 27th.

STIMPSON, W. G., Passed Assistant Surgeon. Upon being relieved at San Francisco, Cal., by Surgeon G. M. Magruder, to proceed to Port Townsend, Wash., assuming command of the service, and relieving Passed Assistant Surgeon D. E. Robinson.

WARREN, B. S., Assistant Surgeon. Granted leave of absence for four days from April 3rd.

WALKER, R. T., Acting Assistant Surgeon. Granted leave of absence for twenty days from March 30th.

YOUNG, G. B., Passed Assistant Surgeon. Detailed to represent the service at the meeting of the Council on Medical Education of the American Medical Association at Chicago, Ill., April 20th.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending April 8, 1905:

CLIFFORD A. B., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the Navy Yard, New York, N. Y.

COWAN, J., Pharmacist, retired. Ordered to the Naval Recruiting Station, New York, N. Y.

DESSEZ, P. T., Assistant Surgeon. Detached from the *Kentucky* and ordered to the Naval Hospital, Norfolk, Va., for treatment.

FARWELL, W. G., Medical Director. Retired from active service in accordance with the provisions of Section 1444, Revised Statutes, April 5, 1905, upon which day he will have reached the aged of sixty-two years.

FIELD, J. G., Surgeon. Appointed a surgeon in the United States Navy from March 3, 1905.

FITTS, H. B., Surgeon. Detached from the *Buffalo*, when placed out of commission, and ordered to the *Lawton*.

FREEMAN, G. F., Passed Assistant Surgeon. Ordered to the Naval Station, Olongapo, P. I.

GUTHRIE, J. A., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from January 1, 1905.

MILLER, J., JR., Assistant Surgeon. Detached from the

Buffalo when placed out of commission and ordered to the *Lawton*.

ORVIS, R. T., Surgeon. Commissioned surgeon, with the rank of lieutenant commander, from January 1, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 8, 1905:

ADAIR, GEORGE W., Lieutenant Colonel and Deputy Surgeon General. Left St. Paul, Minn., on thirty days' leave of absence.

BIRMINGHAM, H. P., Major and Surgeon. Ordered to make medical and sanitary inspection at Forts Clark and Bliss, Texas, Forts Sill and Reno, Oklahoma Territory, and Fort Logan H. Roots, Arkansas.

CARTER, EDWARD C., Major and Surgeon. Relieved from further duty at Fort Yellowstone, Wyoming, and ordered to Fort Brady, Michigan, for duty.

EDIE, GUY, L., Major and Surgeon. Ordered to report to the Secretary of War for duty as attending surgeon to accompany him to the Philippine Islands and return to this city.

FRICK, E. B., Major and Surgeon. Ordered to take charge of the Chief Surgeon's Office, Department of Dakota, during the chief surgeon's absence on leave.

GIRARD, A. C., Assistant Surgeon General and Brigadier General. Appointed a brigadier general, to rank from April 6, 1905.

KULP, JOHN S., Captain and Assistant Surgeon. Relieved from duty in the Department of California, and ordered to the Philippine Islands for duty, to sail on transport, April 30, 1905.

MANLY, C. J., Captain and Assistant Surgeon. Relieved from duty at Fort Brady, Mich., and ordered to Fort Yellowstone, Wyoming, for duty.

MAUS, L. M., Lieutenant Colonel and Deputy Surgeon General. Relieved from duty at Fort Riley, Kansas, and ordered to San Antonio, Texas, for duty as chief surgeon of that department.

ROCKHILL, E. P., First Lieutenant and Assistant Surgeon. Granted thirty days' sick leave of absence, with permission to apply for thirty days' extension.

USHER, F. M. C., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Yellowstone, Wyoming, and ordered to Fort Brady, Michigan, for duty.

WELLS, GEORGE M., Major and Surgeon. Retired from active service.

Births, Marriages, and Deaths.

Born.

DEAN.—In Chicago, Illinois, on Friday, March 24th, to Dr. Elmer A. Dean, United States Army, and Mrs. Dean, a daughter.

Married.

HOUGHTON—WHITAKER.—In Philadelphia, on Saturday, March 18th, Dr. Charles W. Houghton and Mrs. Sarah J. Whitaker.

WILKENS—BEATIN.—In Philadelphia, on Tuesday, March 28th, Dr. George L. Wilkens and Miss Annie Beatin.

Died.

DREWRY.—In Mineola, Virginia, on Monday, April 3rd, Dr. Samuel D. Drewry, in the seventy-fourth year of his age.

GILBERT.—In Liberty, N. Y., on Wednesday, March 29th, Dr. Thompson D. Gilbert, in the thirtieth year of his age.

HADEL.—In Baltimore, Maryland, on Tuesday, April 4th, Dr. Albert Kimberly Hadel, in the fifty-fifth year of his age.

SAUERBRIE.—In Clarksville, N. Y., on Sunday, April 2nd, Dr. Fred Sauerbrie.

New York Medical Journal AND Philadelphia Medical Journal.

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SATURDAY, APRIL 22, 1905

WHOLE NO. 1377.

Original Communications.

THE VALUE OF THE RADIOGRAPH IN DIAGNOSIS.*

By SINCLAIR TOUSEY, A. M., M. D.,

NEW YORK,

SURGEON TO ST. BARTHOLOMEW'S CLINIC.

The first case is that of W. R. D., a man aged 22 years, a patient at St. Bartholomew's Clinic. There was a congenital deformity of both feet which had become so exaggerated as to cripple him and necessitate the wearing of shoes of a very awkward shape. A radiograph (Fig. 1) showed the phalanges of the great toes to be at a right angle to the metatarsals. The case interested me from the standpoint of an x ray specialist, and the radiographs made at different stages were very helpful in the treatment of the condition. I operated on the left foot in May, 1904; a dorsal incision being made over the metatarsophalangeal articulation, and a cuneiform osteotomy being done, as indicated by the black lines. This removed the greater part of the head of the

metatarsal bone by two cuts with the chisel, one transverse to the long axis of the bone just behind the articular surface, and one almost at right angles with the first, removing a wedge which included nearly, but not quite, all of the articular extremity of the metatarsal bone. The phalanx was not touched. Fig. 2 shows the condition after operation on the left foot and before operation on right foot. Figs. 3 and 4 show the present condition of both feet. This is five months after the last operation; both great toes are straight and there is the normal mobility at the metatarsophalangeal articulations. In this connection the accompanying skiagraph (Fig. 5) of a practically normal foot may prove of interest. In all these radiographs a sesamoid bone is visible and looks almost like an exostosis.

The patient with congenital injury to the shoulder is a boy, aged 7 years, with a story that when he was born the doctor took him by the left arm and threw him across the room. He has never been able to move his left arm since. Ordinary methods of examination showed complete ankylosis at the shoulder, the humerus moving only so far as the scapula could follow it, flattening of the shoulder without muscular atrophy, the point of the acromion apparently projecting about

* Read at a meeting of the Orthopaedic Section of the Academy of Medicine.

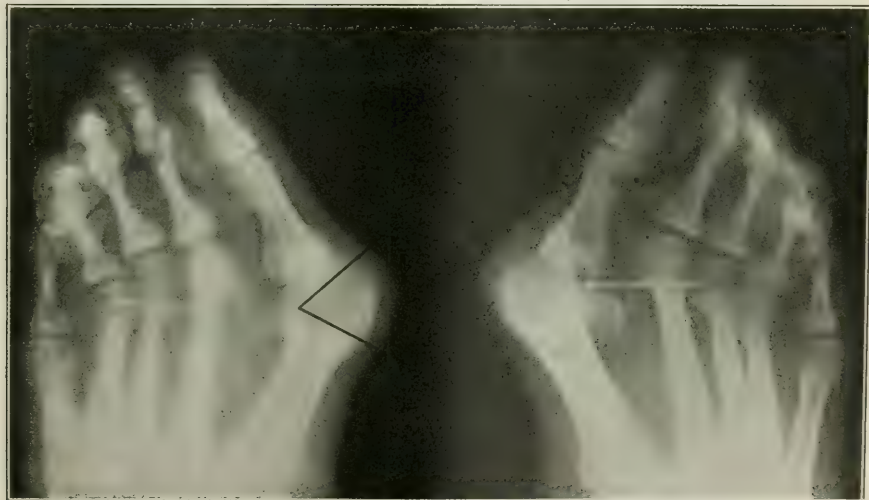


FIG. 1.—Bromide print radiograph of both feet before operation for hallux valgus.



FIG. 2.—Hallux valgus. Right foot before, left foot after operation.



FIG. 4.—Hallux valgus. Radiograph showing condition after operation on both feet.

an inch further than normal over the upper end of the humerus. The head of the humerus could not be felt, either in the glenoid cavity or anywhere else. The boy had good use of the arm through a limited radius of motion, and was able to climb trees, etc. The accompanying skiagraph shows the sound shoulder (Fig. 6) with its rounded outline formed by the head of the humerus and the upper extremity of the shaft of the humerus large and well developed. The other shoulder (Fig. 7), however, shows the upper part of the shaft of the humerus only two thirds the normal size, and perched upon its upper extremity is a little knob, of the size of a marble, which represents the head of the bone. The flattened contour of the shoulder is readily seen to be due to the absence of the rotundity of the humeral head. An indication of the ankylosis is seen in the skiagraph, where we notice that the spine of the scapula is tilted above the level of the clavicle when the arm is at the side. My diagnosis is congenital injury to the osteoplastic cartilage and consequent lack of development; my advice was not to attempt any surgical treatment.



FIG. 3.—Hallux valgus. Condition five months after operation on the second foot.



FIG. 5.—Radiograph of a normal foot.



FIG. 6.—Normal shoulder (case having congenital injury of the other shoulder).

Another radiograph which may be interesting in this connection illustrates the case of a young lady, with loss of function at the shoulder joint, upon whom thousands of dollars had been spent; for whom the efforts of the best orthopædists in this country and Europe had accomplished practically nothing. The history is too long for the present paper, but the fluoroscope showed at a glance that on the sound side the rounded head of the humerus and the glenoid cavity formed a natural ball and socket joint with almost unlimited range of motion, while on the affected side (Fig. 8) the flattened and irregular head of the humerus could not possibly form part of a joint with a normal range of motion. Here, too, my advice was to avoid surgical interference, to do everything possible to promote the nutrition of the atrophied muscles about the shoulder, and to prevent further morbid changes in the joint, for this was apparently an acquired condition.



FIG. 7.—Congenital epiphyseal separation of the head of the humerus.



FIG. 8.—Ankylosis at shoulder, the result of an anatomical change in the head of the humerus.



FIG. 9.—Seven months old fracture of the neck of the femur.

The third case which I am permitted to report is that of Miss L. C., aged 38 years, and weighing 140 pounds. She was brought to my office by Dr. R. W. Eastman and the history is briefly that the left hip was broken seven months before, that she was treated in a hospital chiefly by rest in bed and traction, that there is shortening of one and one half inches, and that she still has to walk with two crutches. On inspection the great trochanter was found to be very prominent beneath the glutei. The radiograph (Fig. 9) shows an intracapsular fracture of the neck of the femur with displacement upward, the head of the femur remaining in the acetabulum. There is no evidence of bony union having taken place.

Pictures like the last, of course, require the best apparatus and technics, but granted these conditions they are taken with such a short exposure as to be absolutely devoid of risk. This hip picture was made with a moderate current of only nine ampères, with the tube at a distance of 19 inches from the plate and an exposure of one hundred and fifty seconds in all.

One more radiograph (Fig. 10) may be of interest. This is of a man, Mr. T. F., weighing 175 pounds, brought to my office by Dr. Leroy Broun

to be examined for renal calculi. The exposure was for two minutes at a distance of 22 inches from the plate. The picture shows seven or eight large calculi, looking like a bunch of grapes, and will probably interest the members present to-night, because of the beautiful detail shown in the spinal articulations. Perhaps I ought to add that none of my pictures is ever touched up. They are all exactly as produced by exposure to the x ray.

103 WEST SEVENTY-SIXTH STREET.

HÆMATOMA OF THE VULVA AND THE VAGINA.

By I. L. HILL, M. D.,

NEW YORK,

CLINICAL INSTRUCTOR IN OBSTETRICS, CORNELL UNIVERSITY
MEDICAL COLLEGE.

Hæmatoma of the vulva and of the vagina was first described in 1554, by Rueff, of Zurich, in a short paragraph under the heading *Tumeur sanguine de la vulve et du vagin*. It was not mentioned again until one hundred and fifty years later, when it was briefly referred to by Philippe Peu. In

1734 it was made the subject of a thesis by Kronauer, of Bâle. The subject received attention at short intervals from this time on and during the hundred years following Baudelocque, Boer, Audibert, and Mme. La Chapelle contributed case reports, while Legouais and Siebenhaar added practical observations. In 1830 Deneux published a notable monograph on Thrombus of the Vulva. In American medical literature the subject was first treated independently by Dewees (*Phil. Med. Journal*, Nov., 1827). Velpeau, '34; H. Blot, '53; Cazeau, '56; Populus, '57; Scanzoni, '67; Elliott, '68; Hervieu, '70; Doléris, '83; Barker, '86; Mme. Sasonoff, '86; Cadillac, '94; Budin, '86 to '98, have all made important contributions.

Hæmatoma, which has been called variously thrombus of the vulva and the vagina, labial hæmatocele and pudendal hæmatocele, is a tumor due to an extravasation of blood into the connective tissue of the labia majora or of the vaginal wall. It extends frequently into the perinæum as far as the



FIG. 10.—Renal calculi, looking in the radiograph like a bunch of grapes. Beautiful detail in the spine.

anus and sometimes to the buttocks. In its extensions upward the extravasation may invade the subperitoneal tissue, even reaching the region of the diaphragm. The effusion of blood coagulates rapidly. Most frequently a globular tumor is formed, but, because of the greater resistance of certain tissues in the course of the invasion, hour glass shaped tumors or cylindrical tumors with fusiform proliferations are met with. A considerable œdema extending beyond the limits of the actual extravasation of blood adds to the deformity of the parts. The actual tumor varies in size from a hazel nut to a cricket ball or to a large canteloupe. One case has been reported with a diameter of 21 cm., and the case that the author presents was probably no less.

Hæmatoma is usually found at one side of the vagina, but it may extend beyond the median line and is sometimes bilateral. Sixty per cent. of all cases are of one labium primarily, twenty-five per cent. are vaginal, ten per cent. intrapelvic and five per cent. are of the labia of both sides.

Attempts have been made to classify hæmatomata according to the tissues chiefly invaded. Laborie has made an elaborate classification which cannot be taken seriously; for, as Budin says in discussing it, "the army of invasion does not respect the frontiers of the country invaded." Budin recognizes: 1st, hæmatomata of the labia; 2d, hæmatomata of the vaginal wall; 3d, pelviabdominal hæmatomata.

Anything that causes a stagnation of the local circulation is a predisposing cause, anything that endangers the integrity of the vessel walls may be an exciting cause of hæmatoma. The great vascularity of pregnancy and the varices are the chief predisposing causes, but that the predisposing causes are, after all, relatively unimportant is seen from the extreme rarity of the accident. External violence or muscular exertion in their various expressions are the exciting causes. In pregnancy it is the long walk or the strain of severe vomiting, in labor, manual or instrumental interference on the part of the accoucheur, or the straining of the patient. After labor, the hand of the operator removing the placenta may cause the rupture. But most frequently in cases occurring after labor the damage has been done during the expulsive act. The foetal body has then acted as a tampon. The pressure has stopped the hæmorrhage. Later some external force or the relaxation of the tissues has dislodged the guarding clot and the blood has poured into the tissues unimpeded.

An interesting feature is the frequent occurrence, of hæmatoma between the births of twins. The condition is brought about by the injuries received during the birth of the first child. The second child's delivery is often impeded by the tumor.

Dubois, in 14,000 cases, reports two hæmatomata, Hugenberger in the same number of births reports eleven cases. The author has personally encountered three cases. The consensus of opinion is with Mme. Sasonoff, who estimates one case for 2,500 labors. It is safe to assume that many cases of small size are overlooked or disregarded.

More than fifty per cent. of all cases, according to all observers, occur after delivery. Of the remainder only about ten per cent. occur before the second stage of labor and they are divided equally between the first stage and pregnancy.

Pain, sudden appearance of a tumor, and *hæmorrhage* are the cardinal symptoms of hæmatoma.

The pain varies in intensity. Sometimes it is slight, particularly directly after the passage of the foetal body, when the tissues are relaxed, and the pressure anaesthesia still exists. At first there is a pin prick sensation, then follow sharp pains radiating to the lumbar regions and thighs as the violent distention of the tissues takes place. After this, as the tissues become less sensitive from the prolonged pressure of the tumor, there is a feeling of extreme tension. Vesical and rectal tenesmus are present in all cases of considerable size.

The formation of tumor is very rapid. In the case of vulval tumors, the growth is perceptible to the eye. The tumor is glistening in appearance and dark blue, purple, or even black in color. Rectal or vaginal examination is difficult if the tumor is large. The vaginal tumors cannot at first be seen. Pain or tenesmus attracts attention and a vaginal examination determines the presence of the tumor. Lochial discharges are sometimes blocked by the hæmatoma. The walls of the tumor may remain intact or may rupture with the discharge of blood and clots, diminution of pain following.

While the tumor is usually very rapid in formation and attains its full development in a few hours, occasionally the increase is intermittent, clots alternately forming and being dislodged.

The simplest and happiest termination of hæmatoma is by resolution. Here, after coagulation, gradual contraction and diminution of the tumor follows until, after from three to six weeks, only a slightly indurated area marks its site. Rupture of the hæmatoma is frequent. It may occur during the formation of the tumor from excessive distention, from violence, or strain (especially during labor) or from thinning or necrosis of the sac. The amount of hæmorrhage following rupture varies. It may result fatally. Infection of the mass, with suppuration, was formerly a frequent termination, and many of the deaths reported by early observers were due to this complication. Under the present methods this termination is now infrequent.

The diagnosis of hæmatoma is generally easy. The

sudden appearance of the tumor and the rapid development of the train of pressure symptoms is characteristic. Abscess of a vulvovaginal gland might possibly be thought of, but the less rapid development would eliminate it. An unilateral œdema, if encountered, might on purely objective examination cause some confusion. Œdema is always present in vulval hæmatoma and in the presence of a local œdema, the absence of a small deep seated hæmatoma could not immediately be shown. Vaginolabial hernia would also have to be considered. Cystocele with distended bladder, which might be suggested by the vaginal form of hæmatoma, could readily be eliminated by the use of the catheter. Cases are reported in which the tumor has been mistaken variously for cyst of the vagina, retroversion, inverted uterus, and uterine polypus.

If we take an estimate from all cases of hæmatoma reported in medical literature, we will encounter a very high mortality. For example:

Deneux reports 66 cases, with 22 deaths.

Populus reports 34 cases, with 5 deaths.

Blot reports 19 cases, with 5 deaths.

In these cases we have a mortality of twenty-seven per cent. But we find that in fully half of these cases which occurred before the era of antiseptics, the cause of death was septicæmia. Mme. Sasonoff cites seventeen patients of whom seven died of hæmorrhage and ten of septic infection. We would expect to find a marked reduction in the number of cases terminating fatally from sepsis under the present methods. We are borne out in this by the report of Winckel. He submits a series of cases treated during the reign of antiseptics. The mortality in these cases was twelve per cent. and hæmorrhage was practically the sole cause of death. We must consider the occurrence of hæmatoma a grave event and hæmorrhage the chief source of danger.

Fortunately the largest number of cases occur after labor has been completed. When rupture occurs in such cases, we are confronted with a simple case of hæmorrhage which we can treat independently. But the appearance of a vaginal hæmatoma in the second stage of labor is a matter of greater gravity. The tumor if large causes a dystocia. Rupture is then inevitable. The pressure of the presenting part may bring this about. But frequently the operator elects to empty the tumor to deliver the child. Vaginal hæmatoma in the course of the expulsive stage of labor may be said to present dangers parallel to those of placenta prævia.

Treatment of hæmatoma must be expectant. Deneux outlined a system of prophylactic treatment in which he counseled among other preventive measures the puncturing of all varices in preg-

nancy. Inasmuch as the occurrence of hæmatoma is so rare that many textbooks of obstetrics do not even mention the subject, it would seem that such an extreme of prophylactic prudence would hardly meet with favor. Aside from the annoyance to the patient, it is even doubtful that the puncturing of varices in a thousand or more patients would not cause complications quite as serious in the total as the one case of hæmatoma we might expect in this number of cases.

Some authors have advised immediate use of the knife when a hæmatoma appears during pregnancy. As there is always the possibility of the fœtus passing without rupturing it, we may as well take the benefit of this chance. When the tumor first appears during the expulsive stage, we need not deviate from this policy unless unmistakable dystocia is produced.

In the largest class of cases hæmatoma appears after the birth of the child. The consensus of opinion among the most authoritative writers who have discussed this question is that the best results will follow a plan of treatment which favors the contraction or absorption of the tumor. If the hæmatoma is very large it is probable that pressure necrosis of the coverings of the blood mass will eventually allow a rupture. When this event seems imminent, the tumor should be generously incised. After incision the clots should be turned out, the bleeding points ligated, and the cavity irrigated with an antiseptic solution and packed with gauze. Up to the time that incising is indicated, ice, astringents, and pressure should be applied to favor contraction and absorption. The after-treatment of a hæmatoma which has been opened and packed consists of removing the packing, irrigating and packing again with a less quantity of gauze until the cavity has closed from the bottom. It is needless to say that there is occasion for intelligent general treatment of a patient suffering from hæmatoma. The conditions brought about by the hæmorrhage demand appropriate general treatment. Shock must be combated and elimination favored.

REPORT OF CASE.

Mrs. E., German, aged 22 years, para II. Previous history of no illness except diseases of childhood. First confinement normal. Weight of child first confinement, 7 pounds. Was delivered of second child November 2, 1902; labor precipitate. The attendant was summoned when the first pains were felt, but on his arrival fifteen minutes later the child was already born. Weight of child, 9 pounds. Circumferences: Occipitomental, 15 $\frac{3}{4}$ inches; suboccipitobregmatic, 12 inches; biparietal, 12 $\frac{3}{4}$ inches.

The third stage was completed without assistance twenty minutes after the birth of the child. Weight of placenta, 1 $\frac{1}{2}$ pounds. Size, 6 inches by 7 inches.

No anomalies. There was no bleeding after the third stage was complete from the uterus, cervix, vagina, or perineum. The uterus was firmly contracted. A vaginal douche, mercury bichloride 1 to 6,000, was given and fluid extract of ergot, 1 drachm, was administered. An abdominal binder was applied and the vulva dressed. Patient's temperature was 99, pulse 68.

Six hours later the attendant was hurriedly called to the case. The patient reported that she had suddenly felt a sharp pain in the vulva. This had been followed by a painful feeling of pressure. She felt faint and nauseated. Temperature was 100, pulse, 140. On inspection, an enormous hæmatoma of the vulva was found. The external circumference was much greater than a foetal head. The parts were distorted. The tumor, which had its origin on the left side, drew upon all the surrounding tissues for its coverings. The upper and inner quadrant of the presenting sphere was covered with the greatly stretched vaginal wall; the outer portion drew upon the superficial integuments as far as the thigh. The tumor seemed to merge into the thigh itself. Below, the perineum was involved. The anus gaped widely and for an area of over two square inches the rectal tissues formed the external covering of the sphere. The globe was glistening and the color purple, the anal and vaginal portions almost black. The surrounding tissues were œdematous. The œdema extended above, beyond the pubes, externally midway down the thigh, and behind into the buttocks. The right labium was also involved in the œdema. The tumor was uniformly tense and hard. The surrounding tissues were tense but boggy on pressure. A finger was passed with great difficulty into the vagina by pressing firmly against the right vaginal wall. The entire vagina was occluded. The finger could not be passed into the rectum, as the sphincters were already stretched to the point of endurance. A probe passed into the rectum showed that the passage was completely plugged and that the tumor filled the pelvis below. There was no external bleeding. The patient was in a state of profound shock. Immediately general treatment for hæmorrhage was insti-

tuted. Externally an astringent, antiseptic, wet dressing was applied and covered with an ice pack. With much difficulty the patient was catheterized. Saline cathartics were given. A soft catheter was passed into the rectum and saline enemata were given. After twenty-four hours the patient's general condition was fair. Temperature, 100.6°; pulse, 120. The œdema had subsided somewhat and the tumor decreased considerably in size. At this time the photograph which is reproduced here was taken. There were some fluctuating places on the tumor.

On the third day there was a slight decrease in the size of the tumor, but pressure necrosis had begun near the sphincters and at several other points. It was apparent that the mass would rupture spontaneously. With careful aseptic precautions, a vertical incision five inches long was made at the juncture of the vaginal mucous membrane and the skin of the external genitalia. Huge clots, a pint and a half in the aggregate, were removed. There were no bleeding points of consequence, but there was some oozing. The cavity was irrigated with mercury bichloride solution and packed with sterile gauze. The day following the patient's temperature was 100.6°; pulse, 116. The packing was removed. There was very little oozing. The cavity was irrigated with a hot antiseptic solution and the packing was reinserted, less compactly than before.

This treatment was carried on for ten days, the packing being decreased in quantity, day by day, until on the tenth day it was little more than a small gauze drainage. After four weeks the patient had fully recovered. The child had been placed with a wet nurse and was in excellent health. No secretion of milk had appeared in the mother's breasts, although she had had an abundant supply in her first parturition.

The patient was examined by the author a short time ago and bore no noteworthy evidences of her trouble.

712 MADISON AVENUE.

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THE SYMPTOMATOLOGY AND DIAGNOSIS OF ATYPICAL FORMS OF PNEUMONIA.*

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The term pneumonia, signifying an inflammation of the lungs, is generally applied both clinically and pathologically to two essentially dissimilar conditions—bronchopneumonia and croupous pneumonia. This nosological error is the more unfortunate since it not rarely happens that cases of the one form of pneumonia bear clinically a more or less superficial resemblance to the other form and even upon the post mortem table there are, though much more rarely, cases in which a similar superficial resemblance of the lesions of the two forms may be observed. Nor does the use of the terms lobular and lobar pneumonia greatly simplify the matter, for there are cases of bronchopneumonia in which the pulmonary lesions involve the whole of large masses of lung tissue or even an entire lobe on the one hand, while upon the other there are cases of croupous pneumonia in which the lesions are limited, circumscribed, or even lobular. But those are exceptional.

There is abundant reason to believe that a failure on the part of practitioners to discriminate between these two essentially distinct diseases known as pneumonia, even in cases in which the diagnosis is obvious, has been the cause of misleading therapeutic conclusions and rendered much of the statistical data relating to the morbidity and mortality of croupous pneumonia absolutely worthless. It is to be hoped that the clearer and more precise modern methods on the part of the teachers alike of clinical medicine and of pathology will lead to a more general recognition of the fact that in practice we have to deal daily and side by side with a local inflammatory process and a constitutional infection with a local pulmonary exudate, both of which we call pneumonia, and to differentiate them by the use of the proper qualifying adjectives bronchial and croupous. Then, and not until then, will there be value in the statistics.

Words are the tools of thought and to those who make the distinction referred to habitually and as accurately as circumstances permit the classification of the observed facts is comparatively easy and an intelligent scheme of the various forms of pneumonia is possible. To those, however, who fail to make this distinction the subject of the classification of the facts remains elusive and unsatisfactory from every point of view. When the division of the cases into the two groups is systematically made a large group of cases commonly regarded as atypical at once fall into their proper nosological category as

* Read before the Philadelphia County Medical Society.

forms of bronchopneumonia. These include among others, for example, since these remarks are intended to be suggestive and in no sense to constitute a systematic discussion of the subject, acute pneumonic phthisis, syphilitic pneumonia, many of the reported cases being apparently tuberculous, inhalation or deglutition pneumonias, postoperative and anæsthesia pneumonias, hypostatic pneumonias, and influenzal pneumonias. The pneumonias of other acute infections, especially measles and pertussis, also must be referred to this great group.

Speaking from the ætiological standpoint the initial pneumonia of rare cases of enteric fever—pneumotyphus of the French—though it is not a bronchopneumonia in the ordinary sense, cannot be regarded as an atypical form of croupous pneumonia. On the other hand, the pneumonia which occurs in malaria would appear to be in most instances an intercurrent croupous pneumonia.

When the above cases are referred to their proper nosological position there remains to be considered the second great group of cases of croupous pneumonia, probably the most important of the acute infectious diseases of the present historical epoch. just as enteric fever was the most important of the last century, typhus of the previous three centuries, and the plague the most important of the middle ages. The plague, typhus, and enteric fever have lost their terrors for our civilization because our methods of living are hostile to their spread and we have learned, even if we do not universally observe them, the sanitary laws by which they can be controlled.

Croupous pneumonia yet defies us. We are as ignorant of the causes of its endemic prevalence as our fathers were of the causes of the epidemics of the great pests of their historical times. The problems in regard to it which we are resolutely setting ourselves to solve—for it is a matter of life or death—contain unknown quantities which at present baffle solution. But the great problems of the past have been successfully and brilliantly solved and preventive medicine is capable of this great ordeal of the present.

The typical form of croupous pneumonia, the classical form, is alike at the bedside, upon the post mortem table, and in the laboratory as it comes into evidence from both life and death, the very type of an infection in which the clinical phenomena and the pathological findings are correlated. In the whole domain of clinical pathology it would be difficult to find a better example of conformity to type. Yet here, as in all biological research, we no sooner recognize the type than our attention is drawn to the variants. Clinically, there is every degree of departure from

type to extremes beyond our art to recognize. Pathologically the lesion, however circumscribed, however remote from the ken of the clinician, is definite and characteristic. Symptoms and signs may be at fault, but the fibrinous exudate and the pneumococci are there.

It is difficult, therefore, to draw a sharp line between the classical and the atypical cases. Here, as in other uncertain matters in our art, we are compelled to content ourselves with conventions. It is generally agreed among descriptive writers upon croupous pneumonia that the cases occurring in infancy and old age and in drunkards are atypical. Yet most of us have many times seen perfectly typical cases under these conditions. Nevertheless the following forms are generally regarded as differing sufficiently widely from the type to deserve separate and special consideration:

1. *Pneumonia in Infants*.—The local lesion in this form is much more common in the upper lobes than in adults. Like other infectious diseases, at this period of life it often sets in with convulsions. Cerebral symptoms, especially torpor, retraction of the muscles of the back of the neck, occasional excitement with muscular twitching, may suggest meningitis. Cough may be slight or, as in cases that I have seen, absent altogether.

2. *Pneumonia in the Aged*.—The disease may develop insidiously and without a chill. Cough and expectoration are slight and the physical signs obscure. There is great tendency to pulmonary œdema. The gravity of the constitutional symptoms is altogether out of proportion to the local lesions as indicated by the physical signs. The prognosis is grave.

3. *Pneumonia in the Alcoholic*.—*Pneumonia Potatorum*.—This form is often overlooked, since the symptoms are masked by those of delirium tremens, especially when the attack occurs during a debauch. The onset is insidious and the fever slight or absent altogether. The stitch in the side, cough and expectoration, even dyspnoea may be absent altogether and the actual condition recognized only upon routine examination.

A second variety of this form of croupous pneumonia is seen in individuals who are habitual consumers of alcohol in large amounts, but who do not present the signs of intoxication. Here the pneumonia begins in the usual manner, abruptly with a chill, pain in the chest, dyspnoea, and elevation of temperature. Cardiac failure, septic phenomena, and prune juice expectoration speedily develop, and profound asthenia is a characteristic condition. The prognosis in such cases is highly unfavorable.

4. *Toxic, So Called Typhoid Pneumonia*.—This condition is a pneumococcus septicæmia with secondary infection. The constitutional phenomena are severe; the evidences of pulmonary exudate are slight or absent altogether. Profound asthenia, ataxic symptoms, and wandering delirium are often associated with the jaundice and gastrointestinal symptoms. A positive diagnosis cannot in all cases be made during life. The pneumococcus has been isolated from the blood.

5. *Epidemic Pneumonia*.—Multiple cases of croupous pneumonia occurring in prisons, garrisons, and sometimes in private houses show typical and atypical forms. The cerebral, circulatory, and abdominal symptoms of so called typhoid pneumonia are frequently present and the death rate is high.

6. *Larval Pneumonia*.—Undeveloped forms of pneumonia are occasionally encountered. There are two groups of cases, the more common being those in which the onset is characteristic, with chill, moderately high temperature, the evidences of local exudate speedily following with cough and rusty sputum, the whole process terminating by crisis within two or three days. This form is described as abortive. In other cases the sickness is slight, chilliness being followed by moderate fever with unsatisfactory physical signs and no characteristic expectoration. The diagnosis at best is a probable one, though it becomes more definite when such cases occur during local epidemics and show herpes.

From the standpoint of the pulmonary lesion the following atypical forms are to be considered:

1. *Upper Lobe Pneumonia, So Called Apex Pneumonia*.—This form is common in infants and young children. It occurs also later in life and is sometimes attended with marked cerebral symptoms, while chest pain, cough, and expectoration are not marked. In the absence of a systematic routine physical examination this form of pneumonia may be overlooked.

2. *Pneumonia Migrans*.—Cases of this type are rare. The disease begins with characteristic phenomena, one lobe after another being in turn the seat of the exudate, the regions first involved successively clearing up. The whole course of the disease is prolonged and termination is commonly by lysis.

3. *Central Pneumonia*.—The onset may be characteristic and the constitutional phenomena severe. The pulmonary lesion is, however, remote from the periphery of the lung and does not yield definite physical signs. In the course of several days' dulness, crepitus, and bronchial respiration may be detected, at first over a limited area.

The course of the disease is usually characteristic and the termination frequently by crisis.

4. *Terminal Pneumonia*.—Croupous pneumonia constitutes the terminal event in many chronic diseases, especially phthisis, valvular disease of the heart, chronic nephritis, diabetes, and disease of the spinal cord. The condition is very often latent, in the first place because it often gives neither constitutional nor local phenomena indicating its presence, and in the second place because the patients are very often too ill to be systematically examined. The condition reveals itself only upon the post mortem table, where circumscribed regions of the lungs or the greater part of a lobe are found to be the seat of the characteristic fibrinous exudate, very often in the stage of gray hepatization.

5. *Pneumonia in Pulmonary Emphysema*.—The constitutional symptoms are commonly well marked and characteristic, the onset being sudden with chill, followed by high fever and cough. Rusty sputum is scanty or absent. Herpes appears, but the emphysematous condition of the lungs fails to reveal the presence of consolidation, and pain in the chest is commonly absent. The greater capacity of the vesicular structure and the diminished richness of the intervesicular capillaries account for the absence of physical signs. The supply of blood from which the coagulable exudate is poured out is less than normal, and the vesicular spaces into which it is poured more capacious.

A lady, 76 years of age, who had long suffered from bronchitis and had become highly emphysematous, had a severe chill with temperature rising above 104°, with cough, herpes, delirium, stupor. Death occurred with the signs of pulmonary œdema upon the fourth day.

6. *Hæmorrhagic Pneumonia*.—The chill is followed in the course of a few hours by the more or less abundant expectoration of blood and this may continue for several days, gradually diminishing. The course of the disease and the physical signs do not differ in other respects from the ordinary form.

A gentleman, more than 90 years of age, was suddenly seized with chilliness and epigastric pain radiating to the right. In the course of a few hours he had abundant hæmoptysis, which recurred at intervals of ten or twelve hours. He became stuporous, with occasional slight cough and tenacious rust colored sputum, which later, as jaundice developed, became of a greenish yellow color. The lower lobe of the right lung became consolidated, with crepitus followed by bronchial respiration. Death occurred with the signs of pulmonary œdema upon the fifth day.

The diagnosis of typical cases of croupous pneu-

monia is unattended with difficulty. Errors arise much more frequently from carelessness than from ignorance. Too much importance cannot be attached to a systematic routine examination of the chest in all cases of acute disease beginning abruptly with chill followed by fever or presenting pulmonary symptoms. The diagnosis becomes difficult in proportion as the departure from type becomes more marked. In the extreme forms of atypical pneumonia—the terminal pneumonias—the clinical diagnosis is very often impracticable. Herpes, which occurs in more than half the cases, is of diagnostic importance. The detection of the pneumococcus in the laboratory reinforces the clinical diagnosis. It can only rarely be utilized in diagnosis except to this extent.

Leucocytosis is an almost constant phenomenon. Its diagnostic importance is diminished by the fact that it also occurs in most of the conditions in which the question of diagnosis arises. Leucopenia is of most unfavorable prognostic significance.

1509 WALNUT STREET.

NASAL OBSTRUCTION AS A CAUSE OF DISORDERS OF NUTRITION.

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While the rôle of digestive disturbances as an ætiological factor in the causation of nasal, pharyngeal, and laryngeal disease has attracted attention commensurate with its therapeutic importance, the reciprocal relation of gastrointestinal disease and malnutrition as a result of many affections of the upper respiratory tract, particularly those associated with mouth breathing, and its hygienic significance, seem to have received insufficient notice. In a "symposium" on this subject at the New York Academy of Medicine, a year or two ago, a number of papers were read, and a discussion followed in which many prominent laryngologists participated. The influence of gastric and intestinal disturbances, of hyperacidity, dyspepsia, hepatic torpor, constipation, and plethora, as factors in the production of nasal and nasopharyngeal disease was dwelt upon at length, yet strange to say not one word was said about the influence upon the intestinal tract, nor upon the various digestive functions, of diseases of the nose, rhinopharynx, and tonsils. This but reflects the attitude of the textbooks, which, almost without exception, pass over this subject or give it cursory mention, while dilating in a perfunctory way on the traditional observations of congestion of the lingual tonsil and oropharynx in drinkers and

plethoric individuals, the action of purgatives in acute affections of the upper respiratory tract, irritable cough due to indigestion, colds induced by hyperacidity, and so forth.

This omission is the more surprising when we consider the connection between the nasal respiration—the moistening, heating, and filtration of the inspired air—and the sense of smell, with the various functions of taste, appetite, and mastication, and with the disturbances of these functions in their various manifestations, from anorexia to constipation or diarrhœa.

When we remember how important a part taste and appetite take in digestion, and the rôle played in degustation by the nasal mucosa, we shall not be amiss in alleging that the nose stands at the beginning of the gastrointestinal tract as an accessory, if not as an integral part physiologically of the digestive system. While it may be impossible to separate the nasal factor of anosmia and deficient aeration from the systemic agencies in analyzing such a symptom as the anorexia accompanying a cold, there is no doubt of its presence. Alteration of taste, insipidity, unpalatableness of food, and with it loss of appetite, are common symptoms of a fresh coryza; the cause of similar symptoms in a milder form is apt to be overlooked when due to chronic nasal disease, and when they have become inveterate. The sense of smell is important not only for digestion and appetite, but as a guard against deleterious elements and putrefactive changes in the nourishment. The anosmia may lead to a marked blunting of taste, causing lack of discrimination in diet, eating spoiled or badly cooked food, and the abuse of spices and condiments.¹ Anorexia may be due to deficient aeration alone, and its effect upon the system caused by faulty respiration in mouth breathing. The stimulating effect of fresh air on appetite, and the opposite action of the stuffy atmosphere of crowded or ill ventilated rooms, suggests itself at once.

For the process of buccal digestion, with its elements of mastication, insalivation, bolus formation, and deglutition, the importance of normal nasal functions, and the marked influence of any disturbance in them, appears still greater—greatest, perhaps, in the infant, where suction is the main function in gaining nutrition. The subject of infant feeding is generally considered exclusively from the standpoint of the chemical constitution and nutritional value of the mother's milk and its various substitutes; although there can be no doubt that a large percentage of digestive disturbances in nurslings is caused by a faulty method of taking nourish-

¹ A similar blunting of taste is observed in many chronic affections of the oropharynx, accompanied by abnormal predilection for sharp and highly seasoned food.

ment, and not to the composition of the nourishment itself.

The child at the breast requires for the ingestion of a single meal about one quarter or one half hour. It does not take its mouth from the breast during that time, *provided that it breathes through the nose*, and hence swallows no air. A strong negative pressure of from 50 to 140 c. cm. of water is produced (Cramer) which stimulates production of gastric juice (Pfaundler) and causes a certain amount of fatigue; so that the child falls asleep without crying or vomiting.²

Nasal obstruction or any allied condition leading to mouth breathing is deleterious in two ways; it interferes with respiration, and interrupts the process of feeding and swallowing. The little one, forced to breathe through the mouth or suffocate, sucks spasmodically, with frequent stops for breath, gasps, strangles, gulps air, and, later, vomits. These symptoms are almost pathognomonic for the nasal obstruction due to adenoid growths. Either an insufficient amount of nourishment is taken, or large quantities of milk mixed with air are swallowed, instead of the milk entering the stomach a little at a time. The results for digestion and nutrition are evident.

In young children similar causes lead to somewhat similar effects, modified by the fact that solid food is ingested, and thorough mastication is wanting. Here, too, we have bolting of food and gobbling, so often attributed to greediness or haste, and that may, of course, be due entirely to such extrinsic factors, if I may so term them, but they are not seldom the expression of an inner necessity—that of getting in air and food through the same portal. Granted nasal obstruction, breathing can only take place as mouth breathing “between drinks,” or between gulps, and neither function is performed normally. The effect of the action of the muscles of mastication on the development of the jaw, alveolar arch, and teeth is too well known to need more than brief mention. Habitual lack of this action in mastication, plus the mechanical effect of the open mouth and the hanging jaw, help to produce the narrow adenoid arch, the protruding, overlapping “buck teeth,” and, as a natural result, difficult, delayed, or irregular dentition. That such a jaw does not close and given an even bite, and that such teeth again are incapable of doing their work of mastication thoroughly, are difficult to keep clean, and apt to decay, is apparent; and so the result becomes a cause of indigestion and malnutrition as the vicious circle is completed. In this connection Spratling's observations³ are of great in-

terest. This author concludes that difficult dentition may in suitable subjects constitute a sufficient irritation to cause convulsions, and that these may ultimately lead to epilepsy. By “suitable subjects” Spratling means individuals who inherit a neuropathic tendency to disease; and he is of the opinion that gastrointestinal disorders may produce similar results. That the air taken in through the mouth is not inspired in the true sense is evident—it is neither warmed, nor moistened, nor filtered as it is after nasal inspiration, and so is not prepared for pulmonary use. The effect on intimate respiration and on the general health is an important and interesting topic, but one which is somewhat aside from those here considered. The lack of exercise of the thoracic respiratory muscles in mouth breathers has its important mechanical, structural, and functional results in underdevelopment of the thorax, flat or pigeon breast, phthisical habitus, and, as I really believe, phthisical predisposition on the one hand; and lack of energy, sleepiness, phlegma, apnoea on the other.⁴

The study of the saliva is still in its infancy, but the observations of Kyle, Hays, and others show that its abnormal composition may cause malnutrition, and, again, that such chemical changes may be due to nasal and nasopharyngeal disease. Add to this that an open mouth, perforce open for air, is, or soon becomes, a dry mouth, so that saliva and other peptic or lubricant secretions are insufficient, as well as abnormal, scanty, and bad.

Deglutition is affected by two factors. The first, an indirect result of mouth breathing, is the character of the bolus, which is not sufficiently comminuted and softened by mastication, or moistened, “ptyalized,” and lubricated by insalivation. The other, due to the necessity for getting air, is the bolting of food, with disturbances in cesophageal action, “swallowing the wrong way,” hiccough, regurgitation, and the like. An artificial aid to deglutition is then found in drinking water as a substitute for chewing and insalivation, not only to soften the bolus, but actually as a mechanical aid in deglutition. The food is washed down with copious draughts, distending the stomach with a thin extract of food.

⁴In a recent issue of the *Journal of the American Medical Association* a writer gravely states that the main danger of mouth breathing lies in the insufficiency of air, in air hunger, to satisfy which a great strain is brought upon the inspiratory muscles of the thorax, to which they eventually succumb. The modus operandi of mouth breathing is, however, just the opposite. The air taken in at a breath from the mouth is quite sufficient, and much larger than that usually inspired through the nose, as one would expect from the size of the channel, and as is shown further by the fact that when out of breath from exertion or any other cause we gasp for air through the mouth, “like a fish out of water.” The danger of mouth breathing, aside from the bad quality of the air referred to above, lies in the fact that it takes place with little or no respiratory effort, and that sufficient air is taken in to satisfy the lungs without a good, deep breath. The result is that breathing becomes habitually superficial and the chest remains undeveloped.

² A. Schmidt. *Münch. medicin. Wochenschr.*, November 29, 1904.

³ *Medical News*, October 10, 1904.

Nutrient thus insufficiently prepared, largely diluted with water, and mixed with air in the buccal cavity is digested with difficulty and is likely to cause gastric and intestinal disturbance. This morbid process may be further encouraged by the entrance of the products of purulent inflammation or mucous hypersecretion into the stomach from the nose or pharynx by gravitation, or from the larynx and trachea, or even from the bronchi and lungs, by swallowing after expectoration. That this secretion is allowed to accumulate and to make its way into the stomach is an observation frequently made in children, where it is almost the rule; and it is by no means unusual in the case of adults. The same thing holds true of laryngeal and pharyngeal secretion which, though expectorated, is not infrequently swallowed, instead of being rejected *per os*.⁵

Expectoration is not synonymous with spitting, although often used in this sense. The latter is very properly forbidden in cars and other public places; but one of the minor evils of this reform is the inhibition of all expectoration, however necessary. The result, I am convinced, is but too often that expectorated masses are actually swallowed. How often, in our catarrhal population, do we hear and see people "clear the throat," and how seldom is the expectorate or sputum rejected into a handkerchief or other proper receptacle? What has become of this matter is only too evident. It has been brought up from the air passages and consigned to the all tolerant stomach. In children, nasal secretions are often disposed of in the same way. The habit is all but universal; and so common that some sensitive souls express disgust at the sight of any one coughing or spitting into a handkerchief.

These conditions being due to nasopharyngeal disease and not to mouth breathing *per se*, it will suffice to have called attention to them, and to their well known complications. Among these we may mention the sudden increase of intraabdominal pressure and the injurious effect on the viscera, particularly on the lower bowel, or on a possible hernia, of excessive coughing, violent sneezing, hawking or "clearing the throat," and blowing the obstructed nose, and the causation of obstinate hiccough, retching, and even vomiting, by these acts.⁶

The morbid processes will persist for a time even if the causes, mouth breathing, insufficient mastication, and the like, have been removed. When the

⁵ The deleterious effect on digestion of swallowing morbid tonsillar secretions was noted by Yearsley a half century ago, and Turck has recently drawn attention again to the dependence of gastric disturbances on direct infection from germ laden nasopharyngeal secretion.

⁶ Gagging and vomiting may also be caused by irritation of the fauces from enlarged tonsils, or a pendulous uvula. Septic or irritant matter may thus be thrown into the posterior nares and infect the middle ear by way of the Eustachian tube.

latter have been present for some time the vicious circle has become habitual. Makuen says (*Bulletin of the American Academy of Medicine*, August, 1903): "There are many obstructions to normal breathing; and when once the natural rhythm of the breathing process is perverted it can never be entirely restored without conscious effort and well directed practice." It is not sufficient to correct nasal deformity, to remove adenoid and tonsillar hypertrophies, to do away with mechanical obstacles. These procedures, however radical, give the possibility alone of nose breathing; they by no means insure it. Until this is accomplished, until habits of mastication and respiration are trained and taught to be performed normally and thoroughly, each in its own province, mouth breathing will continue in spite of a permeable respiratory tract. This is particularly noticeable, as I have pointed out in a previous communication,⁷ in children who have been operated on for adenoid growths. As they have never learned to breathe through the nose they will continue to be mouth breathers until they have unlearned this habit and acquired the new one. Prolonged and thorough mastication is an invaluable aid in this training, and in my opinion at least as important as respiratory and thoracic gymnastics. I have advised that children be allowed, or rather encouraged, to chew gum until the nasal respiratory modus has become established. Cold sponging of chest and back, physical exercise, singing or reciting, and occasionally the use of a respirator or chin bandage at night are further aids to nasal respiration. The latter is more apt to be overlooked when the children are at school, or bent over their books, and it is advisable that the sessions should be interrupted, half hourly at least, for a few respiratory gymnastics. This need take but one or two minutes, during which the children are to stand and stretch out to their full stature, clasping their hands behind their heads, breathing deeply, and fully expanding their lungs and extending the vertebral column. A few simple exercises, such as the swimming motion with the arms or a short march around the schoolroom, may also be instituted. Special attention should be paid to the posture of children while at their books, so that anything may be avoided which encourages a crouching body, collapsed lungs, bent back, folded arms, or lowered head. Among such factors are badly printed books, small type, insufficient illumination, the habit of reading on into the dusk without light, and simple sluggishness.

114 WEST ONE HUNDRED AND TWENTY-SIXTH STREET.

⁷ The Necessity for Supplementary Measures after the Removal of Adenoids, *Archives of Pediatrics*, April, 1904.

MALNUTRITION IN YOUNG CHILDREN.*

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The human being is the only mammal that does not know how to take care of its young. Is it to be wondered at, then, that the physician is constantly called upon to treat cases of malnutrition in children? What are the causes that operate to bring about this distressing condition?

(1) Lack of parental knowledge of the correct method of rearing children;

(2) Diseases of the child;

(3) Diseases of the parents.

LACK OF PARENTAL KNOWLEDGE OF THE CORRECT
METHOD OF REARING CHILDREN.

The first and foremost factor in the causation of the production of such an alarming number of undersized, thin, pale, weak eyed and flabby muscled children is the fact that those children's parents know very little about their offspring. These self same parents were the children probably of healthy, hard-working parents who ate their three good square meals a day, had a happy home, and loved to be in close relationship with their children. Parents of this class knew every little whim and fancy of their offspring; they fed their babies on Nature's own food, breast milk; they had plenty of it and to spare. When their children became old enough to eat other articles of diet, it was the parent who prepared that food. When their child was ill, who was it that took care of that little patient? And who can watch and care better for a sick child than its mother? That, then, was the influence that in the early days surrounded the parents of the child of the twentieth century. In consequence thereof we grew up in the path that Nature had mapped out for us. We went to school at a reasonable age, romped out of doors every minute when not in the schoolhouse, ate our meals at certain definite times, went to bed early at night, and never knew that there was such a thing as alcohol. Such a life has been the experience of nearly ninety per cent. of the parents of the children of to-day. But, alas! How changed are the mode of life, habits, and surroundings of the present generation of children! Born of healthy parents in a steam heated flat, these children are first fed on breast milk, and in this regard the parents show the good result of their own early training. The baby vomits—all babies do—and immediately a host

of nursemaids, kind (?) friends, and neighbors advise withdrawing that baby from the breast, as somebody else in their acquaintance nursed her baby with "bad milk," and the baby had convulsions! Imagine what an influence such advice is apt to have upon the secretion of breast milk in a mother who is already worried by the servant question. The mother, never thinking it necessary to consult her physician, foolishly takes the advice of her ill advising friends and, heart sick and discouraged, begins to try to bring up her baby as she hears a twentieth century baby should be reared. Cows' milk is now tried, and usually it is not diluted sufficiently. The baby becomes colicky, constipated, vomits, and does not thrive. Condensed milk is now given a two weeks' trial; it is usually given as weak as the solution of cows' milk was strong, and it, too, is thrown to the wall. To enumerate the patent foods that now come upon the scene would take your time and patience, and would elicit remarks from the writer that are not proper to be preserved in the archives of this society. One food after another is tried, and all to no purpose. If the parents condescend to accept the advice of a physician at this stage, all yet may be well, but if they do not wish to interfere with the plans of their friends, then that baby is certainly destined to tread the path of the poorly nourished. If such a child does survive the first two years of its life, he is thought to have escaped the "dangerous period," and then may be fed on anything. He usually is fed on anything and everything. He is generally fed irregularly, on half cooked cereals, ten minute breakfast foods, and raw vegetables; and, not relishing these articles of diet, he makes most of his meals of bread, potatoes, and "cambric" tea. We have all seen these children; they are constipated, pale, thin, and flabby, with an appetite that is capricious; they are poor sleepers; many of them wear glasses; and their parents consult us because they wish their boy or girl, who has now arrived at the age of four to ten years, to be made strong! Well may these parents wish it, and high time is it that they consult their physician as to the welfare of their offspring. The prevailing innate idea that, as soon as a baby has recovered from the shock of entering childhood, he should be plunged into a kindergarten, is the cause of many a case of foul air headache and paling cheek. If he ever in his life needs fresh air, he needs it now. "Training up a child in the way he should go" is proper and highly to be desired, but as for the twentieth century so called higher education, where young children are expected to recite lines of Homer's Iliad and to converse fluently in four languages before they are ten years old, I claim that such a higher education is bound to produce an

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inferior race of human beings. If a breeder of animals wishes to produce the very best of a species, he feeds the young animals on certain articles of diet that will bring about the end he desires. These animals are fed regularly, groomed, and cared for in the best possible manner. Does not an offspring of the human race demand as great care as that bestowed upon beasts? He certainly does, but yet he does not get it. Large, roomy, well ventilated box stalls are fitted up for horses; yet the baby of the household is reared in a dark, gas lit, inside bedroom opening on an air shaft! The everyday picture of a thin, pale, ambitious half grown boy or girl, carrying to and from school a pile of books that would do credit to a free library is a sight with which we are all familiar. Did we as youngsters have as large a number of books from which to learn our lessons? No, we did not, and yet we consider ourselves quite equal to cope with the hard, common sense problems of either a lay or professional life, notwithstanding that we did not quote Virgil when twelve years old. We never in our young childhood were compelled to go to our room immediately upon returning from school and remain there till evening, eat a light supper, again to return to our problems in geometry and algebra, until finally tired, eyesore, and faint, we turned to our beds to find what sleep an exhausted, overworked brain and ill exercised body would give to us! We, on the contrary, remember returning from school, throwing our few books into the house, and going immediately out again to enjoy a game of baseball or to go skating. When we returned at five or six o'clock we had an appetite for the good and wholesome meal that was set before us. It was either eat it or leave it. There was no coaxing or buying necessary to make us eat. Our appetites were the only whips. After our outdoor exercise and our satisfied digestion we went early to bed and were asleep about as soon as our heads touched the pillows. Chorea, brought about by overpressure in school, was an almost unheard of disease; and yet now how common an ailment it is and how numerous are the cases of St. Vitus's dance that we see almost daily in both private and outpatient work! On the other hand, the pace at which we are required to live is most rapid. We are compelled to work twice as hard, sleep half as much, and spend twice as much nowadays to obtain the same ends as we used years ago. Our mode of living is changing. Too much cooking is done in the factory and too little in the home. The servant question is possibly responsible for this state of affairs, and in consequence thereof the middle class, rather than pay impossible wages to servants, prefer to live on breakfast foods and the products of the delicatessen store and the bakery.

The myth called "higher education" has become entangled in the heads of the lower classes, so that a servant who formerly was willing and glad to work at every kind of housework at moderate and just wages is not now content unless she can find a position in the factory so that she can have her evenings off to attend "night school." This would be a commendable state if it was true. The extreme upper classes pay comparatively fabulous sums to servants in order to entice them to remain, and in some cases even theatre tickets are furnished as a reward to the faithful, and in consequence of this lavishness the middle class suffers for want of servants, and children are therefore sadly neglected. The servant question has at last entered the realms of medicine, and become an aetiological factor in the production of disease. The extreme desire to be upon the top round of the social ladder is also responsible in part for the necessity of the rapid and strenuous life of the average twentieth century woman. "My social engagements first, then my children," says many a social leader. I know of families the mothers of which do not see their children for days at a time. They have a telephone or speaking tube to the nursery and deem this sufficient parental intercourse with the children of their hearts. The punch bowl, the cocktail, and the cigarette were unknown articles in the lives of our mothers, yet what a prominent feature are they in the daily lives of many of the mothers of to-day! Can a woman successfully produce a perfect breast milk who is continually stimulated by the use of black coffee and alcohol? The increasing number of unhappy marriages, divorces, and strained social relations are not the atmosphere most conducive to success in rearing well nourished, sweet tempered, and normally developed children.

So much, then, for the consideration of the first division which I have made of my subject—namely, the lack of parental knowledge of the correct method of rearing children.

DISEASES OF THE CHILD.

A child may be brought up under the best surroundings, with ideal diet and care, and still fall under malnutrition. I speak of children that are ill or have had some disease which has impaired their bodily functions and in consequence of which they have become emaciated and are not thriving. Of course our first duty in these cases is to treat the disease and then to build up the child according to the rules laid down under General Treatment of Malnutrition. Adenoids and enlarged tonsils are great factors in causing malnutrition in young children, and upon removal of these growths the child becomes a different individual entirely in a few weeks.

We now pass on to the third and last division:

DISEASES OF THE PARENTS.

In cases of malnutrition, where you have exhausted every known method of proper feeding and prescribed fresh air, proper bathing, and hygienic surroundings, and notwithstanding a month's or six weeks' trial, the child does not respond, always suspect syphilis. Many cases of malnutrition in children are treated for years with no beneficial effect whatsoever until they come under the care of some physician who realizes the probability of syphilis, immediately institutes a form of antisyphilitic medication and the child is a different child altogether in a month's time. These cases of syphilitic malnutrition are usually hereditary cases, where the father in his younger days had a chancre, and the physician who treated the father told him he was to all intents and purposes cured. He marries and begets a child who suffers from malnutrition. There are none of the "textbook" symptoms of syphilis present, such as rash, enlargement of the liver and spleen, or bony changes; there is simply malnutrition. This is in many cases the only symptom, as is admirably set forth in an article entitled *Malnutrition as Shown in Congenital Syphilis*, by Dr. C. G. Kerley, of New York. There may be enlargement of the epitrochlear glands; there may be Hutchinson's teeth of the pivot, notched, or screw-driver variety; there may be bird claw fingernails or toenails; a history of snuffles in early infancy; a rash a few weeks or months after birth. There may be present an enlarged liver or spleen. So that given a case of malnutrition in a young child who does not improve after careful feeding and hygienic regulation—no matter whether the father or mother are pictures of health and morality—treat that case for syphilis and you will be surprised at the result obtained. I usually employ the bichloride of mercury, beginning in doses of one one hundredth of a grain morning and night to a child of three to four years old, and gradually increasing the dose up to the amount which brings about improvement. Children bear the mercurial well, as it is impossible to salivate a baby. Frequent green stools are an indication that the maximum dose has been reached. Mercurial symptoms in young children are very infrequent. Potassium iodide may be combined with mercury to advantage, commencing by giving two to three drops of a saturated solution three times a day and increasing up to a diminution of symptoms or an iodide rash. The iodide is usually well borne by young children. I do not use ointment, on account of the irregularity with which it is usually applied by parents. It soils the clothing and is objectionable. Of course, aside from the anti-

syphilitic treatment a régime of proper diet and hygiene should be continued.

THE GENERAL TREATMENT OF MALNUTRITION.

The Sleeping Room.—The room in which a child with malnutrition should sleep should be the best room in the house. The idea of keeping the best room in the house as a spare room or guest chamber, which is almost never aired nor entered except there come strangers to the house to visit, while the family sleep in some ill ventilated portion of the house, is a wrong one and should not be entertained. Many are the families in moderate circumstances which have the only decent living room in their apartment used as a parlor, while the members of the family repose in inside rooms opening on airshafts or so called courts. The child suffering from malnutrition should sleep in the best room obtainable—the parlor, if necessary—as his future welfare is far more important than the satisfaction of the whims of the family. There should be as much sunshine and fresh air in the room as it is possible for Nature to place there. The windows should be fitted with window boards which allow of fresh air, but no draught. The temperature of this room should be kept at 68° F. during the day and may be allowed to go down as low as 50° F. during the night. Fresh, cool air never hurt anybody, gave a cold, or killed a person; but an ill ventilated, steam heated room, reeking with the breaths and rebreathed air of whole families, coupled with the odors emanating from neighboring kitchens, is responsible for many a case of chronic cold, and death.

The Bedclothing.—The bedclothing should consist of a suitable mattress of either hair or felt, covered by a pad. The child should sleep between well dried sheets, having for covering as many blankets as is consistent with the degree of temperature in the room. A hot water bag or bottle should be placed, well guarded, at the feet. The child should wear cotton night drawers or a cotton night shirt.

The Clothing.—The underclothing should be preferably of mixed cotton and wool. A great mistake is made by prescribing too heavy underclothing. A medium weight is to be preferred. The outer garments should be such that their weight may be changed according to the weather and temperature. A child should not be bundled up too much. He should wear thick gloves or, better, mittens in winter and should never acquire the "muffler habit," which is responsible for many a laryngitis and chronic bronchitis. Thick soled, broad toed shoes should be worn. The feet should never be allowed to become damp.

Exercise.—The child should be out of doors as much as possible on pleasant days. On stormy days he should be clad in his outdoor garb, the windows

raised and given his airing indoors. The child should be allowed to run, romp and play games as much as he pleases, when out of doors.

Bathing.—A child should have a bath once a day, preferably in the morning. This bath should be given warm, 90° F., and the child should remain in it for ten minutes. Half a pound of sea salt should be dissolved in each bathtub, half full of water. The child should be rubbed with the bare hand while in the tub. Any soap but castile soap (and that very sparingly) should be excluded. When the child is taken from the bath the skin should be rubbed briskly with a coarse Turkish towel until the surface is thoroughly dry. The body should then be anointed with from a half ounce to one and a half ounces of olive oil. The skin will vary in different individuals regarding its power of absorption; some children's skins will absorb but half an ounce of oil, while others will absorb an ounce and a half. This oil should be rubbed well into the skin.

School.—A child should not attend school until he is seven years old. Kindergarten for the young is useful and instructive in that it keeps young children amused and trains their minds by the use of simple games, exercises and songs. In a well constructed home, where a mother, father, relative or competent nurse can devote a few minutes each day to the simple training of the young mind by reciting alphabets, singing songs, reading or telling proper stories (not *ghost* stories), using building blocks, moulding lumps of soft clay, teaching elementary sewing and drawing, a child reared in such a family need never go to kindergarten. Where such instruction is impossible to attain at home, then an hour at kindergarten daily is advisable. Not till the child is five years old, and then only upon the advice of the family physician, who should examine it for any symptoms of malnutrition or chorea, should it be allowed to attend school. Should the physician find such symptoms, he should advise against sending that child to any school whatever until such symptoms have disappeared. But how rare is it that the family physician is ever consulted regarding the advisability of sending a child to school for the first time. This should not be so. Children should not be compelled to learn the hard advanced lessons that are seemingly required today of nearly all young children of school age. I am glad to say that there has been inaugurated a movement to appoint special teachers for the instruction of backward children in our public schools. A child should be mentally fed with as great care and deliberation as would be used in feeding that child by mouth. Volumes are written in medical journals regarding the feeding of children, yet how few articles do we find in these self same journals

that deal with the mental feeding of the human race. Children should have ample time to eat their luncheon; they should not be compelled to travel a long distance home, eat a ten minute luncheon and run all the way back to school again for fear of being late. The noon hour recess has been lengthened in most of our public schools, and that very advisedly. Ventilation of the school room and overcrowding are pertinent problems with which the educators of our land have been contending for and gradually remedying. A child presenting symptoms of malnutrition should be taken out of school. His health is of more importance than his learning, and, by giving him health, you likewise give him the means of attaining better cerebral absorption.

Sleep.—Children should have a daily nap until they are five years of age. A child with malnutrition should be put to bed early, say at 6 p.m., and should rise at 7.30 a.m. He should sleep alone in his own crib or bed. A bright light should not be kept burning in the room where a child is sleeping, as even a small light vitiates the air. Parents and attendants are more or less responsible for children being afraid to go to sleep in the dark by their having told the children stories such as would cause impressions of fright upon even an older brain.

Food.—Of utmost and prime importance is the selection of food to be given to children suffering from malnutrition, for without a proper régime of diet very little can be accomplished toward a cure. A child with malnutrition should be given a high proteid diet; it is the proteids that make flesh and blood and bone. He should be put upon a diet of milk, meat and eggs, oatmeal (which contains a high amount of proteid), soups such as purée of split peas, beans, and lentils. He should be given green vegetables. His carbohydrates should be cut down to a minimum and we therefore exclude to a small degree bread, potatoes, and sugar. Under no circumstances should tea, coffee, or beer be allowed. His meals should be given at regular intervals. Written instructions should be given to the parents regarding the articles of diet. In advanced cases of malnutrition it is well to feed a child every three or four hours, so that a child six years old would be given five meals a day. This does not mean that he is expected to sit down and eat five large meals a day, but that something to eat should be given him five times a day, and he is therefore fed small quantities, but at short intervals. It is my custom to give to parents of children suffering from malnutrition the following printed directions as to the details of the children's menus. You must give a parent something definite in the form of instructions as to the care and feeding of their children. It will not do to say: "Feed your child on milk, meat, and eggs,"

and stop there with your instructions. You must go further and tell the parent how and what to feed in detail.

DIET IN MALNUTRITION; CHILDREN 4 TO 12 YEARS OF AGE.

Breakfast, 7 to 8 a.m.—Oatmeal or wheaten grits (cooked three hours), and rich milk with a very small amount of granulated sugar. The cereals should be well salted; a soft boiled or poached egg; a small piece of stale bread or zwieback; a glass of good, rich milk.

10 a.m.—Glass of milk.

Dinner, 12 to 1 o'clock.—Soups of purée of split peas, beans (white or black), or lentils. Lamb, roast beef, steak, mutton, white meat of chicken, or fresh fish (boiled or broiled); stewed celery, asparagus tips, spinach, string beans, or peas, a very little mashed potato (two or three teaspoonfuls). For dessert an orange, baked apple, stewed prunes, rice pudding, plain custard. *The child must eat his dinner before any dessert is given to him.*

4 p.m.—Glass of milk.

Supper, 6 to 7 p.m.—A well cooked cereal and milk; stale bread in milk, milk toast, custard pudding, and a glass of milk.

Cool, boiled water should be given the child to drink between meals.

There are cases where you will be told that the parents have offered the child the articles of food that you have prescribed, but the child will not eat them. This is a frequent story. Oftentimes, when a child is of reasonable age, a good heart to heart talk with him by the physician himself, explaining why you wish him to eat the food you have ordered, that you want him to grow up big and strong, may have the desired effect upon him. Children usually require a reason explained to them for any new action. This is a fact that few think of, and therefore the simple command for a child to do a certain thing is followed by his asking "Why?" This is natural and should in no way be responded to by saying: "Because I tell you to." This reason is all right for the army, but not for the nursery. If a child, after having been talked to by the physician, still refuses to eat the articles of food set before him, there is only one means of procedure to adopt, and it always works. Do not threaten, whip, or coax such a child, as this will do no good, and only aggravate the already existing trouble. Put that child to bed and, if necessary, employ a trained nurse. Offer the prescribed articles of diet to him in his bed. He will ask why he is put to bed. Tell him that as he will not eat his food at the table he will be too weak to sit up and therefore must have his meals in bed, but as soon as he eats his food he will then be strong enough to sit up to the table, play games, and go out

of doors. This explanation usually suffices. If it does not, his food must be simply set before him at the stated meal hours and if, after having been left there for ten or twenty minutes, he will not touch it, ask no questions of him, but quietly remove the tray until the next meal time arrives and repeat the process. It will not be long before this child under this method of quiet, but firm management will be "broken," and he will eat his meals with a relish and vigor born of hunger. If a child in his anger and stubbornness shows a tendency to break dishes, tin plates can readily be substituted.

So much for pure dietetics.

Medication.—It is advisable in some cases of malnutrition coupled with poor appetite, to administer a teaspoonful of the following solution of iron and quinine citrate in sherry:

R Citrate of iron and quinine.....	1 grain;
Sherry	of each.....
Water	1/2 drachm.

M. Sig. For one dose; take three times a day after meals.

This seems to have in most cases a salutary effect upon the appetite. There are other cases in which codliver oil, if well borne by the stomach, may be given with advantage in doses varying from five to thirty drops three times a day after meals. In all cases of malnutrition we must keep on friendly terms with the stomach, for if ever a child needs a good stomach, he needs it in these cases. Any form of medication, therefore, that tends to upset the stomach should be discontinued. The child should be weighed regularly.

Cases of malnutrition that are treated along the indicated lines are certain to be improved. Vague coughs that are thought to be occasioned by adenoids, large tonsils, and malaria will be seen to vanish when the child is put upon the hygienic diet which I have mapped out. What, then, does it signify when over half of the children between the ages of four and twelve years seen at a children's clinic are under par, and what inference may we draw from the observation that we are constantly called upon in private practice to treat weak looking, pale faced, poorly nourished children? It signifies to my mind that (1) the care and feeding of children should be a part of the curriculum of our schools, where the rising generation, the coming parents, can be taught how to care for themselves, and in so doing they are better enabled to care for others; (2) physicians in general practice should realize the importance to the coming generation of a correct diagnosis in cases of simple malnutrition before commencing treatment of vague and atypical so called cases of malaria, chronic typhoid, and tuberculosis along the lines that these diseases would suggest; finally, by the observation of the foregoing two suggestions and by carrying out a scheme of treatment such as has been

outlined in the present paper, we have good reason to hope that the coming generation will be minus the stigma of the hordes of poorly nourished children whose presence is a blot, shame, and disgrace to the civilized world.

INFLAMMATION OF THE GLANDS OF BARTHOLIN.

By CHARLES C. MILLER, M. D.,

CHICAGO.

(Continued from page 738.)

THE EXCISION OF THE GLAND OF BARTHOLIN, WHERE CHRONIC INFECTION OF THE GLAND PERSISTS.

If a gland remains enlarged and palpable, it is very likely to be infected. An acute inflammation will result in the deposit of much inflammatory material in a gland. If resolution is slow more or less organization of the inflammatory material into connective tissue may occur, leaving the gland hypertrophied and palpable after the infection has disappeared, but this is not the rule and a palpable gland usually signifies an infected gland.

If a discharge persists from the duct, which discharge is more than a colorless mucus, the natural secretion of the gland, we can safely say that duct or gland is infected, and treatment as above outlined if futile should be followed by an extirpation of the gland.

The function of the gland is of secondary importance when we consider that the duct or gland alone may harbor a previous infection, and that the discharge from this gland may offer the only possible means of reinfection of the genital and urinary tract, and that in such a case sexual relations would be safe were it not for the constant menace of the discharges of the gland.

Pozzi credits Breton with being "the first to demonstrate that gonorrhœa might lie for a long time dormant in the excretory duct of the gland after the vagina was free from it, and starting from this point renew the infection. Zeissl confirmed this statement." Others have called attention to this possible source of infection, but the difficulty has been that the great majority of writers, particularly in this country, have conveyed the impression that this infection is first manifested by abscess of duct or gland. Dudley, in his book on gynecology, speaking briefly of these glands, has made a statement the probable true import of which has not been grasped by the majority of his readers. He said "the capacity of the glands to receive, retain, and distribute infection will often explain the frequently observed attacks of recurrent gonorrhœa in women."

The disease of the duct and gland which I have

just described and which has never manifested itself by any symptoms apparent to the woman since the acute infection, coincident with the acute vulvar or vaginal inflammation, is a menace to her, just as is the gland in which abscess has developed followed by fistula formation. The function of the glands need not deter us from extirpating them. Huguier correctly inferred that the secretions of these glands served to render the first approaches of the male less painful, and by maintaining the humidity of the genitals during intercourse furthered the retention of their extreme sensibility. These functions are of secondary importance to the health of the woman, and may easily be dispensed with if necessary.

The extirpation of the gland which is only slightly enlarged and which is not surrounded by inflamed tissues is comparatively simple, and can be accomplished under the influence of cocaine injections. Where the operator has had previous experience with cocaine and can deposit it with accuracy, from fifteen to thirty minims of the four per cent. solution of the drug will serve best in rendering the removal of the gland painless. If the operator possess but little skill in depositing cocaine, double the quantity of a two per cent. solution may be used to a better advantage, as with the larger quantity the less skillful operator is more likely to infiltrate all the tissues about the gland with the solution. The cocaine should first be injected along the site of the skin incision, then the needle should be carried down around the gland and beneath it.

The gland may be approached from the cleft between the labia majus and minus, and the subsequent scar will be concealed from sight, but this incision is not advisable in these cases and it is better to cut directly downward through the labium majus. The short incision, which serves to gain access to this type of gland, is inconspicuous and leaves an unimportant scar after being treated by immediate suture.

The bulb of the vagina is in close relation with the gland above and in front and, while injury to it is of no material importance, it is well to avoid it if possible. The skin incision should be directly over the gland, but should not extend too far forward. As soon as the gland is reached, it should be grasped with a strong toothed forceps and drawn strongly outward. It is now to be removed by dissection, keeping as close to it as possible, especially above and behind. A fairly large vessel runs beneath the gland and in spite of care it is sometimes wounded. As soon as the gland is free the cavity is to be packed with gauze. This is then removed and any bleeding

points are to be caught with forceps. Twisting is usually all that is required to control bleeding, though small catgut ligatures may be used if preferred. Closely applied sutures will control bleeding, and the operator may trust to this means alone if he wishes. The sutures should extend to the depth of the wound and where bleeding is persistent, they should be tied tightly. This is a simple operation, but it may mean much to the future health of the patient. Both glands may be removed at the same sitting and the patient need not be confined to bed.

I have not been in the habit of directing any attention to the duct, until the wound formed by the removal of the gland has entirely healed. A delicate probe is then to be wrapped with cotton, and the cotton is to be saturated with a ten per cent. chromic acid solution, and is then to be carried to the bottom of the duct if the duct is dilated or patulous. By manipulations the chromic acid is brought into contact with all parts of the duct and is then removed. The probe should then be rewrapped with sterile cotton and carried into the duct, and any excess of the chromic acid solution removed. The object of the chromic acid solution is to destroy the delicate epithelial lining of the duct so that its walls may adhere, and it is thus obliterated.

I have outlined briefly the symptoms and course of conditions which may be seen and studied by every gynecologist and many general practitioners. I hope they will appreciate the importance of these varieties of disease of the glands of Bartholin, and that from now on these organs will not be neglected until their pathological condition is manifested by the affections which I shall proceed to describe.

ACUTE INFLAMMATION OF THE DUCT AND GLAND OF BARTHOLIN WITH RETENTION OF PUS AND GLAND SECRETIONS.

This is the condition which is commonly described by writers as acute inflammation of the duct or gland. Acute inflammation without retention of pus and secretions differs widely from the acute inflammation which accompanies or follows an obstruction to the duct of the gland. A number of symptoms manifest themselves in this latter condition in an unmistakable way, and, in consequence of this, the disease has been recognized and described by gynecological writers for many years.

This variety of the disease where a retention cyst forms is one which causes much discomfort and inconvenience; it is fairly common, not infrequently recurs in the same individual, always with much discomfort and pain for two or

three weeks, and many times is followed by fistula formation. Reinfection of the genital or urinary tract may occur at any time, and the infected woman is a constant menace to any person with whom she may have sexual relations. In spite of all this, American writers have found but little to interest them in diseases of Bartholin's glands, and their descriptions of these diseases are brief and perfunctory. Mann years ago in the *American System of Gynecology* said "it is surprising how little has been written in American literature concerning the affections of these glands," and those words have remained true to the present day.

Acute inflammation alone has been accredited in the past as a frequent cause of occlusion of the duct. I have seen but two cases where I was convinced that infection had occurred within a month previous to the appearance of the disease. The gonococcus we must recognize as the most potent factor in producing an infection of the duct and gland. This organism produces most severe inflammations of the tissues about the genitals, and with such we would have the greatest degree of diminution in the calibre of the duct. At the same time we will have a profuse purulent discharge, and if this discharge becomes more or less thick or inspissated, we will have it acting as a factor in aiding in the plugging of the duct.

Trauma has been cited as a factor in the production of inflammation and enlargement of the gland. This trauma may occur during labor or intercourse. Such may predispose to excite an acute inflammation in an already infected gland, especially where there is an imperfect occlusion of the duct from stricture and a tendency toward the retention of pus and secretions.

Severe trauma lacerating the duct and producing a traumatic stricture with retention of the secretions may be followed by an acute inflammation, especially if the duct is already infected. I have treated one patient, a prostitute, who developed an acute suppurating cyst of the duct and gland after being kicked in the region of the gland by a drunken paramour. This woman had a gland which was already infected, as I have previously described, for the gland upon the opposite side was palpable. I have not tried to produce a laceration of the duct in the cadaver by a blow, and even if such is easily possible this case would not be conclusive, as stricture of the duct may have previously existed, and an increase of the inflammation or the effusion of a small amount of blood into the duct or acini of the gland might have acted to obstruct the duct, and thus produce the cystic retention which was necessary to initiate the process.

Inspissated secretions very often play a part in obstructing the duct, not acting alone, except in very exceptional instances, but in conjunction with stricture of the duct, the mode of formation of which has been previously considered.

The irritating discharges of cancer have been enumerated as among the causes of this form of disease of the gland. Without the encroachment of the cancerous tumor upon the duct or the development of papillomata or other growth to occlude directly or indirectly the lumen of the duct, I do not believe inflammation with cystic retention is likely to develop. A chronic inflammation of the duct, following an acute inflammation due to infection from a foul cancerous growth without retention of the secretions of the gland might be followed by stricture, which stricture interfering with the discharge of secretions and pus might be followed by this form of inflammatory disease, which we are at present considering.

I have mentioned the possibility of various growths encroaching upon the duct and obstructing it. This is a condition which we seldom see.

The commonest cause by far, as I have before suggested, of stricture of the duct is a prolonged gonorrhœal inflammation of the duct, and these varieties of stricture precede the development of this form of Bartholinitis, where there is an accumulation of pus and gland secretions in duct and gland.

Many have persisted in asserting that in these cases of inflammation the duct alone is involved in most instances. My own observations of these acute inflammations lead me to believe the contrary, and this is an opinion formed as the result of repeated extirpations of the gland during this condition, and I believe that further surgical experience of other men will go to prove the same.

The recognition of abscess of the gland could not be avoided, inasmuch as it is a common disease with striking and unmistakable symptoms, nevertheless a very imperfect understanding of the cause of the symptoms has existed. Writers seem to have exhausted their interest in expressing the opinion that suppuration and abscess are usually confined to the duct, and some have stated that we have superficial abscess of the duct and deep abscess of the duct. The reasons for such an opinion have not been expressed.

We are at present considering that form of the disease in which there is retention of pus and secretions in the duct or gland. We know when an infection develops in various parts of the body, that it will be from three days to a week before pus forms. Now this opinion has gained a footing, and wherever an inflammation is seen, it is

taken for granted that several days must elapse before pus forms. Here we have preceding the inflammation an accumulation of the infected secretions of the gland. Now these secretions by pressure upon uninfamed tissues cause but little discomfort. Quite a cyst may be present and cause no discomfort except during intercourse, but let the tissues about this cyst become acutely inflamed, and then the tension of the cyst will cause severe pain. This point I wish no one to misunderstand. In these cases cystic retention precedes all painful symptoms, and if we are merely to treat this case by palliative measures we need not poultice or wait for pus formation, for fluid has already accumulated, and the immediate evacuation of this fluid, as soon as the patient complains of pain, will relieve the tension upon inflamed tissues, and thus cause a subsidence of the pain.

THE COURSE OF THE DISEASE UNINFLUENCED BY TREATMENT.

Patients sometimes complain of a preceding chilliness, and in rare instances a distinct rigor. This is followed by malaise and a sense of discomfort in the genital region. This is accompanied by pain and tenderness over the site of the gland and duct, and usually within twelve or twenty-four hours the patient is complaining of severe pain over the gland. This pain is intense and lancinating, being badly borne as a rule, and causing much complaint. The color of the patient is often bad, the tongue is coated, and there is a febrile reaction. When the inflammation is at its height, the patient finds that even the change of position in bed is painful, and with loss of appetite and loss of sleep, the patient during the time is in quite an unhappy condition.

The first examination a few hours after the pain begins may reveal nothing upon inspection, but by palpation an exquisitely tender tumor will be felt beneath the labium. This tumor cannot be palpated freely, and it is not possible to grasp it even gently without causing much discomfort.

As the disease progresses, a tumor becomes apparent projecting toward the median line. It increases in size quite rapidly, and at the same time symptoms of inflammation of the external parts develop. The genitals over the tumor become acutely inflamed and this inflammation extends backward over the perinæum, so that an inflammation observed some days after its origin may be mistaken for an infection which has developed about the bowel and extended forward.

After a variable time the abscess ruptures spontaneously into the vagina or beneath the labium majus. The pus usually finds exit through sev-

eral openings, and then the severe pain subsides. The discharge of the contents of the cyst may occur by a giving way of the obstruction in the duct and in this way fistulæ may not form. Where this latter route of escape of the pus occurs, we are likely to find the duct again becoming occluded very early, and then we note an early recurrence of the acute symptoms in most instances.

After the discharge of pus and secretions, an examination will reveal in almost every instance an enlarged and somewhat tender gland. The suppuration continues and the fistulæ persist. In some cases the pus burrows backward into the perinæum and discharges into the rectum as well as into the vagina, so that we are able to find fistulous communications between these parts.

The pus discharged is usually fetid, and is capable of setting up an acute vaginitis or urethritis. I have had this condition under treatment where this acute inflammation has developed immediately after the discharge of the pus into the vagina. These reinfections are not to be looked upon lightly, as the woman may develop a uterine and annexal inflammation, which she has previously escaped.

This gland lies well back toward the perinæum, and an inflammation of it is not likely to be mistaken for pudendal hernia or cyst of the canal of Nuck or any other tumor of the genitals in front. Diffuse inflammation and phlegmon do not correspond either in symptoms or appearance to this condition. The acute inflammation is nearly always unilateral and the tumor projects markedly toward the opposite labia. Cysts without acute inflammation are unaccompanied by the severe pain and constitutional symptoms which manifest themselves in this condition.

(To be continued.)

Epidemic of Diphtheria in Cats.—The Orange (N. J.) Board of Health is preparing to investigate the cat population in the city with a view to preventing the spread of diphtheria. A large number of cats are known to be suffering with the disease at the present time. Many of these animals are the pets of children and the danger is great. Dr. G. Herbert Richards, president of the board of health and a member of the board of education, has said that he would advise all householders owning cats that have sore throats or are apparently suffering from difficult breathing to at once consult a physician.

The Medical Association of the District of Columbia, at its meeting on April 4th, elected the following officers: President, Dr. Clifton Mayfield; vice-presidents, Dr. D. Olin Leech and Dr. G. Brown Miller; secretary, Dr. D. W. Prentis; treasurer, Dr. Frank Leech.

A METHOD OF MEASURING THE X RAYS.

By MILTON FRANKLIN, M. D.,

NEW YORK,

LECTURER ON ELECTORADIOTHERAPY IN THE NEW YORK POLY-CLINIC MEDICAL SCHOOL.

It is scarcely necessary at the present time to say anything regarding the importance of a method for accurately measuring the energy of the x rays. The multiplicity of the attempts to this end made on all sides, speaks eloquently of its importance, and it is generally conceded that all experimental science depends ultimately upon accurate measurement. Of the many methods heretofore proposed for the measurement of the x rays, not one can be said to fulfill the loosest requirements of accuracy or expedition.

Until now, all methods have been based on one or a combination of the following principles:

1. The resistance of the tube as measured by that of an air gap in parallel.
2. The penetrability, as determined by the thickness of metal through which a fluorescent effect could be obtained.
3. The fluorescent effect, by comparison of a fluorescent screen with some standard light.
4. The photochemical effect as measured by photographic papers and the Holtzknecht radiochromometer.
5. The measurement of the amount of current in the secondary circuit of the induction coil or the static current.

The first method is of little or no value, on account of the possible variety of performances in a tube for a given resistance, and the obscure and inconstant relation between the performances of different tubes with equal resistances. Except by very complex mathematical expressions, no relation can be established between the resistance and performance of a tube, and the many variable factors in such equations as are made use of render the results extremely difficult of attainment.

The second method is generally made use of by employing the radiochromometer of Benoist. This consists of a casting of aluminum in the form of a circular train of steps, the height of each bearing a definite known ratio to that of the next preceding it. In the centre of the spiral is a sheet of silver of a given thickness. When the radiochromometer is attached to the fluoroscope, the number corresponding with the thickness of the step casting a shadow similar to that of the silver plate gives a rough estimate of the penetrability of the rays. The method is of value only in indicating the penetrability of the rays. The determination is necessarily rough, depending as it does on the personal equation of the operator. In consequence many differences of opinion arise and it is not possible

to compare the results of different observers with certainty.

The third method has not as yet been scientifically applied, though there is a possibility of its being of great value if a suitable photometer is devised, and the author is engaged in perfecting such an apparatus at the present time. Also there is a brief mention and a description of a forthcoming photometer for this purpose in *Le Radium*, No. 4, for October, 1904.

The fourth method, in its most popular application, is based on the change in color produced in certain salts by absorption of the rays. In practice a small quantity of a test reagent is applied to the skin near the lesion to be treated, where it can be acted on by the rays. This reagent is frequently removed and compared with a standard tint found on a scale of graduated tints, having arbitrarily chosen numbers. When the test reagent has assumed the desired color, the treatment is terminated. The method while apparently capable of some accuracy in hypothesis, is subject to grave errors in practice. Total dependence is placed in the matching of the colors by the eye, and this presents serious difficulties, especially as it must be done in subdued light, to lessen the danger of an incorrect result from the light. The numbers on the standard scale are purely arbitrary and bear no known mathematical relation to each other, so that comparison of results can have no real value. Besides this there is no convenient application to radiography, and the method offers no means of rapid adjustment. The uncertainties of the method are so numerous and considerable as to have prevented its general use, and recently while in Paris, the writer was informed that the apparatus is no longer manufactured and that the method generally had fallen into disuse.

The proposed method of using a photographic paper and having the rays traverse it before reaching the lesion, is scarcely possible. It presents at best only a means of estimating the quantity of rays which *have* acted, and offers no aid to regulating the quantity which it is desired *shall* act. It is, therefore, of little or no use.

The fifth method is altogether misleading and is based on a false assumption. As can be easily proved there exists no discernible or demonstrable relation between the x rays produced and the current indicated by the reading of a millimeter in the circuit. Experiments made by the writer show that there may be a reading indicating that the current is less than zero, or that it is reversed, and that there may be quite potent rays coming from the tube. The many uncertainties and contrary conditions in the application render it impossible to obtain accurate results with this method. A merely

theoretical consideration of the subject renders evident its sophistry, but I cannot spare the space necessary to discuss it here.

The method I herein present is based on the power of the x rays to ionize the gases through which they travel. This quality has been known for some time but has not, so far as I have been able to ascertain, been systematically used to measure the intensity of the x rays. The method, excepting for necessary modifications to make it conform with the special requirements of the x rays, is substantially analogous to that now commonly employed to measure the radioactivity of the radioactive substances. Air is rendered a conductor of electricity by the ionizing agent and measurement of the amount of current flowing through it under given conditions gives an absolute index of the activity of the radiation.

With ordinary care, this method is capable of great accuracy, and discrepancies in the results of different observers, due to personal equation, are negligible. The measurements may be made, as is done for radioactive substances, in laboratories, with some form of Lord Kelvin's quadrant electrometer, but such apparatus requires much space, a battery or other generator capable of maintaining a constant E. M. F. of at least 700 volts, and much time and skill in its operation. Also the condition of the instrument varies from day to day and its exact constant must be frequently determined.

With an electroscope, on the other hand, of the gold leaf pattern, the relative activities of two radiations may be compared with great accuracy and expedition, and if one of them is the standard unit of activity or bears a known ratio to the standard, the value of the other, in terms of the standard, will be readily deducible. It is necessary only to charge the electroscope by applying a rod of vulcanite, sealing wax, resin, or other suitable material, which has been previously electrified by friction, and then to time the transit of the filament under the influence of the rays. The rate of discharge will vary directly as the activity of the radiation.

All computation with consequent delay is eliminated, and the whole process need not occupy more than ten or fifteen seconds. The electroscope may be charged and the rays allowed to enter only at the instant when desired during the exposure, by means of a ray proof shutter at the back of the instrument.

In order to make clear the working of this method, it will be necessary to briefly review the ionization theory of gases.

J. J. Thompson and Rutherford (*Phil. Mag.*, November, 1896) explained the phenomenon of the discharge of both positively and negatively charged

bodies, in the vicinity of a Crookes's tube on the assumption that the x rays produced in the gas surrounding the charged body, positively and negatively charged carriers. These carriers which are now universally called ions, travel in an electric field, with a velocity directly as the strength of the field.

Thus, if we have two parallel plates, A and B (Fig. 1), the one positively, and the other negatively charged, and x rays are caused to traverse the air

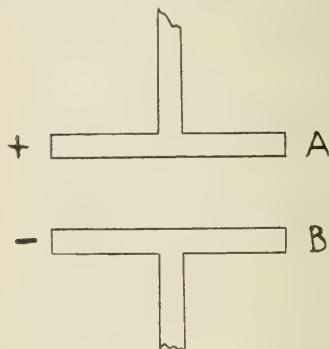


FIG. 1.

between them, ions will be generated therein, which will travel toward the plates with a velocity proportional to the strength of the electric field, the negative ions traveling toward the positively charged plate and the positively charged ones in the opposite direction. The number of ions produced a second under the influence of the x rays will depend upon the nature and pressure of the gas present, the distance between the plates, and will vary directly as the activity of the ionizing agent. In what follows we shall regard the gas between the plates as atmospheric air under ordinary pressures, unless otherwise stated.

If there is no electrification upon the plates and consequently no difference in potential between them, there will be a recombination of the ions as soon as produced. The rate at which this recombination takes place has been experimentally determined to vary as the square of the number present. Owing to the absence of a definite motion, on account of there being no electric field, the number which recombine will be large and will ultimately balance the number produced. Now when a small potential difference is established between the plates, the ions begin to move in the electric field and, as the rate of production is constant for any given ionizing agent, the number of recombinations lessens in proportion to the number which reach the electrified plates. As the potential difference is increased, the speed of the ions is proportionately

increased, and the number of recombinations decreased. A stage is finally reached where the speed is so great that the ions do not have time to recombine in passing and all of them travel across the field and reach one plate or the other. After this point is attained, no increase in the potential difference between the plates can cause an increase in the amount of current flowing between them, it being borne in mind that the charge carried by an ion has a constant value. An increase can be affected only by increasing the rate at which the ions are produced.

In brief, the quantity of gas between the plates and the activity of the ionizing agent will determine the maximum amount of current that can pass between the plates, the potential difference between them being insignificant after it has reached the value sufficient to cause all of the ions to carry their charges to one or other of the plates as soon as they are produced. The value of the maximum current that will flow through an ionized gas under any potential is called the saturation current on account of the resemblance of its graphical representation to that of the magnetic saturation curve of iron, and it is the measure of this saturation current upon which comparative determinations depend.

The rays given off by uranium are analogous, with respect to their photographic and electrical action, to those from the Crookes's tube, but inestimably more feeble. Nevertheless, so delicate an indication of the presence of radioactivity is the ionization of air, that by specially designed apparatus, an activity of one ten thousandth, or even one one millionth, that of uranium may be detected.

The electroscope which has been devised for the measurement of the x rays comprises an electrical system and a shell in which it is isolated. The function of the latter is to confine the action of the rays to a particular portion of the system. If it is desired that the results be comparable, it is absolutely necessary that the instruments be identical in design and dimensions. Details and proportions of this instrument are shown in Fig. 2, and the figures in the text refer to the cut.

The shell is of brass, one eighth inch thick, four inches square inside, and seven and one eighth inches long. The diaphragm, I, is of hard rubber, one fourth inch thick, and divides the inside of the shell into two compartments, the lower of which is two and one half inches high. The window, E, in this compartment, is two inches in diameter, circular, and closed with an air tight hard rubber blind, one sixteenth inch thick. The space, S, between the ends of the rods, C, D, is at the exact centre of the compartment and is one quarter inch long. The lower rod, D, is one quarter inch in diameter and communicates with the shell by means of the metal bottom on which it is mounted. It is thus kept at a potential, zero, by being in electrical communication with the earth. The upper rod, C, is one quarter inch in diameter and passes through the

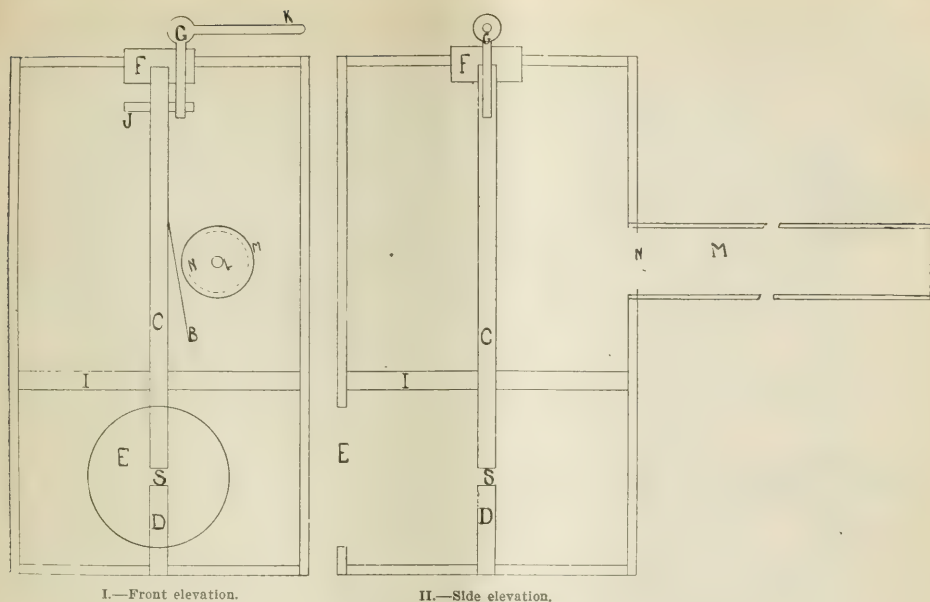


FIG. 2.—Plan of electroscope.

diaphragm, I. It is fastened at its upper extremity, into the rubber plug, F, and does not communicate with the outer air in any manner.

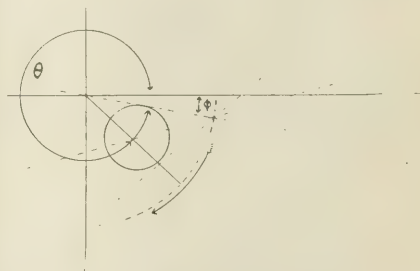
The filament, B, is fastened to the rod, C, at a point two and one eighth inches from the diaphragm, I; it is one quarter inch in width, and has a free length of one and three quarter inches. It is made of thin aluminum foil. In the upper compartment there should be glass windows at the sides to allow of illumination; the dimensions are relatively unimportant.

The charger consists of the rod, G, passing through the cover of the shell. The hard rubber handle, K, permits of turning the rod, G, and bringing the brass spring, J, into contact with the rod, C; when the handle, K, is released, the rod, G, resumes its former position, by means of a spring and breaks the connection with the rod, C.

The tube, M, serves to limit the field over which the filament moves during the period of the reading. Its dimensions and position are of the extremest importance in rendering the instruments comparable. The length between the diaphragms, N, L, should be six inches. The diaphragm, N, has a diameter of seven eighths inch and the diaphragm, L, is one eighth inch in diameter. The tube is fastened to the wall of the shell and so placed that the upper limit of the field corresponds with the terminal side of the angle 350° , i. e., the filament first comes into the field after it has traversed the angle— 10° . The transit of the needle from the time it enters the field till it disappears beyond the inferior limit of the diaphragm will vary in speed directly as the intensity of the x radiation, and inversely as the square of the distance of the

tube from the radiometer. The position of the filament and its transit is shown in Fig. 3. The filament during its transit describes an angle in the negative direction in the fourth quadrant.

The electroscope may be mounted on a stand rendering it movable about the room. In the model shown in Fig. 4 there is a large shield of some metal

FIG. 3.—Position of reading tube and transit of filament.
() = 350° ; $\phi = 10^\circ$.

impervious to the rays, which is placed at the back of the instrument and which protects the operator from the action of the rays while making the observation.

The counting may be done with a stop watch, a metronome, or other convenient device.

The following details of design are the result of experimental consideration:

i. Having the lower chamber closed, precludes the

possibility of the ultraviolet rays causing the discharge. As an extra precaution, no zinc should be used in the construction.

2. The lower compartment should contain a fragment of calcium or a vessel of sulphuric acid or other drier for the purpose of maintaining the air within at a constant condition of dryness. If this precaution is observed, the chamber will not need attention for months. The condition will not vary appreciably and changes in the rate of ionization, due to variations in the amount of moisture in the atmosphere, will be negligible.

3. The thickness of the shell should be such that no appreciable amount of rays enters. In this way the leak is confined entirely to the space between the plates in the lower chamber, and consistent performance is thus assured.

4. The arrangement of the charging system is such that there is no communication between the charged filament and the surrounding air, so that the discharge of the electroscope takes place only when the rays are allowed to enter the lower chamber. The instrument may be left charged in the vicinity of an operating tube without discharging.

5. The tube is placed at the front of the electroscope and the window for the rays to enter at the back. In this way, with the help of the shield before spoken of, the operator is not exposed to the action of the rays.

In making use of the instrument it should be remembered that, as the rays emanate from a single point on the target, their potency will vary inversely as the square of the distance. Thus if it is desired to know what the energy of any ray is at a distance d_1 from the tube, and it is known from the electroscope placed at the distance, d_2 , that the energy is e , then the energy x , at d_1 , can be found from the equation:

$$\frac{x}{e} = \frac{d_2^2}{d_1^2} \dots \dots \dots (1).$$

The result so obtained will not be strictly accurate, however, because of an error introduced by the absorptive influence of the atmosphere on the x rays. It is a variable which must be considered. If the power of the radiation was inversely proportional to the square of the distance, we could plot the relation between the distance of the tube from the electroscope, and the time of discharge, on an ordinary paraboloid curve, as in Fig. 5, where the solid curve represents the one whose equation is,

$$y = x^2 \dots \dots \dots (2).$$

The distance of the tube is plotted as abscissa while the time of discharge is plotted as ordinate.

Experimentally, however, it is found that at any distance, x , the time of discharge, y , instead of being exactly equal to x^2 , is equal to kx^2 , where k is some constant greater than unity: i. e., instead of the time of discharge varying directly as the square of the distance, it is found to take longer than the equations call for. In consequence, we get a curve similar to the dotted line in the figure. This additional time is found to vary with the condition of the atmosphere through which the rays pass but, for any condition, bears a definite relation to the indicated time. The variation while small, even between the extremes of midsummer and mid-winter, is still appreciable and demands consideration. To determine the exact value of the constant k would be impossible without the aid of very elaborate calculations, and by neglecting it, the results obtained in different places would agree only roughly. To avoid all the uncertainty introduced by this variable factor and to render at once com-

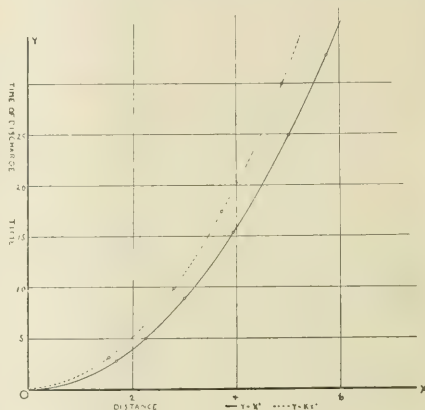


FIG. 5.

parable all readings, it is only necessary to measure the energy of the rays at the distance from the tube at which they are to be used. By this simple expedient the actual strength of the rays at the point of application is found, no consideration being given to the quantity absorbed before arriving at that position. The number of seconds which it requires for the filament to traverse the field is the coefficient of the strength of the rays, all calculation and variation due to atmospheric absorption being at once eliminated.

The application of the instrument is as follows:

1. The electroscope is charged by having brought into contact with the knob, a rod of vulcanite which has been electrified by friction. The knob is brought into communication with the filament, while the vulcanite is in contact, and released as soon as the filament has assumed a horizontal position.

2. The electroscope is brought to the same distance from the tube as the patient or plate (in any position) and while the tube is running, the shutter is opened

and the time in seconds, occupied by the filament in transit, is noted. The number of seconds is the exact coefficient of energy of the rays, and when compared with any other reading made under any circumstances whatever, with a similar instrument, the ratio of energy of the two radiations will equal that of the two times.

112 WEST FORTY-SEVENTH STREET.

A REVIEW OF THE TREATMENT OF INFLAMMATORY CONDITIONS OF THE THROAT BY IRRIGATION AND A DESCRIPTION OF A NEW IRRIGATOR TIP.

By EDWARD L. KELLOGG, M. D.,
NEW YORK.

During the several years of my connection with the Hospital for Scarlet Fever and Diphtheria Patients, I have received many inquiries from physicians in New York and elsewhere concerning the methods adopted there for treating throat infections in scarlet fever and diphtheria.

The statement that we use saline irrigations has been followed in many cases by a request for details. A review of the *modus operandi*, therefore, may not be out of place, although the course pursued is not a new one.

The usual forms of amygdalitis and pharyngitis may be treated effectively in the same way.

Normal saline is the solution ordinarily used. Occasionally when the throat is dry and glazed, a solution of sodium bicarbonate (one tablespoonful to a pint of water) is preferred to soften tenacious mucus or start secretion.

Boric acid, potassium permanganate, and other antiseptic solutions possess no apparent advantage over the salt water which not only has a soothing and cleansing effect, but will do no harm even if a considerable quantity is swallowed while the patient is being "broken in" to the treatment.

The solution is made as hot as it can be borne without discomfort, usually 110° F. at the start with a gradual increase to 125°.

The quantity used is about two quarts; sometimes, however, it is necessary to diminish the amount until the patients learn to let the water flow out of the mouth without exhausting themselves by gagging and straining.

The severity of the infection plus the ability of the patient to stand the irrigation determine the frequency of the treatment. Severe cases as a rule are irrigated every two hours from six a. m. to midnight.

The patient, protected by a rubber sheet, is

turned on one side with the cheek resting on the edge of a pus basin, and the head is lowered slightly by removing the pillow. (Infants are prepared as for intubation by wrapping them from the shoulders to the feet in a strong sheet fastened firmly at the shoulders, elbows, wrists, knees, and ankles.) A fountain or Davidson soft rubber bulb syringe is used. The straight tip of the syringe is introduced into the mouth in the median line and carried back to the base of the tongue, which is held down so as to expose the back of the throat. The solution is then directed with considerable force against the pharynx, or the part of the throat from which we wish to dislodge the membrane. When the mouth is filled, the tube is compressed with the finger, and the patient is allowed to expel the solution into the basin. This process is repeated until the treatment is finished.

The effect of the treatment described is to relieve pain, dislodge membrane, and wash away thickened mucus more thoroughly than by any other means with which I am familiar.

In bad cases, particularly those in which the nasopharynx is extensively involved, the nose is also irrigated with the same solution. A conical tip which plugs the nostril tightly is employed, or a catheter is passed through one nostril to the

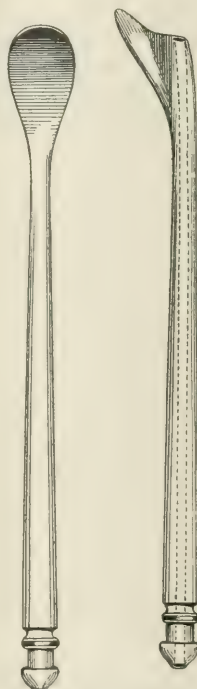
nasopharynx. The latter method, although slightly less efficacious, is adopted to minimize the danger of ear infection, which is considerable in all nasal irrigations.

The tips supplied with the syringes are not well adapted for the work of throat irrigation; they are too short and do not offer a sufficiently broad surface to satisfactorily depress the tongue.

On this account I have devised an irrigator tip which is now in use in the Hospital for Scarlet Fever and Diphtheria Patients, and which I have used in private practice with much satisfaction.

This tip may best be described by repeating the specifications which I have given for the manufacture of it.

Make irrigator tip of



Dr. Kellogg's new Irrigator tip.

hard rubber, seven inches in length, a straight canal extending the entire length of same, size seven, French scale, one end conical in shape to fit easily into the rubber tube of the syringe with a groove above to keep the tube from slipping; the outer end flattened and curved downward to form a tongue depressor three quarters of an inch wide.

The tip is small enough to be used in the throat of a child and yet satisfactorily controls the tongue of an adult. It is long enough to prevent the hand of the operator from interfering with inspection of the throat.

The cuts convey a good idea of the instrument when completed.

104 WEST FIFTY-EIGHTH STREET.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 756.)

Hæmoantitoxine is a preparation of Maragliano's tuberculosis antitoxine in combination with alcohol and glycerin, flavored with aromatics. It forms a clear solution of a wine red color of agreeable taste. It is given as a prophylactic against tuberculosis in tablespoonful doses four times a day before eating. It is made at the laboratory of the Institute for Infectious Diseases, Genoa, Italy.

Hæmolin is the name given to a mixture of oxyhæmoglobin and maltose.

Oxyhæmorrhoidin is a name that has been incorrectly applied to hæmorrhoidin, the name of a tablet which owes its medicinal activity to the active principle of what is described as extract of *pantjansona*, a plant which it is asserted is indigenous to Asia. The tablet has a basis of chocolate and sugar. (We have been unable to place any plant bearing this name.—Ed.)

Heritine Marpmann, which must not be confounded with the alkaloid heritine obtained from *Heritiera japonica*, appears to be a dilute alcoholic solution of the crude alkaloid heritine. It contains from 45 to 46 per cent. of alcohol and is devoid of any special taste or odor, forming a clear solution. After concentration by evaporation the solution gives the reaction for alkaloids; the residue contains small amounts of albumen and mineral matter.

Hæmapeptone is represented to be a solution of albumose peptone combined with hæmatin in a mixture of alcohol, glycerin, and aromatics. It is asserted to possess nutrient nitrogenous properties and may be administered by the mouth or by rectum.

Hæmec Tablets contain hæmatin, an organic iron preparation, grain $\frac{1}{4}$; nux vomica, grain $1\frac{1}{8}$; arsenous acid, grain $\frac{1}{120}$. It is recommended in malaria and other ailments characterized by impoverishment or loss of blood.

Hæmostyptic, Brünninghausen, is a preparation of the active principles of ergot and golden

seal, which is recommended in hæmorrhages, in 30 drop doses, four times a day.

Herniarin is a new active principle obtained from the leaves of *Herniara glabra*. It is soluble in absolute alcohol, but insoluble in ether. When triturated with sulphuric acid the crystals turn yellow, later pink, and finally dark red. On boiling with water the product is split into glucose and herniariac acid, an acid which is regarded by some as the active principle of the herb itself, which is used in the treatment of calculi in the kidney, Bright's disease, etc., chiefly as a diuretic.

Histosan is a combination of guaiacol with egg albumen, which is put up in syrup and powder form. It is intended for the treatment of tuberculosis, the dose of the syrup being from a teaspoonful to a tablespoonful three to four times daily and of the powder 4 to 8 grains.

Hals's Pastilles consist of 2 grammes of masses of guaiac resin and white sugar, with a certain quantity of anæsthesin, menthol, and rose oil. They are said to be effective in the treatment of amygdalitis and similar throat affections.

Hippol is the trade name adopted for methylene hippuric acid, which occurs as colorless prismatic crystals, without odor or taste and only sparingly soluble in water. It is recommended as a urinary antiseptic in the treatment of bacterial diseases of the urinary organs, in doses of 24 grains four times daily. The antiseptic action of this compound is said to be due to the setting free of formaldehyde during the processes of metabolism.

A Public Library for the Blind.—A recent issue of the *Evening World* draws attention to a charity that must appeal strongly to any one who gives it more than a moment's thought. The *World* says: A public library for the blind has been opened in Brooklyn. It starts with 400 books, printed not with letters in ink to be read with the eye, but with the punctured characters for the trained and sensitive fingers of the blind. The library is located at Fourth Avenue and Pacific Street, and all blind visitors will be welcome. Although the books are not many in number, they take up a great deal of space. Books for the blind cannot be printed on thin paper, and the punctured characters must not be compressed, or they become blurred and more difficult to read. The Bible alone takes up three feet of shelf space. The blind readers who have been consulted as to the kind of books they most want express a preference for light literature. They prefer books telling of sunshine and outdoor life, with vivid descriptions of the scenes which they cannot see and the things of which their loss of sight deprives them of first hand knowledge. A library like this will bring more happiness than many great libraries for those who can read. The cost of preparing books especially for the blind is so great that the purchase of single copies by the blind is rare, and a library which gives them access to current literature will do much to bring into their lives some of the sunshine which they cannot see.

NEW YORK MEDICAL JOURNAL

AND

PHILADELPHIA MEDICAL JOURNAL.

A Weekly Review of Medicine.

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THE PHILADELPHIA CONFERENCE OF ANATOMISTS.

On April 11th and 12th there took place in Philadelphia a conference of ten prominent American anatomists who had been invited by the Wistar Institute of Anatomy to consider, with the managers of the institute, the question of increasing its usefulness to American anatomists by establishing relationship with the individual anatomists of the country, with the Association of American Anatomists, with the *American Journal of Anatomy*, and with similar institutes abroad, also the question of establishing an advisory board of anatomists of the institute, with ten or more members selected from the leading anatomists of the country. The following anatomists were present at the conference:

Dr. Lewellys F. Barker, professor of anatomy, University of Chicago; Dr. Edwin G. Conklin, professor of zoology, University of Pennsylvania; Dr. Henry H. Donaldson, professor of neurology, University of Chicago; Mr. Simon H. Gage, professor of embryology, Cornell University; Dr. G. Carl Huber, professor of embryology and histology, University of Michigan; Dr. George S. Huntington, professor of anatomy, Columbia University; Dr. Franklin P. Mall, professor of anatomy, Johns Hopkins University; Dr. J. Playfair McMurrich, professor of anatomy, University of

Michigan; Dr. Charles S. Minot, professor of embryology, Harvard Medical School; and Dr. George S. Piersol, professor of anatomy, University of Pennsylvania. General Wistar, the donor of the institute, representing the board of managers, after expressing his pleasure at having such a distinguished body of men present, spoke of the organization of the institute, its objects, its resources, and its probable future. Dr. M. J. Greenman, director of the institute, followed with a short address outlining the work which he thought might be accomplished by the conference.

The anatomists were called upon to consider what special lines of work the institute might best undertake. They were also requested to consider the possibility and advisability of establishing a central institute of neurology to make use of the Wistar Institute as its working base and acquiring relations with the committee appointed by the International Association of Academies for Brain Investigation. Attention was called to the achievements made possible by cooperation with an institution organized and endowed for research anatomy. The organization of an advisory board of anatomists for the institute was suggested as a possible means of accomplishing the most work for the greatest number.

The conference then organized and elected Dr. Charles S. Minot chairman and Dr. M. J. Greenman secretary. A discussion brought out the unanimous opinion that the Wistar Institute of Anatomy offered exceptional facilities for all investigators in this branch of science. It was thought that research material might be collected and prepared there, especially neurological and embryological material, in such a way as to save much time to the interpreter; and that original preparations which had been studied, and were therefore of much greater value, should be deposited in the Wistar Museum for the future use of students who wished to review the work. The reproduction of models was suggested. The importance of organized effort to collect and properly prepare the vast amount of anatomical material which usually went to waste and the desirability of its immediate use while fresh were emphasized. The establishment of agencies in va-

rious localities, with skilled preparators in charge for the collection of material, was suggested. It was made plain in the course of the discussion that the advanced museum work which the institute was striving to do was inseparable from investigation. It was considered that the pursuit of a well defined line of research was necessary for the proper collection and preparation of materials. Neurology, embryology, and comparative anatomy were discussed as the broad fields of work to be developed, and it was thought that neurological research should be the first to receive attention.

A committee, consisting of Dr. Minot (chairman), Dr. Donaldson, and Dr. Mall, reported an outline of the principal objects of the institute, and recommended that an advisory board of ten be appointed. General Wistar thereupon expressed the approval of the Wistar Institute as to every detail of the recommendations and asked the ten anatomists present if they would become members of a permanent advisory board of anatomists of the institute and proceed to organize and appoint such committees as had been recommended. He explained that he represented the sentiment of the members of the board of managers present, and he would assume authority for the creation of such a board and the appointment of its members, and he had no doubt that the creation of the advisory board of anatomists and the personnel of its membership would be officially confirmed by the board of managers at its next meeting. The members of the conference consented and the advisory board was organized by electing Dr. Charles S. Minot as chairman and Dr. M. J. Greenman as permanent secretary. A meeting of the board of managers held on April 18th officially confirmed the action of its representatives at the conference.

The advisory board proceeded to appoint the following committees: On neurology and the establishment of relations with the International Association of Academies, Dr. Barker, Dr. Donaldson, Dr. Mall, Dr. McMurrich, and Dr. Minot—this committee to elect its own chairman. On the relations of the Wistar Institute to American anatomists, Professor Gage (chairman), Dr. Pierson, and Dr. Huber. On comparative anatomy

and embryology, Dr. Huntington (chairman), Dr. Conklin, and Dr. Mall.

At the close of the meeting Dr. Barker called attention to the unusual procedure of an endowed institution offering its facilities in such a liberal manner to the workers in the science and calling upon them to advise methods of development which would be advantageous to both the institute and themselves.

The enlightened course pursued by the institute in this matter and the cordial cooperation of the anatomists who took part in the conference are certainly of great promise for the prosecution of anatomical research in this country.

THE VALUE OF EVIDENCE.

Not long ago a representative of this journal saw a distinguished master of modern magic make a demonstration of the art at an uptown theatre. The most forcible impression derived from the experience was that human testimony is an extremely fallible thing. To one having some knowledge of the principles upon which modern magic is based it is truly amazing to hear an account of any trick given by one of the uninitiated; the essentials upon which the success of the trick depends are omitted and the actual deception which the artist has been at pains to create is dwelt upon in detail. Careful contradiction of the narrator will elicit the most vehement reiteration of what he supposed he had witnessed, and a further expression of doubt will lead to a belief on his part almost fanatical in its nature—a veritable "faith, the evidence of things not seen."

As Hume pointed out, there is nothing intrinsically impossible in miracles, and the only justifiable disbelief in their occurrence is founded on the unreliable character of the testimony adduced to prove their occurrence. Members of our profession have, however, made deplorable laughing stocks of themselves more than once when certifying as to the "unexplainable" performances of "magnetic women," sealed letter readers, and others.

Testimony, to be of value, must be really expert testimony. When persons who claim supernatural powers are to be investigated, the invited committee of doctors might well add to their

number a competent modern magician and possibly the manager of a dime museum. The shock of the temporary association would be more than compensated for by the illuminating comments and conclusions of the latter.

The lesson to the physician as an individual is that he should discount heavily the history and account of symptoms given by the relatives of a sick child and even those made with painful attempts at accuracy by an adult concerning his own ailments. The objective examination may be made first and thoroughly if the patient can be kept quiet long enough, and his subsequent statements should be depended upon more to shed valuable light on his mentality than to help materially in the diagnosis.

THE PREVENTION OF CONCEPTION.

In France there has lately been under discussion the question of the justifiability of preventing conception, not only for the preservation of the woman's life, but also for reasons that we cannot look upon as founded on anything more serious than considerations of convenience. The discussion is in the form of letters written in reply to a circular of inquiry by Dr. Klotz-Forest, published in the *Chronique médicale* for February 15th. That individual does not seem to have asked for any justification of anybody's advocacy of preventing conception for social or personal reasons, but he does appear to have imposed on the opponents of the practice the burden of sustaining their contention.

A few of the replies are published in *Médecine orientale* for March 25th. They are by Dr. Grasset, of Montpellier, M. Lucien Descaves, Dr. Paul Achard, Dr. Francis Bleynie, President Magnaud, of Château-Thierry, and Madame Odette Laguerre, editor of the *Fronde*. All these persons, except Dr. Grasset, uphold the practice, but it is worthy of remark that one of them, Dr. Bleynie, makes it a *sine qua non* that the means employed shall consist solely in abstinence from coitus. By implication Dr. Bleynie limits his approval of the practice to cases in which coitus would be injurious to the husband or parturition exceptionally dangerous to the wife, and he seems to feel confident that men and women will observe con-

tinence for such reasons—the man on the woman's account and the woman for the man's sake. But it may be that he is sarcastic throughout.

Dr. Grasset pricks the bubble of conscience salving out of regard for apprehended danger to the wife, and undoubtedly he expresses the feeling of the great majority of physicians. As he puts it, if the justifiability of preventing conception in the interest of the wife's health should be conceded, married couples will feel at liberty to prevent it in case the physician cannot guarantee that childbirth will be quite free from peril to the woman, which of course no physician can do. One may share Dr. Grasset's dread of the consequences of such a free and easy shifting of responsibility upon the physician, and yet not deny the propriety of preventing conception in cases of exceptional danger to the woman.

THE CLAMP VERSUS THE LIGATURE FOR HÆMORRHOIDS.

Nothing contributed to current literature for a long time on this special subject has been so clean cut, decisive, and worthy of consideration as the article by McBurney in a recent issue of this journal. His ground is this: Make a clean dissection of the tumor; follow it up to its pedicle; tie; amputate; close the incision by suture; and strive for primary union.

To show how near we are together, my own rules can be formulated as concisely. Make a clean dissection of the tumor, follow it up to its pedicle, grasp with artery forceps, amputate and cauterize rather than ligate the stump, and wait for healing by granulation rather than hope for union by first intention.

Really, we are getting pretty near together. McBurney thinks the cautery rather old fashioned and primitive compared with the ligature, but the cautery is, I believe, still in favor in sealing the stump of an appendix and is preferred by many to the ligature. It is preferred by me to the ligature in cases of hæmorrhoids, but this may be only a preference.

McBurney's operation is thoroughly scientific and probably fully as painless as mine. My own is as thoroughly scientific as his, and probably as painless. The question is, then, reduced to this:

Can he get union by first intention in a majority of cases? I have given up trying to do so, and therefore trust entirely to union by granulation.

But the main point is this, which seems to be agreed upon both by McBurney and myself, that hemorrhoids are vascular tumors, to be treated as such, dissected out, isolated, strangulated, amputated, cured, and that to do this it is not essential to amputate the rectum. This point having been made plain, both by McBurney on his side and by myself, much has been gained.

Whitehead's amputation of the whole "pile-bearing area" goes into history. The clamp operation as applied to skin, hæmorrhoid, and everything in grasp, has never been taught; and has been the damnation of the method. If there was no better method than this, McBurney's operation would come out far in advance. The only trouble with the clamp operation is that so few men who practise it really have the faintest conception of its proper technique; and the instruments are in themselves misleading. My own "clamp" in the future will be an ordinary broad bladed artery forceps, and by this means something may be done to make it plain that to operate on hæmorrhoids by the clamp and cautery method does not require a blacksmith's vise or a jack screw.

CHARLES B. KELSEY.

RADIUM IN THE TREATMENT OF CANCER.

Sensational articles appeared in several of the daily papers on April 19th giving details of the treatment and cure of a case of cancer at the Flower Hospital by means of radium. In the course of the article credit for the cure is given to Hugo Lieber, who requests us to state, as will be seen in our news columns, that his only connection with the matter was the preparation of celluloid needles coated with radium, which were made at the request of Dr. Piffard, who stated that he desired to make use of them in a case of cancer. Mr. Lieber has never seen or treated the patients. The particular method of employing radium in the case in question was described at some length by Dr. Piffard in an address delivered before the Medical Society of the County of New York on March 27, 1905, when he also exhibited the radium coated needles. While the results obtained by Dr. Piffard have been quite satisfactory so far, he does not consider that a sufficient number of cases have been treated to justify any final conclusion as to the real value of

radium applied in this manner, and for that reason he has not as yet made any formal report of the results of this treatment, and deprecates the fact that so much undue publicity has been given to the particular case referred to in the lay press.

A PREPOSTEROUS PIECE OF PROPOSED LEGISLATION.

There is now before the legislature of the State of New York a bill which seeks to endow magistrates with the power to commit certain offenders for a course of treatment in the Oppenheimer Institute, and seems virtually to command them to exercise the power—the institute's remuneration to be provided for at the rate of \$25 for each person so committed. Such colossal effrontery has never before been witnessed, so far as we know, even in legislative halls.

THE INDIANA CIGARETTE LAW.

There seems to be no fad, no matter how ridiculous, that cannot be made acceptable to the legislative mind, especially if it is adroitly managed. But there must be some limit to the fatuity that legislators are willing to display, and we should say that that limit had nearly been reached in the recent enactment of the Indiana cigarette law.

THE CRESS AS AN ANTIDOTE TO NICOTINE.

At a recent meeting of the Paris Academy of Sciences (*Semaine médicale*, March 22nd) M. Zalackas expressed the opinion that the expressed juice of the cress was preeminently an antidote to nicotine, and he related an experiment supposed to show its efficacy in the case of a rabbit poisoned with nicotine. The experiment would be a little more convincing if the intravenous injection of cress juice had not contained caffeine.

Cincinnati City Hospital.—The following have secured positions as internes in this institution after a severe competitive examination: Dr. T. P. Scott, of Carlisle, Ky., Miami College; Dr. E. O. Schwartz, of Kings Mills, Ohio, Ohio College; Dr. A. T. Heavenrich, of Cincinnati, Miami College; Dr. L. W. Stacey, of Norwood, Miami College; Dr. G. W. McCoy, of Cincinnati, Miami College; Dr. Miriam C. Schaar, of Cincinnati, Miami College; Dr. Martin H. Urner, of Cincinnati, Miami College; Dr. A. W. Foertmeyer, of Cincinnati, Ohio College. Four alternates were named, as follows: Dr. Walter H. Bush, of Madisonville, Ohio College; Dr. Leon G. Tedeschi, of Cincinnati, Ohio College; Dr. Paul D. Espey, of Rising Sun, Ind., Ohio College; Dr. R. E. Gaston, of Montgomery, O., Miami College.

News Items

Society Meetings for the Coming Week:

MONDAY, April 24th.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, April 25th.—New York Medical Union (private); Metropolitan Medical Society; Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery; Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, April 26th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield; annual).

THURSDAY, April 27th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopaedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private; annual); Pathological Society of Philadelphia (conversational); Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, April 28th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 15, 1905:

	April 15.		April 8.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	473	9	422	13
Diphtheria and croup	325	31	359	27
Scarlet fever.....	260	11	259	7
Smallpox	2	1	4	..
Chickenpox	180	..	94	..
Tuberculosis	372	178	441	201
Typhoid fever.....	16	6	26	13
Cerebrospinal meningitis.....	182	117	191	110
	1,710	350	1,776	371

An Ellis Island Hospital.—By the awarding of a contract for the construction of an island in New York harbor, the immigrant station at Ellis Island is assured of another important addition in the form of a hospital for the treatment of contagious diseases, which, it is intended, shall be the finest institution of its kind in the world. The cost of making the island will be \$119,000.

The Facts Concerning a Sensational Radium Cure Newspaper Story.—The following letter explains itself:

"TO THE EDITOR:

"Sir.—I note that the daily papers of April 19th contained sensational articles attributing to me the treatment and cure of a case of cancer at the Flower Hospital, in reference to which I beg leave to say that I have never been in the Flower Hospital in my life and that the statements contained in these various articles are in the main false and wholly misleading. My only connection with this matter was the preparation, some months ago, of some celluloid needles coated with radium, which were made by me at the request of Dr. Piffard. For about two years I had been trying to obtain radium in such form as to overcome the obstruction of the container so as to make the *alpha* rays available for practical use, which I finally succeeded in doing by what I have termed radium coating. This only is the novel feature of my invention. My only connection with

the case was the preparation of the radium coated celluloid needles at the request of Dr. Piffard, who desired to try them in a case of cancer. I have never seen any of the patients nor treated any of them, and if any credit is due for the use of these needles prepared by me it is to Dr. Piffard.

"Yours very truly,

"HUGO LIEBER."

Academy of Medicine.—The Section in Laryngology and Rhinology will meet on Wednesday, April 26th, at 8.15 p. m. Order: Presentation of Cases: 1. Report and Presentation of a Case of Thyrectomy with Subsequent Laryngectomy for Cancer of the Larynx, by Dr. Walter F. Chappell; 2. Set of False Teeth, Which Had Remained in the Oesophagus Six Weeks, with Radiograph of Chest and Neck Showing Teeth in Position, by Dr. Robert C. Myles; papers: Eucaine Lactate as an Anæsthetic on the Nose and Throat, by Dr. Thomas J. Harris; a short paper on Instruments and Their Use in Intranasal Operations on all the Nasal Accessory Sinuses, with Special Reference to New Mallet Chisel that cuts from the vital parts with Rotary and Punch Principles, by Dr. Robert C. Myles; Specimens and New Instruments: An Unusually Large Postnasal Fibrous Polypus, by Dr. William W. Carter; Set of Tonsil Scissors with the Pressure Created Near the Distal End, by Dr. Robert C. Myles. Lewis A. Coffin, M. D., chairman; Lee Maidment Hurd, secretary, 15 East Forty-eighth Street.

The Section in Obstetrics and Gynecology will meet on Thursday, April 27th, at 8.15 p. m. Order: Presentation of Specimens: (a) Four Cases of Ectopic Gestation Presenting Unusual Clinical Features; (b) Two Specimens of Fibroid with Colloid Degeneration, by Dr. L. J. Ladinski; paper: The Effect of X Ray Examination upon Pregnancy, by Dr. Sinclair Tousey; paper: A Report of Seven Cases of Cesarean Section, by Dr. James D. Voorhees; discussion by Dr. Cragin, Dr. Painter, Dr. Edgar, Dr. Flint, Dr. Marx, Dr. Vineberg, Dr. Stone, and others. Charles F. Adams, M. D., chairman; Arnold Sturmdorf, M. D., secretary, 51 West Seventy-fourth Street.

PHILADELPHIA.

Change of Address.—Dr. C. A. Van Dervoort, to 3311 North Broad Street.

Germantown Hospital Appointments.—Dr. Samuel Bradbury, Dr. Ferdinand Mitchell Perrow, and Dr. Walter E. Kelton, of the University of Pennsylvania, and Dr. H. M. Stewart, of Jefferson Medical College, have been elected resident physicians in the Germantown Hospital.

Arrested for Perjury and Malpractice.—Dr. Oswald Victor Hartmann, of 208 South Twelfth Street, was arrested on April 8th, charged with perjury. On searching his apartments. United States secret service agents found an infant in a satchel. The Federal officers turned the incriminating evidence over to the coroner's office. Hartmann had filed an application with the State Board of Medical Examiners for license to practise medicine; he expected to prove his citizenship by exhibiting a passport, for which he had applied, in which he said he was born in Milwaukee in 1870. The State department found that he was born in Pilsen, Austria, hence the arrest for perjury.

The Health of the City.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending April 8, 1905:

	Cases.	Deaths.
Typhoid fever.....	161	23
Scarlet fever.....	47	3
Chickenpox.....	61	0
Diphtheria.....	72	16
Cerebrospinal meningitis.....	8	2
Measles.....	43	1
Whooping cough.....	18	5
Tuberculosis of the lungs.....	41	52
Pneumonia.....	63	53
Erysipelas.....	6	0

The total deaths for the week were 503, in an estimated population of 1,438,318; corresponding to an annual death rate of 18.19 a 1,000 population. The total infant mortality was 111; under one year, 89; between one and two years, 22. There were 39 still births; 14 males and 25 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 13; puerperal fever, 3; dysentery, 1; diarrhoea and enteritis under two years, 15. The maximum temperature for the week was recorded on the 4th, when the thermometer reached 67°. On April 4th there was a thunderstorm and on the 4th and the 5th 1.26 inches of rain fell.

Medical Legislation.—From time to time during the winter we have noted in these columns the various bills passed by the Pennsylvania legislature, which affect the medical profession and the public health. Now that the legislature has adjourned it may be profitable to review some of this legislation.

State Sanatorium for Tuberculosis.—First, a bill appropriating \$300,000, setting aside parts of the State forestry reservation and appointing a commission of two practising physicians and two commissioners of forestry to select sites and supervise the building of two State institutions for the treatment of persons suffering from incipient tuberculosis, was passed by the legislature and subsequently vetoed by Governor Pennypacker. The veto was made on the ground that if the State should undertake to provide for the treatment of incipient tuberculosis a precedent would be established which would, in time, be used as an argument for State care of other infectious diseases, such as typhoid fever and pneumonia. Furthermore, the governor pointed out that there was no provision in the bill which would confine the benefits of the institution to the poor; but that, as the bill was drawn, the rich would have as much right to free treatment as their unfortunate fellow citizens. When this bill was first proposed an effort was made to have it endorsed by the Philadelphia County Medical Society. The discussion of the resolution offered to accomplish this, which was participated in by some of the leading men in the management of sanatoria for tuberculous patients, developed the fact that there were at present in the State well organized, well equipped, and well managed private institutions for which State aid would be asked, and that if \$300,000 was to be appropriated it might better be appropriated for the improvement and enlargement of these institutions rather than for the be-

ginning of new institutions. At the business meeting of the society in January, however, the society endorsed the plan on recommendation of a committee, which investigated it. After the governor's veto of the bill newspaper editorials and an address by the president of the Pennsylvania Society for the Prevention of Tuberculosis took the executive to task in a somewhat severe way. It appears to us that the veto of the bill was for the best interests of the men who have the interests of the tuberculous poor at heart, and that they should devote their energies to securing large appropriations for charitable institutions already started and efficiently managed. The legislature has appropriated \$100,000 to the White Haven Sanatorium, one of this class of institutions. The appropriation is not large enough, and it is hoped that the governor will not reduce it.

The State Department of Health.—A second piece of legislation of great importance is the passage of a bill establishing a State department of health. The bill creates a commissioner of health, who must be a physician of ten years' practical experience, who shall be appointed by the governor and who shall receive a salary of \$10,000 per annum. An advisory board of six members is to be appointed, the majority of which must be physicians. The powers of the commissioner of health are large, and if the first commissioner is a man who has good judgment and who cannot be tampered with, much good may be expected of the new department. The State, according to the provisions of the bill, is to be divided into ten districts, each to be in charge of a physician of at least five years' experience, who shall receive a salary of \$2,500 per annum. Fines and imprisonment are provided as penalties for those who violate the orders or the regulations of this department. Two other bills which passed the legislature at about the same time and which have a bearing on the State department of health provide for the establishment of a State bureau of vital statistics and for the preservation of the purity of the waters used for drinking purposes.

The Osteopathic Bill.—The bill to regulate the practice of osteopathy and licensing osteopaths in Pennsylvania has had a rough passage. At first the legislature failed to pass it. Next, it was reconsidered; the newspapers said because the member who had the bill in charge had done good work for the "organization," and as he was interested in the bill, it was allowed to be reconsidered and passed as a reward of merit. The bill is now on the governor's desk. At the meeting of the Philadelphia County Medical Society on Wednesday evening, April 12th, a committee, composed of Dr. L. Webster Fox, Dr. J. Madison Taylor, Dr. Hobart A. Hare, Dr. Alfred Stenzel, Dr. Henry Beates, Jr., and Dr. Charles H. Frazier, was appointed to place before the governor the reasons why the bill should not become a law.

Food Adulteration.—The legislature passed a bill regulating the manufacture and sale of fruit syrups for use in soda waters, etc. The bill provides that any person found selling fruit syrups

which contain formaldehyde, sulphurous acid, or sulphites, boric acid or borates, salicylic acid or salicylates, saccharin, dulcin, glucin, betanaphthol, abristol, asaprol, fluorides, fluorborates, fluorsilicates, or other fluorine compounds, also all coal tar dyes, copper sulphate, and all other coloring matter injurious to health, shall be deemed guilty of a misdemeanor. It also provides for a fine of from \$60 to \$100, with costs, or imprisonment not exceeding sixty days, or both, at the discretion of the court. The great criticism, it seems to us, with food legislation at present is that most of it is hasty and ill advised. We do not mean to pass judgment on this bill, but if it belongs to the class that District Attorney Jerome calls "moral yearning laws," the governor can afford to veto it.

Health of Domestic Animals and Care of Indigent Insane.—The governor has signed a bill to amend the fourth section of the act to protect the health of the domestic animals of the State by providing penalties and methods of procedure for the enforcement of the provisions of the act. He has also signed a bill appropriating \$2,000,000 for the care of the indigent insane for the next two years, and fifty cents a week in addition for each person cared for.

The Fifth Annual Dinner of the Northern Medical Association was held at Mosebach's Restaurant, 1463 North Broad Street, on Tuesday evening, April 11th. Covers were laid for seventy-five members and guests. Toasts were responded to by Dr. Albert Bernheim, the president of the society, Dr. William B. Atkinson, Dr. Solomon Solis-Cohen, Dr. Henry Beates, Dr. B. L. Singer, and Dr. John W. Millick. Dr. Thomas Shriner acted as toastmaster. The Northern Medical Association is the oldest medical organization in Philadelphia, except the College of Physicians. It was organized fifty-nine years ago, one year before the Philadelphia County Medical Society. Its scientific meetings are held throughout the winter months on the second and fourth Friday evenings, at Sixth Street and Fairmount Avenue.

Social Affairs for Charitable Objects.—A "measuring tea" for the benefit of the Seaside Home at Cape May Point was given in Witherspoon Hall on April 20th by Mrs. Elias Naudain.

Mr. George Kiernan, of Pittsburgh, presented *Rip Van Winkle* at the New Century Drawing Room on April 10th for the benefit of the Woman's College Hospital.

An international fair will be held at the residence of Mr. and Mrs. John Wanamaker, at Jenkintown, on May 24th, for the benefit of the Jefferson Maternity.

Meetings of Scientific Societies for the Week Ending April 29, 1905.—Monday, April 24th, Mineralogical and Geological Section, Academy of Natural Sciences; Section in Medical History, College of Physicians. Tuesday, April 25th, Medicolegal Society; Northwest Medical Society; Philadelphia Neurological Society. Wednesday, April 26th, Philadelphia County Medical Society. Thursday, April 27th, Pathological Society; Entomological Section, Academy of Natural Sciences.

Friday, April 28th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

Officers of the Pennsylvania Society for the Prevention of Tuberculosis were elected at the annual meeting held on April 12th. They are:

President, Dr. Joseph Walsh; vice-presidents, Dr. M. P. Ravenel, Dr. Benjamin Lee, Dr. Talcott Williams, Dr. A. B. Craig, Dr. Howard S. Anders, Samuel Castner, Dr. Samuel G. Dixon, Dr. Lawrence F. Flick, Samuel Scoville, Jr., Dr. Seneca Egbert; secretary, Dr. Ward Brinton; solicitor, James L. Stanton; treasurer, the Commonwealth Title Insurance and Trust Company; board of directors, Dr. Flick, Dr. G. W. Norris, Dr. D. J. McCarthy, Dr. Anders, Dr. Leonard Pearson, James L. Stanton, W. B. Stanton, Dr. J. W. Irwin, Dr. A. E. Roussel, Dr. Ravenel, Dr. A. H. Davidson, Dr. J. Solis-Cohen, Dr. Walsh, Dr. Brinton, Samuel Scoville, Jr.

The Annual Meeting of the American Philosophical Society was held in Philadelphia on April 12th, 13th, and 14th. Among the papers of interest to physicians which were read were A Plea for Governmental Supervision of Posts Necessitating Normal Perception of Color, by Dr. Charles A. Oliver, of Philadelphia; The Oligodynamic Action of Copper on Some Intestinal Organisms, by Dr. Henry Kraemer, of Philadelphia; The Effects Upon Metabolism of Preservatives Added to Food, by Dr. H. W. Wiley, of Washington; Reason and Intelligence *vs.* Custom and Habit in the Nutrition of the Body, by Dr. Russell N. Chittenden, of Yale University. A reception by the president and council of the society was given at the Free Museum of Science and Art on Thursday evening, April 13th, at 9 o'clock. The annual dinner was given at the Bellevue-Stratford Hotel on the evening of the 14th.

GENERAL.

Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at this academy on April 25th is Eczema, and Dr. F. H. Beadles and Dr. Thomas W. Murrell will participate.

Personal.—Dr. Jesse C. Coggins has resigned as assistant physician at the Maryland Hospital for the Insane at Catonsville, after having been associated with the institution for nine years. He will enter private institutional work.

Governor McDonald has appointed Dr. S. D. Van Meter, president of the Colorado State Board of Health, as a delegate to represent Colorado at the council on medical education of the American Medical Association, which will be held in Chicago, April 20th.

The Sullivan County, N. Y., Medical Association elected the following officers on April 12th: President, Dr. H. P. Deady, of Liberty; vice-president, Dr. S. W. Wells, of Liberty; secretary, Dr. Frank Laidlaw; treasurer, Dr. C. S. Payne.

Chicago Neurological Society.—The next meeting of the Chicago Neurological Society will be held at the Sherman House, Thursday, April 29th, at 6.30 p. m. Dr. Hugh T. Patrick will present a case for diagnosis. Dr. Alfred C. Croftan will relate some studies upon Epilepsy of Gastrointestinal Origin. Dr. J. H. Hess will show some specimens of Sarcoma of the Brain. L. Harrison Mettler, secretary and treasurer, 100 State Street.

The Hornellsville, N. Y., Medical and Surgical Association, at its meeting and banquet on April 4th, elected officers as follows: President, Dr. J. G. Kelly; vice-president, Dr. C. S. Parkhill; secretary-treasurer, Dr. Leon M. Kysor.

McGill Medical Society, Montreal.—The following officers have been elected by this society for the coming year: President, Mr. H. H. Christie; honorary president, Dr. George E. Armstrong; vice-president, C. E. Walsh; secretary, J. Healy; treasurer, O. E. Rublee.

Statement of Mortality in Chicago for the Week Ending April 15, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	April 15, 1905.	April 8, 1905.	April 16, 1904.
Total deaths, all causes.....	548	512	616
Annual death rate per 1,000.....	14.35	13.40	16.66
By sexes.....			
Males.....	305	304	359
Females.....	243	208	257
By ages.....			
Under 1 year.....	105	104	97
Between 1 and 5 years.....	67	57	39
Over 60 years.....	96	90	135
Important causes of death—			
Acute intestinal diseases.....	24	22	24
Apoplexy.....	11	15	17
Bright's disease.....	55	44	39
Bronchitis.....	30	14	28
Consumption.....	50	67	78
Cancer.....	23	22	23
Convulsions.....	6	8	16
Diphtheria.....	5	9	6
Heart diseases.....	51	37	50
Influenza.....	3	2	3
Measles.....	15	16	1
Nervous diseases.....	16	16	29
Pneumonia.....	84	70	111
Scarlet fever.....	1	9	1
Smallpox.....	..	2	0
Suicide.....	9	7	4
Typhoid fever.....	4	4	0
Violence (other than suicide).....	36	27	36
Whooping cough.....	15	13	1
All other causes.....	102	113	129

American Proctological Society.—The seventh annual meeting of this society will be held at Pittsburgh, Pa., May 5 and 6, 1905, at the Hotel Henry. The following papers will be read:

Annual address of the president, by Dr. J. R. Pennington, of Chicago; papers: Malignant Disease of the Rectum and Its Treatment, by Dr. G. B. Evans, of Dayton; The Ambulant Treatment of Internal Hemorrhoids, by Dr. C. F. Martin, of Philadelphia; Instrumental Massage in the Treatment of Acquired Valvular Hypertrophy (Obstipation), by Dr. T. C. Martin, of Cleveland; A Report of Cases, by Dr. Leon Straus, of St. Louis; Urethrorectal Fistula, with Report of a Case, by Dr. W. M. Beach, of Pittsburgh; Tuberculous Fistulas of the Rectum, and the Repair of Extensive Injuries of the Bowel Following Same, by Dr. Howard A. Kelly, of Baltimore; The Operative Treatment of Tuberculous Fistulas in Tuberculous Subjects, with Report of a Case, by Dr. J. Coles Brick, of Philadelphia; Formalin in the Treatment of Diseases of the Rectum, Sigmoid, and Colon, by Dr. John L. Jelks, of Memphis; A Further Contribution to the Study of Pruritus Ani, with Special Reference to Local Treatment, by Dr. Lewis H. Adler, Jr., of Philadelphia; Profound Secondary Anæmia Due to Rectal Diseases: Report of Six Cases, by Dr. D. H. Murray, of Syracuse; Personal Experience in the Employment of Mechanical Vibration in the Treatment of Rectal Diseases, by Dr. William L. Dickinson, of Saginaw; The Office Treatment of Rectal Diseases and Its Limitations, by Dr. James P. Tuttle, of New York; Two Cases of Imperforate Anus, by Dr. T. L. Hazzard, of Pittsburgh; Amoebic Dysentery: Report of Recent Investigations in Its Treatment, by Dr. Samuel T. Earle, of Baltimore; Artificial Anus: Practical Suggestions Regarding Its Making and Closing, by Dr. S. G. Gant, of New York; The Pathology of External Hemorrhoids, by Dr. Louis J. Krouse, of Cincinnati; The Treatment of Rectal Prolapse, by Dr. A.

Tierlinck, of Ghent, Belgium; A Summary of Twenty Radical Operations Upon the Rectum Under Local (Sterile Water) Anesthesia, by Dr. A. B. Cooke, of Nashville.

Meeting of the Michigan State Board of Health at Lansing, April 14, 1905.—The regular meeting of the State Board of Health was held in the secretary's office, Lansing, April 14, 1905. The members present were: Dr. Victor C. Vaughan, president, Honorable Henry A. Haigh, Charles M. Ranger, Honorable Coleman C. Vaughan, Dr. Angus McLean, Dr. Malcolm C. Sinclair, and Dr. Frank W. Shumway, secretary.

After auditing of bills and the disposal of other routine work, Dr. Vaughan, the president, addressed the board briefly and suggested certain lines of work that might properly be considered by the board. He urged the advisability of the board putting forth every possible effort to secure legislation providing for a State Sanatorium for Consumptives, and in this connection Dr. Vaughan also mentioned the importance of collecting reliable statistics on the geographical and class distribution of the disease which would be of great assistance in ascertaining important facts on the prevalence of consumption. Such statistics would also enable the board to work intelligently for the restriction of this disease and in securing legislation providing for a State sanatorium. Many of the States had such institutions, notably among those mentioned being Massachusetts, New York, Pennsylvania, Ohio, and New Jersey, while many other States had bills before their legislatures providing for similar institutions. Dr. Vaughan suggested that a feature of the work of the board for the next two years be the special study of tuberculosis, and to ascertain if the prevalence of this disease in Michigan was increasing or decreasing. The work of the board for the restriction and prevention of pneumonia was considered of great importance, and should be continued as deaths from this disease were rapidly increasing, and its cause and means of spread were problems that the board might properly consider. Dr. Vaughan also mentioned the important line of work carried on through the distribution of the teachers' sanitary bulletins and the good results that had been accomplished through this work. The board arranged the details for holding the annual conference of health officials, June 1st to 2nd, at the State Laboratory of Hygiene at Ann Arbor. The president and secretary were appointed a committee to arrange a programme for this conference, and the secretary was instructed to send announcement and programme of this meeting to every local health officer in the State and others interested in public health work in an endeavor to have an enthusiastic and profitable meeting. Dr. Sinclair, being a special committee appointed by the board at a meeting on April 8th to examine the alleged pollution of the water supply of the city of Grand Rapids through sewage from the soldiers' home being emptied into Grand River, made a verbal report to the board on the subject and presented resolutions adopted by the local board of health of the city of Grand Rapids, in which it was stated that it had taken proper steps, as advised by the State board of health, to abate the conditions leading to the contamination of the water supply of the city of Grand Rapids. Dr. Sinclair's report was accepted. This meeting being the annual meeting of the board Dr. Vaughan, who had been elected as president at the regular meeting of the board, January 20th, to fill the vacancy caused by the death of Honorable Frank Wells, was unanimously reelected president for the ensuing two years.

Mortality of Michigan During March, 1905.—There were 3,367 deaths returned to the secretary of State for the month of March; an increase of 149 over the preceding month. The death rate was 15.5 a 1,000 population as compared with 16.4 for February and 16.0 for March, 1904. By ages there were 687 deaths of infants under one year, 194 deaths of children one to four years, and 1,070 deaths of persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of lungs, 227; other forms of tuberculosis, 46; typhoid fever, 31; diphtheria and croup, 26;

scarlet fever, 10; measles, 16; whooping cough, 5; pneumonia, 399; diarrhoeal diseases of infants under two years, 58; meningitis, 54; influenza, 150; cancer, 158; accidents and violence, 150. There was some increase in the number of deaths reported from tuberculosis and cancer, and a decrease from typhoid fever and pneumonia. Meningitis showed about the same mortality as in February. No epidemic prevalence was reported from any part of the State. Three deaths from smallpox occurred, as follows: One in Alpena city, Alpena county; one in Jackson city, Jackson county, and one in Perry village, Shiawassee county.

An Appeal for the Canadian Brehmer Rest.—

The philanthropic idea of establishing a recuperative home in the mountains, near Montreal, Can., for patients suffering from anæmia or debility, and for those unfortunately predisposed to pulmonary weakness has been suggested by a number of Canadian women interested in the duty of preventing tuberculosis, who have volunteered to direct and supervise this worthy undertaking, and have promised to collect the amount sufficient to meet half the annual cost of running the institution for the first year, which they hope to manage in a way as to make it self supporting. In addition to the amount required annually for carrying on the good work, there is immediate need of \$500 to equip the home with bare necessities, and in addition to this sum \$1,100 will be required, and if immediately available the home will be opened on May 15, 1905. The Brehmer Rest will be non-sectarian, and both men and women will be received, each on payment of \$4.00 a week. The Brehmer Rest is situated two miles from Ste-Agathe, near Montreal. Particular attention will be devoted to imparting instruction to patients in hygienic living, and each will on recovering health possess sufficient knowledge to be sent out to preach the gospel of tuberculosis prevention. A special committee will have charge of the institution and will provide worthy indigents with all transportation facilities. Contributions have been received from many persons, showing their appreciation of such a want nearer Montreal, as it solves the difficulty so often to be faced, viz.: the sending away to Muskoka, Colorado, etc., of indigent invalids. Further information can be obtained from any member of the committee: President, Mrs. Annie Wheeler; first vice-president, Mrs. R. M. Liddell; treasurer, Mrs. C. W. Lindsay; secretary, Miss Barnard.

Medical and Chirurgical Faculty of Maryland.

—The tenth annual meeting will be held at Baltimore, April 25, 26, and 27, 1905, when the following papers will be read:

Malignant Disease Developing in, or Accompanying Uterine Myomata, by Dr. T. S. Cullen; Review of the Deaths Due to Cancer During the Past Fourteen Years, by Dr. C. Hampson Jones; A Severe Case of Tetanus Successfully Treated with Antitoxine, by Dr. Charles F. Davidson; Some Remarks on the Recent Diet Cures in the Treatment of Diabetes, by Dr. Julius Friedenwald and Dr. John Ruhrah; Empyema of Frontal Sinus. (Exhibition of Patient), by Dr. R. H. Johnston; Gastric Conditions in Urticaria, by Dr. L. K. Hirschberg; The Physiological Basis and Clinical Effects of Hydrotherapy in Chronic Disorders, by Dr. Simon Baruch; Collaboration in Medical Education, by

Dr. Clarence J. Blake, professor of Otology, Harvard University; A Consideration of the Benefits Conferred Upon Humanity by Medical Science: a. Preventive Medicine, by Dr. William H. Welch; b. Modern Therapeutics, by Dr. I. E. Atkinson; c. The Debt this Generation Owes to Surgery, by Dr. Robert W. Johnson; "Symposium" on the Newer Methods of Clinical Investigation: a. Improved Chemical Methods in the Clinical Laboratory, by Dr. E. L. Whitney; b. Blood Pressure Observations for the Practising Physician, by Dr. Clinton E. Brush; c. Leucocytosis, by Dr. Thomas B. Farrar; d. Cytodiagnosis in Psychiatry, by Dr. Clarence B. Farrar; The Success Which at the Present Day Attends the Operation of Cataract Extraction and the Causes Which Contribute to it, by Dr. Samuel Theobald.

Annual oration: Unity, Peace, and Concord, by Dr. William Osler. The meeting will close after the presentation of a portrait of Dr. William Osler to the Medical and Chirurgical Faculty by his medical friends; presentation address by Dr. George J. Preston.

The National Association for the Study and Prevention of Tuberculosis.—The plans for the annual meeting of this association to be held in Washington, May 18 and 19, 1905, under the presidency of Dr. Edward L. Trudeau, are now rapidly approaching completion. At the general meeting of the association to be held on the morning of the 18th, addresses will be made by the president and by the two vice-presidents, Dr. William Osler, of Baltimore, and Dr. Hermann M. Biggs, of New York. The afternoon of the 18th and the morning and afternoon of the 19th will be given up to meetings of the sections, of which there are three:

Sociological—Homer Folks, New York, chairman; Miss Lilian Brandt, New York, secretary.

Clinical and Climatological—Dr. Norman Bridge, Los Angeles, chairman; Dr. Sherman G. Bonney, Denver, secretary.

Pathological and Bacteriological—Dr. M. P. Ravenel, Philadelphia, chairman; Dr. D. J. McCarthy, Philadelphia, secretary.

The sociological section in addition to the report by the chairman will offer papers on A Working Programme for Associations for the Prevention of Tuberculosis, National, State, and Local, by Edward T. Devine, of New York; Progress of the Sanatorium Movement in America, by William H. Baldwin, of Washington; and Infection in Transportation, by Dr. H. M. Bracken, of St. Paul. The climatological and clinical programme in addition to the address of the chairman includes a number of reports and papers of particular significance. The report of the committee on clinical nomenclature under the chairmanship of Dr. Vincent Y. Bowditch, of Boston, will be discussed by Dr. Welch, Dr. Trudeau, Dr. Stengel, and Dr. Vaughan. From a practical point of view there is probably no subject upon which agreement is more necessary than this and an authoritative pronouncement by a body of the authority of the national association is greatly to be wished. The report of the committee on early diagnosis, under the chairmanship of Dr. Arnold C. Klebs, of Chicago, will be discussed by Dr. Osler, Dr. Janeway, Dr. Knight, and Dr. Babcock. The role of climate in the management of tuberculosis is also the subject of a committee report by Dr. C. L. Minor, of Asheville, the chairman. A "symposium" on the sanatorium treat-

ment of consumption also promises matter of interest. Other papers are expected by Dr. C. L. Greene, of St. Paul; Dr. William S. Halstead, of Baltimore; Dr. C. F. Gardner, of Colorado Springs; Dr. Edward O. Otis, of Boston; Dr. S. A. Knopf, of New York; Dr. J. A. Wilder, of Denver; Dr. H. B. Loomis, of New York; and Dr. William Porter, of St. Louis. The pathological and bacteriological section will, naturally, be strictly technical in scope. An introductory address will be made by Dr. William H. Welch on Channels of Infection in Tuberculosis, which will be of general interest and value. The final programme of the meeting will be complete in the course of a week. Invitations have been sent to the various antituberculosis organizations in the United States to be represented by delegates at this meeting and a large attendance is expected. The printed papers resulting from a gathering of such authority as this should afford invaluable material in the campaign of education which is now being pushed throughout the country.

American Antituberculosis League.—The programme for the opening exercises for this league held at Atlanta, Ga., April 17 to 19, 1905, was as follows:

The Cause and Prevention of Tuberculosis in the Negro—Considered Largely from a Sociological Standpoint, by Dr. Seale Harris, of Union Springs, Ala.; Some Sociological Considerations for the Antituberculosis Crusade, by Dr. Marion G. Chancey, of Key West, Fla.; The Natural Way of Preventing Tuberculosis in Southern Latitudes, by Dr. J. C. LeHardy, of Savannah, Ga.; Prophylaxis Should Begin Before Conception. After Birth it Naturally Divides Into Two Branches, the Preservation or Development of Immunity and the Prevention of Infection, by Dr. W. S. Alexander, of Oxford, O.; The Treatment and Management of Tuberculosis Patients with Special Reference to Prevention, by Dr. F. F. Young, of Abbeville, La.; State Control of Tuberculosis Disease, by Dr. R. E. Conniff, of Sioux City, Iowa; A Plea for State in the Combat of Tuberculosis, by Dr. H. B. Weaver, of Asheville, N. C.; Tuberculosis in the State Institutions in Tennessee, by Dr. W. J. McMurray, of Nashville, Tenn.; How Shall We Secure the Cooperation of Our Tuberculosis Patients in the Early Stage of Their Disease? A Plea for Legislation, by Dr. Sheridan Waters, of Brookport, Ill.; Some Ways to Prevent the Spreading of Tuberculosis, by Dr. Thomas A. Jones, of Ridgeway, Ill.; The Crusade Against Tuberculosis, by Dr. Charles A. Julian, of Thomasville, N. C.; How Can Conditions Chiefly Responsible for the Spread of Tuberculosis be Overcome, by Dr. J. M. Masters, of Newport, Tenn.; Ten Years of Tuberculosis in Richmond, Va. Some Lessons from Official Sources, by Dr. Ramon D. Garcin, of Richmond, Va.; What Can and Will Be Done in the Future for the Prevention of Tuberculosis, by Dr. C. C. Curtis, of Lower Peachtree, Ala.; Can Tuberculosis Be Eradicated? by Dr. C. Barlow, of Robinson, Ill.; Sanitation and Isolation, Two Requisite Factors in the Eradication of Tubercle Bacilli, by Dr. W. H. Vail, of St. Louis, Mo.; Reports from Some Tuberculosis Sanatoria, by Dr. Thomas Franklin Smith, of New York city; The Best Means to Stamp Out Consumption, by Dr. R. F. Hanesberger, of Beckville, Texas; The Necessity for Cooperative Clinical Research in Testing the Merits of the Various Proposed Methods of Treatment of Tuberculosis, by Dr. Frank C. Wilson, of Louisville, Ky.; The Rational Use of Rest in the Treatment of the Fever of Phthisis, by Dr. J. F. McConnell, of Colorado Springs, Colo.; Bacteriological Diagnosis of Pulmonary Tuberculosis, by Dr. F. W. Abbott, of Taunton, Mass.; We See Through a Glass Darkly, but We See Something, by Dr. R. J. Price, of Vienna, Md.; Educational Influence and Significance of Sanatoriums for Cases of Incipient Tuberculosis, by Dr. George Homan, of St. Louis, Mo.; Duty of State and the Medical Profession to Consumptives, by Dr. C. W. Fry, of Huntington, Ind.; The

Use of Phenol in the Care and Treatment of Tuberculous Patients, by Dr. Charles M. Watson, of Florence, Ala.; Tuberculous Insomnia, by Dr. J. B. Larned, of Northampton, Mass.; On the Parasitic Origin of Phthisis Pulmonalis or Consumption of the Lungs, by Dr. C. H. Tebault, of New Orleans, La.; A Further Report of Results from the Use of Endotracheal Infection in the Treatment of Tuberculosis, by Dr. W. W. Mangum, of Eufaula, Ala.; Sanitary Treatment of Consumption, by Dr. W. S. Pryor, of Chester, S. C.; The Direct Treatment of Pulmonary Tuberculosis, by Dr. John L. Sweeney, of Chicago, Ill.; Aetiology and Treatment of Tuberculosis, by Dr. John C. McCandless, of Chicago, Ill.; Local Treatment of Tuberculosis of the Upper Air Passages, by Dr. J. H. Hallock, of Saranac Lake, N. Y.; Some Methods of Treatment of Tuberculosis, by Dr. A. C. Foster, of Morganfield, Ky.; Cataphoretic Treatment of Tuberculosis in Connection with Ordinary Drug Medication, by Dr. M. Beshoar, of Trinidad, Colo.; The Climate of Florida in Tuberculosis, by Dr. Henry R. Stout, of Jacksonville, Fla.; The Röntgen Light in the Early Diagnosis and Treatment of Tuberculosis, by Dr. J. Rudis-Jicinsky, of Cedar Rapids, Iowa; The Three Most Important Factors in the Treatment of Tuberculosis, by Dr. R. E. Bledsoe, of Somerville, Texas; The Importance of Climate in the Treatment of Tuberculosis, by Dr. Charles J. Lavery, of Fort Pierre, S. D.; The Cottage Treatment of Phthisis in Florida, by Dr. J. D. Bennett, of Crystal River, Fla.; Treatment of Pulmonary Diseases by Inhalation, by Dr. F. S. Twitty, of Columbia, Ala.; Home Care and Treatment of Tuberculosis, by Dr. S. B. Flynt, of Meridian, Miss.; Some Clinical Experiences in the Treatment and Prevention of Tuberculosis, by Dr. Augustus P. Clarke, of Boston, Mass.; My Personal Observation and Experience in the Aetiology and Pathology of Tuberculosis, by Dr. L. Montgomery, of Micanopy, Fla.; Diagnosis of Tuberculosis and Some Lung Diseases, by Dr. A. A. McKitterick, of Evergreen, Ala.; The Physician's Permanent Duty to the Patient and Family in Tuberculosis, by Dr. C. P. Ambler, of Asheville, N. C.; The Tuberculosis Woman in Colorado, by Dr. Mary Hawes, of Denver, Colo.; Our Family Physician, by Dr. Olivia Nelson, of Paducah, Ky.; Heredity a Factor in Tuberculosis, by Dr. G. J. Ross, of Sioux City, Iowa; What Influence, if Any, Does Heredity Have in the Development of Tuberculosis, by Dr. John H. Jamar, of Elkton, Md.; The Mind in Tuberculosis, by Dr. M. A. Brawley, of Frankfort, Ky.; Hereditary Transmission of Tuberculosis, by Dr. C. O. Robinson, of Blair, Neb.; Practical Antituberculosis, by Dr. T. N. Gray, of East Orange, N. J.; Our Public Schools as a Possible Antituberculosis Doctor, by Dr. J. H. Neff, of Harrisonburg, Va.; One or More Ways to Eradicate Tuberculosis, by Dr. John P. Blankenship, of Maryville, Tenn.; The Diagnosis of Early Consumption, by Dr. Hazle Padgett, of Columbia, Tenn.; The Histology of the Tubercle, by Dr. C. H. Anderson, of McLeansville, Ill.; Effect of Malaria on Tuberculosis, by Dr. Samuel A. Southal, of Lonoke, Ark.; What Advice Should Be Given Relative to the Employment of Tuberculosis Subjects in Cotton Mills, by Dr. J. H. Hammond, of LaFayette, Ga.; Out Door Life a Prevention, by Dr. J. G. Brooks, of Paducah, Ky.; Tuberculous Peritonitis in Women, by Dr. Henry O. Marcy, A. M., M. D., LL. D., of Boston, Mass.; Considerations on the True Causes of Tuberculosis, and Its Treatment by Physiotherapy, by Dr. J. A. Révière, of Paris, France; (A) Phymol, a Memoir on the Treatment of Pulmonary Consumption with a New Drug, Its Composition, Its Therapeutic Value, Its Indication, Its Mode of Employment, by Dr. William Guillemin Livet, of the Faculty of Paris; (B) Notes on Bacillosine, as a Remedy Against Tuberculosis; Primary Tuberculosis in the Rectum, by Dr. William M. Beach, of Pittsburgh, Pa.; Skiagraphy of the Tuberculosis Chest, by Dr. Preston M. Hickey, of Detroit, Mich.; Contagiousness of Tuberculosis, by Dr. F. P. Hoover, of Jacksonville, Fla.; Tuberculosis in the Negro, by Dr. E. H. Jones, of Murfreesboro, Tenn.; Tuberculosis in the Negro, Its Causes and Treatment, by Dr. John E. Hunter, of Lexington, Ky.; Prevailing Ideas Upon Open Air Treatment of Tuberculosis and Some of Their Fallacies, by Dr. Henry H. Stone, of Phenix, Ariz.; The Rapid Increase of Tuberculosis in the South, by Dr. R. H. Tatum, of Chattanooga, Tenn.; Visit to New Mexico, by Dr. G. Huston Chapman, of Uniontown, Ky.; The Active Allies of Tuberculosis, by Dr. V. L. Lockhart, of Maysville, Ga.; Isolation of Tuberculous Subjects, by Dr. Frank Cordele, of Trion, Ga.

Pith of Current Literature

LYON MEDICAL.

March 19, 1905.

1. The Biological Value of the Azoturic Coefficient,
By E. DUFOUT.
2. Nephrectomy in Renal Tuberculosis,
By RAFIN.

1. **Biological Value of the Azoturic Coefficient.** Dufourt claims that the azoturic coefficient should not be considered as measuring the oxidation in the organism, nor the utilization of albuminoid material, but wholly as related to the antitoxic function of the liver.

2. **Nephrectomy in Renal Tuberculosis.**—Rafin presents the histories of twenty primary nephrectomies. The patients varied in age between 19 and 48 years; 13 were women, 7 men; 9 had had the right kidney removed, 11 the left. The writer considers at some length the other tuberculous lesions present, the manner of attack, the conditions of the bladder at the time of operation, the subjective and objective symptoms presented by the kidneys and the methods of determining whether the lesion is unilateral or bilateral, with the functional value of each kidney. The methods of examination dealt with are palpation, rectal or vaginal, cystoscopy, ureteral catheterization, and intravesical separation.

March 26, 1905.

1. The Part Played by Compression of the Portal Vein in Certain Serious Accidents After Operations on the Transverse Fissure of the Liver,
By EUGENE VILLARD.
2. Nephrectomy in Renal Tuberculosis (Concluded),
By RAFIN.

1. **Compression of the Portal Vein.**—Villard reports three cases and concludes (1), that it is possible to compress accidentally the portal vein by means of a gauze tampon placed in the subhepatic region; (2) that this compression can give rise to formidable and rapidly mortal accidents which simulate internal hemorrhage; (3) that in practice one should avoid placing gauze drainage too tightly in the subhepatic region or so as to cause compression, and that when such an accident threatens, the causes of compression should be lessened after assurance has been obtained that a true hemorrhage is not occurring.

2. **Nephrectomy.**—In this number Rafin continues the discussion of the technics of the operation, the operative accidents, the mortality, and the final results. The mortality is given as three out of twenty, or 15 per cent. The general health as well as the local condition of the urine and bladder were improved in the patients who survived the operation.

PRESSE MEDICALE

March 18, 1905.

1. Vernix Caseosa. Hereditary Seborrhœa and Fœtal Acne,
By JACQUET and RONDEAU.
2. Tabetic Optic Atrophy,
By F. TERRIEN.

1. **Vernix Caseosa.**—Jacquet and Rondeau state that they found the vernix caseosa well

marked in forty-one per cent. of 287 infants, slight in thirty-four per cent., and absent in seventeen per cent. Histologically it consists of three principal elements: 1, A great many cells, mostly of the epidermic type, globular and clear, rather frequently nucleated; 2, Free fat, the presence of which is shown by the action of osmic acid which colors it dark brown or black; 3, A fairly large number of lanugo hairs. The vernix testified to a remarkable activity of the pilosebaceous apparatus in the fœtus. Another form of activity of the same apparatus results in the production of a milary sebaceous acne, which is present on many infants at birth. The question of heredity as affecting the seborrhœal condition is discussed and some points are advanced which favor the idea that at least heredity may cause an increased tendency toward seborrhœa, but the writers hardly prove that seborrhœa of the infant may be called properly a hereditary disease. Indeed, they rather seem to lend themselves to the theory that the relation between the activity of the seborrhœal glands and the sexual is the same in the fœtus as in the adult, and that the cause of milary seborrhœa and of fœtal acne is the evolution of the genital organs.

2. **Tabetic Optic Atrophy.**—Terrien thinks that about thirty-four per cent. of tabetic patients have atrophy of the optic nerve. This percentage seems rather high, as some observers have placed it as low as fifteen per cent. The atrophy may appear at any stage of the disease. Ophthalmoscopically two pictures are presented; hyperæmia of the papilla with neuroretinitis, and simple optic atrophy. The seat of the lesion is essentially peripheral. The modifications of the visual field are variable, but may be grouped into three classes: those of concentric contraction, contraction of a sector, and total diminution. The latter is the more frequent. Central vision is maintained for a long time; color vision is impaired. Exceptionally there is a central scotoma, while the rest of the visual field remains normal. The sense of light is usually little changed and hemeralopia is exceptional. Prognosis is unfavorable.

March 25, 1905.

1. The Centenary of Manuel Garcia, Inventor of the Laryngoscope,
By MARCEL LERMOYEZ.
2. Acute Rheumatic Arteritis,
By ERNEST BARIÉ.

1. **Centenary of Manuel Garcia.**—Lermoyez presents a eulogy on the occasion of the hundredth birthday of Manuel Garcia, who published his discovery of the laryngoscope in 1855. The article is illustrated by reproductions of two photographs, one of Garcia at the age when he discovered the laryngoscope, the other at the present time.

2. **Acute Rheumatic Arteritis.**—Barié reports a case in which there was a rise of temperature with slight pain in the scapulohumeral articulation on the fifteenth day of an attack of acute articular rheumatism. The movements of the elbow joint were not painful, but about a centimetre and a half above the fold of the elbow was an energetic pulsation of the skin caused by the intense

beating of the brachial artery, which felt less yielding between the fingers than the artery on the opposite side. Slight pressure on the vessel caused severe pain. Under the influence of quiet and salicylates the intense throbbing of the artery diminished. On the seventh day of the arteritis the radial pulse was weak and the patient complained of a tingling sensation in the fingers. The heart sounds were normal. During the six following days there was little change except that the beating of the artery slowly approached normal. The patient then became convalescent and recovered sixteen days after the onset of the arteritis.

March 20, 1905.

1. The Frequency of Angina from Spirillæ and Fusiform Bacilli, By H. VINCENT.
2. The Sanitary Inspection of Schools. Participation of the Fathers of Families in this Inspection, By H. SURMONT.

1. Angina from Spirillæ and Fusiform Bacilli.

—Vincent, on account of what has been published on this subject, made a study of 221 cases of angina at the Hôpital Val-de-Grace, and obtained the following results:

	Cases.	Per cent.
Diphtheritic angina, simple or complicated.	13	5.88
Angina from spirillæ and fusiform bacilli.	5	2.26
Angina from streptococci.	95	42.98
Angina from staphylococci.	57	25.79
Angina from pneumococci.	9	4.07
Angina from coli bacilli.	2	0.90
Angina from Friedlander's bacilli.	1	0.45
Polymicrobial angina, or indeterminate.	39	17.64

2. Sanitary Inspection of Schools.—Surmont

urges a reorganization of the sanitary inspection of the French schools, and proposes that the heads of families take part therein.

SEMAINE MEDICALE.

March 15, 1905.

Pathogeny and Clinical Varieties of Mitral Stenosis,

By ERNEST BARIÉ.

Mitral Stenosis.—Barié says that in general terms organic heart disease is caused by one of two factors, infection and intoxication. Under infections are classed acute articular rheumatism, eruptive fevers, and infectious diseases, such as typhoid fever, gonorrhœa, syphilis, and erysipelas. Under intoxication are classed certain poisons, such as lead and alcohol, and certain dyscrasias, like gout. The first variety mentioned is mitral stenosis dependent on an acute endocarditis of rheumatic origin. According to Sir Dyce Duckworth this includes sixty per cent. of all cases. A second variety is characterized by the association of the mitral stenosis with arteriosclerosis, a combination which renders the prognosis bad. The third variety is one of pure mitral stenosis, first described by Duroziez in 1877. This variety forms the real subject of the paper. The lesion seems to develop without any demonstration, and has been met with in infancy. The primary cause has not yet been demonstrated, and it is met with more frequently in women than in men. The author considers the theories of intrauterine infection, foetal endocarditis, and cardiac hyperplasia insufficient, although he favors the idea that the

lesion is of congenital origin. He points out that heredity plays an incontestable part in its production, and that the two infections which almost always accompany hereditary dystrophy are tuberculosis and syphilis. Yet he seems to incline to the view that the stenosis of the valve is a malformation due to an arrest of embryonal development.

March 20, 1905.

The Identity of the "Fourth Disease" with Scarlatina Variegata, By L. CHEINISSE.

The "Fourth Disease" and Scarlatina Variegata.—Cheinisse uses for a text an article published in the *Lancet*, July 14, 1900, by C. Dukes on the Confusion of Two Different Diseases Under the Name of Rubella (Rose Rash). This writer apparently referred somewhere in that article to the "fourth disease," perhaps as understood by some writers, including M. Cheinisse, descriptive of a new eruptive disease. At any rate the present writer analyzes the description given, and decides that the disease in question is identical with *la rubéole scarlatineuse* or scarlatina variegata.

ZENTRALBLATT FUER GYNAEKOLOGIE.

March 4, 1905.

1. Lutein Cell Development in Atresic Follicles, By L. SEITZ.
2. Uterine Rupture, By A. VON VALENTA.

1. Lutein Cells.—Seitz draws attention to the fact that many authors regard the overdevelopment of lutein cells as bearing some relation to chorioepithelioma and mole pregnancy because it has been observed in these conditions. Seitz has examined the ovaries of women in various stages of pregnancy and finds that the proliferation of lutein cells is a normal accompaniment of every pregnancy, being derived from the follicles. They appear during the second month and are demonstrable up to the end of pregnancy.

2. Rupture of the Uterus.—Von Valenta observed fourteen complete ruptures of the uterus in 1,350 births; of the patients, three recovered, all of them after operation. All the non-operated patients died. It appeared that the quicker the patients were operated upon, the better was the recovery. The author believes in removing the child *per vias naturales* if it lies in the uterus after rupture, but by laparotomy if it has entered the abdomen.

In five cases supravaginal amputation was performed with extraperitoneal treatment of the stump; in one case a suture of the rupture was done, and in two instances total extirpation was practised. The author regards supravaginal amputation as the quickest and safest procedure.

RIFORMA MEDICA.

March 11, 1905.

1. Experimental Researches on the Immunizing and Curative Value of Antibacillary Serum (against Tuberculosis) (from Maragliano's Clinic, Genoa), By FIGARI and MARZAGALLI.
2. Contribution to the Study of Dercum's Disease, By GINO NORSIA.

3. Local Anæsthesia by Means of Stovaine and Stovaine-Adrenalin in General Surgery, By ALDO CERNEZZI.

1. **Value of Antibacterial Serum in Tuberculosis.**—Figari and Marzagallo, at Maragliano's advice, tried to obtain bactericidal serums from animals immunized against the bacillus of Koch. By injecting an aqueous extract of tubercle bacilli into rabbits, goats, and cows, they obtained serums possessing the highest possible agglutinating powers, but very slightly antitoxic and powerfully bactericidal. Virulent living tubercle bacilli emulsified with these serums for twenty-four hours did not affect rabbits even when double the fatal dose was given. The authors conclude that an antibacterial serum can be made which prevents and cures tuberculosis experimentally produced in animals. They report a case of advanced tuberculosis in a monkey which they cured with this serum. Ravenel, of the Phipps Institute of Philadelphia, repeated their experiments on rabbits, with the same results they record.

ROSSKY VRATCH.

February 26, 1905.

1. Cases of Menorrhagia Following the Extraction of Teeth, By A. A. ANOUFRIEFF.
2. The Question as to the After-Treatment of the Wound in the Bladder in Suprapubic Lithotomy, By P. A. BARATYNSKI.
3. On Experimental Cirrhosis of the Liver, By V. M. DANTCHAKOVA.
4. The Secretory Function of the Parotid Gland in Man (To be concluded), By E. A. ZHEROVSKI.
5. A Case of Tiger's Bite, By M. S. MASLOVSKI.

1. **Menorrhagia from Extraction of Tooth.**—Anoufrieff reports a rather unusual case of menorrhagia in a married woman aged twenty-five years, unipara, who was seized with extremely violent bleeding from the uterus soon after the extraction of some dental roots, under chloroform anæsthesia. She was brought to the hospital in a state of acute anæmia. A great variety of remedies were given, including ergot, strychnine, etc., internally and tampons saturated with various solutions as packing. Finally the uterus was curetted, a hot douche given, and a strip of gauze saturated in adrenalin solution was inserted into the uterus. Even this did not act immediately, but finally arrested the hæmorrhage for twenty-four hours, when the treatment had to be renewed so far as the packing was concerned. The scrapings showed the presence of chronic follicular endometritis. The author calls attention to this case as illustrating the connection of menstruation with the teeth, a subject not mentioned in the text books, although the connection of pregnancy with the teeth is well known. From a collection of cases of abnormalities of menstruation gleaned from literature, Anoufrieff found that during the periods there may be neuralgia, swelling of the gums, bleeding from the gums, and sensitiveness of the dentine. Dentists are aware of the fact that hæmorrhages may occur after the extraction of teeth when the operation is performed shortly before or during menstruation, while the same women undergo extractions without any evil con-

sequences between menstrual periods. The author, therefore, urges that dentists should not extract teeth during menstruation, and should even refrain from filling with gold or doing any other painful or exhausting work on the teeth during the periods. In gynecology and surgery the same principle should apply. It is best to follow the old rule, and not to operate during or shortly before or after menstruation, as there is danger of both infection and hæmorrhage. Some surgeons, however, have recently begun to disregard this rule.

2. **Closed or Open Treatment of Suprapubic Cystotomy Wounds?**—Baratynski studies this question concerning which controversy has been going on for some years past. The old method was to leave the bladder wound, as well as the abdominal wound, open, after suprapubic lithotomy. Since Bruns in 1857 sewed up the bladder after a cystotomy, the opinions of surgeons have differed as to the best method—the open or the closed—in the after-treatment of this operation. The author bases his conclusions on thirty-five cases of suprapubic cystotomy. To-day some surgeons, such as Tillmanns, believe that the closure of the bladder wound is never contraindicated. On the other hand, Nitze, Sonnenburg, Koenig deny the usefulness of this procedure in cases accompanied by infections of the bladder. Kukula thinks that in cases where the urine is aseptic (Do such cases exist?) the complete closure of the bladder is indicated. In cases with not very virulent infection of the bladder, complete suture can also be applied, but some of the stitches will probably tear through, although the final result is usually good in these cases. Finally, in virulent infection of the bladder the wound should be left open. The plan followed by the present author was somewhat similar to that just mentioned as recommended by Kukula. In cases with aseptic urine the wound was completely closed. When there was neutral or slightly alkaline urine, the cystitis was first treated, and if it improved the bladder wall was sutured completely. If the urine was much changed or markedly alkaline, the bladder was left open, and drained by means of iodoform gauze or by a drainage tube.

3. **Experimental Cirrhosis of the Liver.**—The ætiology of cirrhosis is by no means clear, but almost all the great writers on this disease agree that it is due to disturbances of digestion and to the action of bacteria of sepsis and their toxins. Kirikoff made the unique observation that staphylococci occur in the blood of patients with Hanot's cirrhosis. The object of the present research by Dantchakova was to test the theory of infectious origin of cirrhosis experimentally. For this purpose she made systematic injections of cultures of *Staphylococcus aureus* into rabbits (subcutaneously), and examined the livers of these animals. She found that she could produce acute effects on the liver, not only in its parenchyma, but also in the interstitial tissue. These were followed later by the formation of new connective tissue and the degeneration of hepatic tissue. The author thinks, from the appearances of cells in various stages of

development in the new connective tissue found in these livers, that the new connective tissue here was formed partly through a regeneration of old cells, but partly also through a differentiation of the lymphocytes.

5. **Case of Tiger's Bite.**—Maslovski reports the case of a soldier who had been bitten by a tiger near the station "Bikir," on the Ussurian Railway. The man was attacked by the tiger while patrolling the railway track, and after several ineffectual shots with his rifle, was obliged to grapple with the animal. He slit open the tiger's belly with his knife, but the tiger had time to throw himself at the man and severely lacerated his shoulders, wrists, and forearms. The latter were bitten while the soldier was trying to choke the animal by thrusting his arms down the tiger's throat. The result was that his wrist was opened on one side and his elbow joint on the other. The treatment consisted in a thorough disinfection of the wounds. Some of them were sutured, and the deeper ones were packed with iodoform gauze. A bichloride dressing was applied to the arms, which were placed in wire splints. The patient, however, developed a series of septic processes in several of the wounds, especially in the elbow joint. The wounds were enlarged, alcohol compresses and lysol baths were ordered. Antistreptococcus serum, stimulants, morphine, etc., were also used. The fever lasted two months and the wounds did not heal completely until three months after the injury. The patient's life was saved, but owing to the terrible disfigurement of his hands and arms he remained a cripple.

BOSTON MEDICAL AND SURGICAL JOURNAL

April 13, 1905.

I. Cancer in and About the Mouth.

(a) The Importance of Early Diagnosis of Cancer in and About the Mouth, By FREDERIC C. COBB.

(b) The Results in Cases of Cancer of the Tonsils, Tongue, and Jaws, Operated in at the Massachusetts General Hospital During the Eight Years from January 1, 1892, to January 1, 1900,

By FARRAR COBB and CHANNING C. SIMMONS.

(c) The Results of Treatment of Cancer in and About the Mouth at the Boston City Hospital,

By HOWARD A. LOTHROP and DAVID D. SCANNELL.

(d) The Use of the X Ray in the Postoperative Treatment of Cancer in the Mouth, By E. A. CODMAN.

2. Thermotherapy as a Part of Physical Therapeutics,

By OCTAVE ROZENRAAD.

3. Weather Conditions at the Sharon Sanatorium,

By WALTER A. GRIFFIN.

4. A Suggestion for a Practical Apparatus for Use in Intrathoracic Operations,

By FRED T. MURPHY.

1. **Cancer About the Mouth.**—(b) Cobb and Simmons report a series of ninety-two consecutive cases of cancer involving the mouth that were observed at the Massachusetts General Hospital during the eight years from January 1, 1892, to January 1, 1900. They have been divided for convenience into four classes: (1) Cancer of the tongue, or floor of the mouth involving the tongue. (2) Cancer of the tonsil, which includes two cases of cancer arising from the mucous mem-

brane of the cheek, but involving the fauces at the time of observation. (3) Cancer of the upper jaw, including those arising from the antrum, alveolar process, or hard palate; and (4) cancer of the lower jaw, arising either from the mucous membrane over the alveolar process or more deeply placed, having a glandular origin, but soon involving the bone. Not all the patients were operated upon; some being too far advanced at the time of consultation, while others refused operation on being told the probable result. In general, it may be said that the statistics presented show that cancer of the mouth is not a hopeless disease. Eighty-three of the ninety-two cases were traced. Of the patients who underwent operation 16.3 per cent. were cured and 8.5 per cent. died from the operation. The remaining cases lived an average of two years after the operation. (c) Lothrop and Scannell summarize the results obtained at the Boston City Hospital thus: (1) The mortality of patients suffering from carcinoma in and about the buccal cavity (based on the statistics presented in this report) is extremely high, at least 90 per cent. (2) All unoperated patients die sooner or later of the disease, barring intercurrent affections. (3) The duration of life of operated patients as compared with those not operated is in favor of the former by an average of about three and one half months. (4) The comfort of the individual is distinctly added to (even if it be only temporary) by some sort of surgical intervention; such relief may be either mental or physical. (5) An early diagnosis of malignant disease about the buccal cavity is of the greatest importance, and a moderately radical excision of parts offers the greatest hope of a radical cure, commensurate with the comfort of the patient and the immediate risk to life. (6) Where there is extensive invasion of the parts, excision (if done at all) should be undertaken solely with the idea of palliation, without too serious interference with physiological function and without too great immediate risk. (d) Codman concludes: "We know that the x ray does make superficial cutaneous cancers disappear in some cases, and we cannot deny that it may allay the progress of deeply seated cancer; therefore, we may honestly say that it *might* do good in certain cases. Hopeless as it is, I believe that it is the most hopeful treatment we have after operation has failed."

2. **Thermotherapy.**—Rozenraad advocates the local use of superheated air in the treatment of many diseases. He does not go into details, but confines himself chiefly to noting the progress that this method of treatment has made in Germany.

4. **Intrathoracic Operations.**—Murphy describes and illustrates a head cabinet he has devised for the purpose of enabling the chest wall to be opened without producing collapse of the lung. The apparatus is simple. A box with a glass top is so arranged as to receive, through air tight opening, (a) the patient's head, (b) the anæsthetizer's hands, (c) the tube necessary for conveying the ether vapor (under whatever pressure is desired) and (d) the tube for carrying off the

consumed air and exhaled ether. This exit tube is connected to a water manometer, which serves to measure the pressure in the box. The apparatus has been successfully employed on animals.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 15, 1905.

1. Surgical Tuberculosis of the Abdominal Cavity, with Special Reference to Tuberculous Peritonitis,
By WILLIAM J. MAYO.
2. Study of the Economic Course of Consumption in Wage Earners,
By MARSHALL LANGTON PRICE.
3. Relation of School Methods to School Diseases,
By WILLIAM J. HERDMAN and JAMES H. MCBRIDE.
4. The Mortality of Appendicitis,
By CHANNING W. BARRETT.
5. An Experimental and Clinical Study of the Value of Clay Mixture Poultices,
By AUGUSTUS H. ROTH.
6. The Etiology and Pathology of Bronchopneumonia Complicating Measles,
By CHARLES F. CRAIG.
7. Immunity. Chapter XII.

1. **Surgical Tuberculosis.**—Mayo calls attention to the comparative frequency with which tuberculosis occurs in the abdomen. The Mayos have found localized tuberculous disease of the appendix twenty-nine times in 1,888 operations for appendicitis. Kelynack, in 121 cases of cirrhosis of the liver, found that ten per cent. had tuberculous peritonitis. Woodhead, in 127 autopsies in children (dead of pulmonary tuberculosis?) found one hundred with tuberculous mesenteric glands. In very many cases of tuberculous peritonitis in women the author has been able to prove the presence of tuberculosis of the Fallopian tubes. In general, it may be said that the author's article presents many disconnected facts which, taken as a whole, tend to show that tuberculosis may not improbably originate, in many cases, from infection acquired through the intestinal tract and that the bacilli either produce primary foci of disease within the abdomen or are carried by means of the lymphatics to more distant parts of the body. The practical lessons with regard to tuberculous peritonitis are thus stated by the author: "From the narrative of facts and observations so briefly set forth, I think we are justified in the belief that the failure of simple laparotomy and evacuation of fluid exudate in tuberculous peritonitis to maintain a high place in surgery is due to reinfection from lesions in the mucous membrane of the Fallopian tube, appendix, or some part of the intestinal tract. We have been treating a symptomatic peritonitis instead of removing the source of disease. That many times the infecting lesion cannot be discovered is true; and it is equally true that not all cases can be explained in this way. Experience teaches that under expectant treatment many of the primary lesions are cured by natural processes. Simple laparotomy and drainage aid recovery in a remarkable manner. Radical operation on the primary lesions in tuberculous peritonitis will greatly increase the percentages of cures and prevent reinfection of the peritonæum. In conclusion, it seems reasonable to suppose that tuberculous peritonitis has its origin in a local focus in practically every case, as is the fact in septic peri-

tonitis. Peritoneal reinfection may be prevented if the local focus can be removed. Whether the patient will regain and maintain general well being must depend to a large extent on whether the local focus thus removed is primary or secondary and, if secondary, as to the possibilities of cure of the chief seat of disease."

2. **The Economic Course of Consumption.**—Price presents a very elaborate statistical paper on the amount of partial and total disability produced by consumption and on the money equivalent of this loss. Few special conclusions need be emphasized. The chief point brought out by the paper is the terrific material loss to the individual and to the community produced by consumption.

3. **School Methods.**—Herdman and McBride assert that at present it is impossible to reach any general conclusions regarding the influence of school methods upon school diseases. Not until school children are medically inspected before, during, and after their school courses shall we be in possession of the facts on which to base rational conclusions.

4. **Appendicitis.**—Barrett's conclusions, condensed, are: (1) To decrease the mortality of appendicitis an early diagnosis is of the first consideration. (2) All troublesome appendices should be removed without waiting for an acute attack. (3) All acute cases should be dealt with surgically. (4) Cases of perforation or gangrene, with localized abscess, should be operated in with drainage or removal of the appendix. (5) Cases with perforation or gangrene without a wall of adhesion are in still greater need of an outlet for the infection, to lessen the tendency of infection to travel inward. (7) A case of acute appendicitis should be operated in at any time if the patient's condition will admit of an operation, unless the patient is rapidly and beyond a question of doubt convalescing. And in this latter case we should wait until all acute symptoms have passed. (9) The proper treatment, as indicated above, does not contraindicate the use of stomach lavage or the withholding of food and, when proper, these things should be employed, with or without operation. (10) Life is not the only consideration. Time of cure and after-conditions are important.

AMERICAN MEDICINE.

April 15, 1905.

1. Hysterectomy for Fibroids of the Uterus, with a Report of 250 Operations,
By JOHN B. DEEVER.
2. The Radical Treatment of Gastric Hemorrhage, with a Review of a Personal Case and 99 Collected from the Literature Since 1900,
By F. GREGORY CONNELL.
3. Paratyphoid Fever with Report of Six Cases,
By JOHN NORMAN HENRY.
4. Chronic Eczema as a Complication of the Senile Degenerations,
By MEDWIN LEALE.
5. Post Partum Hemorrhage,
By H. H. LOVELAND.
6. A Contribution to the Pathology of Sciatica,
By J. RAMSAY HUNT.

1. **Fibroids.**—Deever holds the following opinions regarding fibroid tumors of the uterus

and their treatment: Fibroids of the uterus do not require removal unless they are productive of symptoms, but when they do become symptom-producing, they should be removed promptly, before the patient has been weakened by toxæmia, hæmorrhage, or sepsis. Abdominal supravaginal hysterectomy is the operation to be preferred in the vast majority of cases. Myomectomy is applicable only to younger women in whom the tumors are few in number and subperitoneal in character. Panhysterectomy is to be employed only when intraligamentary growths, whether uterine or ovarian, render the performance of supravaginal amputation difficult or dangerous. The ovaries, or a part of one ovary should be preserved in every woman who has not reached the age of the menopause, unless they are distinctly and indisputably diseased, or unless their retention would needlessly prolong and complicate the operation.

2. **Gastric Hæmorrhage.**—Connell states that the radical methods for treating gastric hæmorrhage are: (a) Direct: Excision of ulcer; partial gastrectomy, or pylorotomy; ligation of the principal artery; cauterization of curettement of the bleeding point; ligation of the mucous membrane, *en masse*; ligation of all coats. (b) Indirect: Gastroenterostomy; pyloroplasty; gastrotomy. Each of these methods of treatment is described and discussed. This survey would seem to justify the following conclusions: (1) After palliative treatment has failed to effect a cure in a reasonable time, and in all cases in which three or more profuse acute hæmorrhages have occurred, that surgical treatment is demanded. (2) Of the various methods of surgical intervention, unless distinctly contraindicated, the direct method should be preferred. The indirect method is indicated when the direct cannot be carried out, and sometimes as a supplementary operation after the direct procedure. (3) Of the direct methods, the choice will lie between ligation of the mucous membrane, excision of the ulcer, or pylorotomy and Andrews's operation. (4) Of the indirect methods, gastroenterostomy will be the operation performed. The mortality rate to be expected after radical operation will depend upon various conditions, such as the previous history and the present condition of the patient, the number and character of the hæmorrhages, and whether the operation is being undertaken as a prophylactic or a life saving measure. The percentage of fatalities has been decreasing gradually. The author ends his article with abstracts of the one hundred cases he has been able to collect.

6. **Sciatica.**—Hunt shows how inadequate is our knowledge of the pathology of sciatica: From the years 1764 to 1878, 11 pathological observations have been recorded. Of this number 3 were negative, including 1 case with microscopical examination (Gubler and Robin). In 8 cases the result was positive, the nerve was found enlarged, reddened, and cedematous. This group included only two microscopical examinations, both negative, that of Leudet, who simply described the nerve fibres as unaltered, and that of Fernet (Vul-

pian's laboratory), in which careful examination failed to reveal any histological changes. Recently the author had under observation a case of undoubted sciatica. The patient died of croupous pneumonia. The sciatic nerve was obtained and a careful pathological examination of it was made. The findings are reported in detail. The essential thing to be noted is that the nerve showed no inflammatory reaction. There was only a jelly-like deposit in the nerve sheath, quite structureless histologically and unaccompanied by inflammatory changes. The author holds that this peculiar deposit must be looked upon as the underlying condition in certain forms of sciatica. The acceptance of a lesion of this nature does not, however, exclude the possibility of a true interstitial inflammation, with cellular infiltration, organization, and permanent damage to the nerve. It would seem fitting, however, to discriminate between this form, which is properly speaking a neuritis, and that under discussion in which the sheath is the seat of a structureless deposit of obscure origin.

MEDICAL NEWS.

April 15, 1905.

1. Intracranial Traumatic Hæmorrhage,
By J. SHERMAN WIGHT.
2. A Preliminary Report of the Use of Diphtheria Antitoxine in Epidemic Cerebrospinal Meningitis,
By FRANCIS HUBER.
3. Some Points in the Construction of a High Frequency Machine,
By CLARENCE A. WRIGHT.
4. Report on the Use of Stovaine,
By C. G. COAKLEY.
5. On the Treatment of Chronic Osteomyelitis and of Chronic Bone Cavities by the Iodoform Wax Filling,
By CHARLES A. ELSBERG.
6. The Significance of Epigastric Pain,
By A. M. POND.
7. Gastrointestinal Conditions in Epilepsy,
By J. W. McLAUGHLIN.

1. **Intracranial Hæmorrhage.**—Wight covers in a general way the subject of intracranial hæmorrhages. Special attention is devoted to so called traumatic apoplexy. The author distinguishes three varieties of this condition: (1) Traumatic apoplexy occurring simultaneously with the injury. (2) Traumatic apoplexy occurring shortly after the injury. (3) Apoplecticiform symptoms occurring long after the injury. Five cases are reported. Four are taken from the literature and the fifth was seen by the author in consultation.

2. **Diphtheria Antitoxine in Meningitis.**—Huber reports using diphtheria antitoxine in a number of cases of epidemic meningitis with rather encouraging results. In some of the cases 1,500 to 2,000 units were injected directly around the cord by means of a lumbar puncture. Particulars of the cases treated are not given, the present paper being only a short preliminary note. A more detailed paper will appear shortly.

3. **High Frequency Machines.**—Wright devotes his paper chiefly to the consideration of the physical data which bear on the construction of a high frequency machine, whose output of current will approximately equal, if not even exceed, one ampère.

5. **Wax Filling.**—Elsberg has treated a number of cases of osteomyelitis according to the method advocated by Mosetig-Moorhof. This consists in filling the bone cavity by means of iodoform wax. The results obtained by the author lead him to strongly recommend the procedure. His own technics differs from those recommended by Mosetig-Moorhof. The author uses twenty per cent. iodoform wax in the place of sixty per cent. wax, and fills the cavities by pressing in place small pieces of the preparation instead of pouring the completely melted wax into the cavity to be filled.

6. **Epigastric Pain.**—Pond's paper is a plea for accurate diagnosis in patients complaining of pain in the epigastric region. He asserts his belief that most of this kind of pain is due to some gross lesion of either the stomach or gall bladder.

7. **Epilepsy.**—McLaughlin has had good results in six cases of epilepsy by attending to the gastrointestinal condition of his patients. He therefore urges that this phase of epilepsy should receive greater attention.

MEDICAL RECORD.

April 15, 1905.

1. Cerebrospinal Meningitis—Epidemic and Sporadic,
By GRANT GOULD SPEER.
2. Recent Studies in the Diagnosis of Rabies,
By DANIEL W. POOR.
3. Modern Methods of Treatment in Obstetrics and Gynecology,
By J. A. SCHMITT.
4. Some Points of View in Regard to the Time When to Perform the Myringotomy and the Mastoid Operation,
By EMIL AMBERG.
5. Decapsulation of the Appendix,
By A. E. ISAACS.
6. Tuberculous Testicle and the X Ray,
By W. B. DE GARMO.
7. Granulation Wound Adhesions, with a Preliminary Report on a New Application in Preventive Treatment,
By FREDERIC GRIFFITH.

1. **Meningitis.**—Speer writes quite a complete formal paper on cerebrospinal meningitis. It is in the nature of a composite picture of what has lately been written about the disease. A summary of the article follows: Cerebrospinal meningitis when first recognized was purely epidemic in character, and is now endemic in large cities. Its method of transmission from place to place and person to person is unknown. According to the latest and best investigators, the exciting cause of the epidemic form is the diplococcus intracellularis meningitidis. And no evidence has been produced to prove that the cause of epidemic and sporadic cases is not the same. The probable entrance of the pathogenic germ into the system is through the respiratory tract, especially that portion covered by the Schneiderian membrane. And its point of attack and usual seat of greatest activity is the base of the brain, from which it involves other portions of the meninges of the brain and spinal cord. Its action is that of a septic invasion, and its symptoms a combination of toxine poisoning, nerve irritation, and pressure. The rate of mortality in late epidemics has been about 50 per cent., which may be lowered by a better

agreement among the profession regarding methods of care and treatment. Spinal puncture is a requisite of exact diagnosis, but as a method of treatment it is still in the experimental stage and leaves much to be desired. Old methods of treatment may be made effective and reliable if used with decision and pushed to the limit of therapeutic effect. Cerebrospinal meningitis in its worst form is amenable to treatment.

2. **Rabies.**—Poor has conducted a series of studies in the laboratory of the New York Board of Health bearing on the diagnosis of rabies. He concludes that, while further studies are needed to fully establish the value of Negri's method of reaching a correct diagnosis, yet it seems probable that this method will prove itself to be a reliable one for the rapid diagnosis of rabies.

3. **Obstetrics and Gynecology.**—Schmitt gives what he considers to be the most modern methods for the treatment of puerperal sepsis, eclampsia, generally contracted pelvis, and carcinoma of the uterus. We note that he favors antistreptococcus serum in sepsis; splitting the kidney in some cases of eclampsia; Gigli's operation for contracted pelvis and in cancer the radical operation of hysterectomy, that is the operation which attempts to clear away as many of the infected lymphatic glands as possible.

6. **Tuberculous Testicle.**—De Garmo reports a case of tuberculosis of the testicle which was cured, apparently, by x ray treatment. The case is placed on record for what it is worth.

LANCET.

April 1, 1905.

1. On the Growth of Cancer,
By E. F. BASHFORD.
2. Industrial Anthrax (*Milroy Lectures, III*),
By T. M. LEGGE.
3. The Physiology and Treatment of Surgical Shock and Collapse (*Hunterian Lectures, III*),
By J. P. L. MUMMEY.
4. Periculis Sinistra,
By H. D. ROLLESTON.
5. The Vibrating Sensation in Affections of the Nervous System and in Diabetes,
By R. T. WILLIAMSON.
6. Notes on a Case of Pressure Stasis,
By R. L. JOYNT.
7. Carcinoma of the Bronchus and Liver Associated with Glycosuria in a Youth,
By G. HALL and R. H. TRIBE.
8. A Soluble Button for Intestinal Anastomosis,
By P. PATERSON.
9. A Note on a Case of Graves's Disease,
By W. B. JONES.

1. **Cancer.**—Bashford briefly summarizes the results of the investigations made under the Imperial Cancer Research Fund, as follows: 1. Cancer is identical in all vertebrates and in growing accommodates itself in a striking manner to the time limitations imposed by the compass of life in different animals. 2. Under favorable experimental conditions the growth of cancer is undefined, of enormous, and, as far as he can judge, limitless amount. 3. Artificially propagated cancer displays all the characteristic features of the growth of sporadic tumors. 4. The growth of artificially propagated cancer is due to the continued proliferation of the parenchyma cells. He has confirmed this conclusion, originally advanced

by Jensen, on his own tumor and on four other different carcinomata. 5. The artificially propagated parenchyma makes the reaction of the host subserve its own needs. 6. Artificially propagated tumors cause no symptoms in the organism to which they have been added. 7. The power of differentiation is definitely in one direction only, even three and a half years after separation from the original host. 8. The number of chromosomes constant for the healthy body tissues is retained, notwithstanding the recurring reduction of this number to the exact half. 9. The balance of evidence is in favor of the growth being interrupted and not uniform. 10. From the standpoint of therapeutics the investigations establish the early surgical treatment of cancer and of the conditions suspicious of cancer, upon an experimental and rational basis. Artificially propagated tumors produce metastases as do sporadic tumors. Sufficiently early removal of the local transplanted tumor removes metastasis from the region of possibility.

3. **Shock and Collapse.**—Mummery, in the third of the Hunterian lectures, takes up the treatment and prevention of shock and collapse by the introduction of fluids into the circulation. There are four principal ways in which this may be done: (1) By intravenous infusion; (2) by intra-abdominal infusion; (3) by rectal injection; and (4) by subcutaneous injection. The intravenous infusion of salt solution or physiological serum will raise the blood pressure in all degrees of shock. As a method of treatment in shock it is disappointing, as its action is fleeting and it cannot be continued indefinitely. In the collapse of severe hæmorrhage it is effectual and lasting in its effects. The introduction of saline solution into the abdomen at the end of an abdominal operation is a valuable method of combating shock, and is not contraindicated by the presence of pus in the abdominal cavity. An effectual method of treating shock is by the administration of drugs, such as adrenalin, hemisine, and ergot, which raise the blood pressure by increasing the peripheral resistance independently of the nerve centres. The few clinical cases in which these drugs have been used are very encouraging, and their use instead of the stimulants now generally employed, will probably result in the saving of many letters. Like sepsis, shock can be prevented much more easily than it can be cured, and it is to its careful prevention rather than to its treatment that we must look to get rid of this source of danger in the operations of the future. With the exception of abdominal operations the method of blocking the main nerves with cocaine seems to afford a ready and most efficient way of completely preventing shock in even the most severe of surgical operations. Morphine, administered both before and after an operation, is useful in preventing shock. In all forms of sudden collapse, including the collapse of chloroform poisoning, the intravenous administration of adrenalin is of immense value in assisting to restore the patient's life. This drug, by raising artificially the blood pressure, allows the heart and the vital nerve centres to resume their functions very easily. It should prove

of great value in resuscitating drowned persons and in other similar emergencies.

4. **Pericolicitis Sinistra.**—Rolleston calls attention to a group of cases which resemble appendicitis, in that the prominent feature in both is the involvement of the visceral peritonæum; only it is on the left instead of on the right side of the abdomen. The cases may give rise to different conditions; there may be (1) local peritonitis of comparatively slight intensity around the descending colon or the sigmoid flexure; (2) a local abscess in connection with the descending colon which may eventually burst into the general peritoneal cavity and set up (3) general peritonitis.

5. **Vibration in Nervous Diseases.**—Williamson's conclusions are as follows: 1. In the normal condition the vibrating sensation, tested by placing the foot of a vibrating tuning fork over the styloid process of the ulna, the internal malleolus, and the inner surface of the tibia about the middle of the bone, is probably always present. 2. In early tabes it may be lost in the legs before impairment of other forms of sensation occurs and before ataxia or Romberg's sign can be detected. 3. In certain cases of spastic paraplegia it may be lost in the legs when other forms of sensation are not affected. 4. In some cases of diabetes mellitus and chronic glycosuria it is lost when sensation in other respects is normal. 5. From these facts it is evident that sensation cannot be declared to be normal until the vibrating sensation has been tested. Though the loss of the vibrating sensation is a symptom of considerable interest it is at present too early to say what its diagnostic value will be in the future.

8. **A Soluble Intestinal Button.**—Paterson states that one of the great disadvantages to the use of mechanical supports in performing intestinal anastomosis is the uncertainty that the support will be discharged after it has fulfilled its function, it being sometimes necessary to perform a second operation for its removal. If a button could be obtained which would be easy to manipulate and which would remain *in situ* for the necessary length of time without, in the meantime, injuring the intestine and then undergo solution, the principal objection to this method of intestinal union would disappear. After many experiments he concludes that gelatin which has been treated with chrome alum meets these requirements. It can be prepared in such a manner as to be more or less resistant to the action of the digestive secretions according to the activity of these in the part operated upon or to suit the particular purpose the surgeon may have in view. The method of fixing the support is almost the same as that employed in using Murphy's button.

BRITISH MEDICAL JOURNAL.

April 1, 1905.

1. Some New Therapeutic Methods in Dermatology (*The Harveian Lecture*), By M. MORRIS.
2. Chronic Constipation and Its Medical and Surgical Treatment, By W. A. LANE.
3. New Methods of Studying Affections of the Heart, By J. MACKENZIE.

4. The Diagnostic and Prognostic Value of the Leucopenia of Cachexial Fever and Kala-Azar, and Its Treatment by Quinine and Bone Marrow, By L. ROGERS.
5. The Experimental Transmission of Mediterranean Fever, By E. H. ROSS and G. M. LEVICK.
6. Intermittent Fever in Malta, By THEM ZAMMIT and G. C. SCICLUNA.
7. Ship Beri-Beri, By G. A. TURNER.
8. Notes on Cases of Spirillum Fever in Uganda, By A. D. P. HODGES and P. H. ROSS.

1. **Dermatological Therapeutics.**—Morris has been led to the conclusion that the general principle of treatment of chronic diseases of the skin is to produce reaction. As a rule, without reaction there is no cure. Reaction, which is simply response to stimulus, varies not only in degree, but in kind. The response varies according to the tissue or organ stimulated. The mechanism is virtually that of inflammation—passing from simple hyperemia to necrosis. Reaction may be caused by the external application of various drugs or by the use of physical agents, such as heat, light, the x rays, and radium, by drugs administered internally, by toxic substances generated within the body as the result of processes set up in the natural course of the disease, or by the artificial production of like conditions by the injection of serums or the administration of organic extracts; or by the combined use of external and internal remedies. It is usually better to produce reaction by a local application. Among the external medicaments causing reaction the writer discusses soft soap, sulphur, tar, salicylic acid, pyrogallol, and especially chrysarobin. Of physical agents, simple baths, hot or cold, and heat produce the mildest form of reaction. More powerful are light, x rays and radium; the author gives a summary of the results of five years' experience with these agents. Among the internal agents may be mentioned tuberculin, streptococcus serum, leprolin, thyroid extract, and adrenal extract; all of these produce their therapeutic effect by causing reaction.

2. **Constipation.**—Lane states that in chronic constipation the cæcum is progressively distended and forced downwards and inwards into the true pelvis. This results chiefly from its weight. This forcing down of the cæcum is much helped by the sedentary position assumed during defecation. The squatting attitude is the correct one as the pressure exerted by the thighs forces the cæcum and transverse colon up into the abdomen. The inflammation of the colon and cæcum consequent upon their excessive distention, produces an adhesive process between the bowel and the peritonæum. The bowel thus becomes fixed, and it is less able to perform its normal functions and its muscle wall wastes. In many of these cases the kidneys are mobile. One of the most conspicuous of the clinical symptoms besides the constipation, is a fullness and tenderness in the region of the cæcum. The symptoms due to the absorption of toxins all tend to produce an appearance in the patient of premature senility, and the loss of fat is very conspicuous. Mental depression is often present to a marked degree. As regards surgical treatment the choice lies between the

division of bands and adhesions, and the establishment of direct continuity between the lower end of the ileum and the termination of the large bowel. In women it is better to proceed at once to the deflection of the fecal contents from the greater part of the large bowel.

4. **Leucopenia.**—Rogers has investigated the diagnostic and prognostic value of the leucopenia of cachexial fever and kala-azar. His conclusions are as follows: 1. A very marked decrease in the leucocytes is always found in uncomplicated cases of cachexial fever, and when they number below 2,000 per cubic centimetre this is almost diagnostic of the disease, but may rarely occur in true malarial cachexia. 2. In cachexial fever the white corpuscles are reduced to a greater degree than the red, so that the ratio falls below one to one thousand in all uncomplicated progressive cases. This is rarely so in true malarial cachexia, while a reduction in the ratio to below one to fifteen hundred appears to be quite diagnostic of cachexia from other Indian fevers. 3. The most marked degrees of reduction of the leucocytes, and especially of the polynuclears, is of bad prognostic import, and vice versa. 4. Red marrow tabloids are of great value in increasing the leucocytes, and this increase may take place during the continuance for months of intermittent fever, and be then followed by cessation of the fever and complete recovery. 5. High remittent fever is accompanied by progressive deterioration of the blood and general condition, but it may be often to a large extent reduced to the less injurious intermittent form by continued large doses of quinine, combined with red marrow. The best results yet reported have been obtained by those who carry out vigorous quinine treatment.

5. **Mediterranean Fever.**—Ross and Levick have experimented in the hope of discovering the true nature of the transmission of Mediterranean fever. Both writers being non-immune to the disease, they exposed themselves to infection by various means of experimental transmission:—by direct contact, fomites, etc.; by inhalation of infected dust; by infected water; and by means of mosquitoes. Up to the present all these methods have failed to reproduce the disease.

7. **Beri-Beri.**—Turner's article is based on his experience as port health officer at Table Bay. Among the conspicuous symptoms of beri-beri he mentions œdema, irregularity of the heart's action, paralysis of very varying degrees, tenderness of the calves, and irregularity of the knee jerks. As regards the ætiology of the disease little reliance is to be placed upon the theories which ascribe it to want of ventilation, to faulty dietary, or to metal poisoning. The evidence tends to support Manson's theory that beri-beri is a place disease, and also that it is a germ disease, but probably not communicable from man to man. It is a disease caused by the absorption of a toxine formed by an organism outside of the body. The organism may exist in the water or mud of tropical rivers, be taken on board ship by means of cargoes, ropes, anchors, etc., and so transmitted to any susceptible members of the crew.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of March 8, 1905.

Dr. HOWARD M. FUSSELL in the chair.

A Hæmoglobin Scale and Color Test Book.—

Dr. H. E. WETHERILL called attention to his hæmoglobin scale and color test book. He also showed a new hæmatocrite which measured in a two way motion instead of one, and gave 25,000 revolutions a minute.

Fracture of the Cervical Spine.—Dr. CHARLES W. BURR exhibited a patient with an old fracture of the cervical spine. He was fifty-six years of age, and had fallen in November, 1898, from a cart, striking on his neck and shoulders. He was unconscious for a time and was taken to a hospital. At first he had severe pain in the neck, shoulders, and both arms. He could not move the arms and could not walk. He stated that he could move the legs a little. About six months later he was brought to the Philadelphia Hospital. At that time he could walk fairly well with short, stiff steps. He held his neck very stiff, and movements in the arms were limited by rigidity and by weakness. The grip was very weak. The deep reflexes were increased. A skiagraph revealed a fracture of the body and lamina of the fifth cervical vertebra. At the present time he walked well. His head was held stiff. He could move it a little, but with pain. There was considerable power of movement of the arms, with rigidity. The knee jerks were a little increased. The plantar jerks were normal. There was a little muscular wasting in the deltoids, but none elsewhere. There was some spasmodic retention of urine.

Dr. M. K. KASSABIAN gave some statistics of fractures, showing that a very small percentage represented those of the spine. In his own 1,500 cases of fracture there had been only four per cent. of fracture of the spine.

Dr. MORRIS BOOTH MILLER stated that in such a fracture an operation should be undertaken only when there was pressure upon the cord or from bone. Ankylosis gave a fair chance of slow absorption of hæmorrhage and gradual restoration of function. To secure that, no device was better than a modified jury mast.

How Can the Physician Profit by Preventive Medicine?—Dr. J. MADISON TAYLOR, in this paper, presented evidence to show that it was necessary that preventive medicine should be exhibited to the profession as a means of advantage to themselves as well as to the community. He submitted that the relationship of the physician to the patient was on the wrong basis; the practitioner should be given free opportunity to inspect the members of a household at regular periods or at will, and not called only when there was illness; disease was now being studied from the standpoint of economics, hence prevention was to be welcomed as a source of general wealth; legislation could be made more effective if physicians would do their part toward the prevention or

limitation of preventable disease; physicians should more clearly point out the ways to reform and educate the public; they should accept the authority of the health boards more cordially and work with them to accomplish results.

He recommended that physicians should adopt a different fee system, and stated that it was a false position for the physician to earn no fee except by being invited to meet exigencies; better, he said, to adopt the plan long since found necessary by lawyers, of demanding a retaining fee or a yearly stipend of the householder, thus giving them access to the house to rectify constitutional peculiarities and save from peril. He alluded to the neglected duty of the physician of discouraging the use of many medicines, bitters, tonics, cough medicines, and the like, whose chief attractiveness lay in the contained alcohol or narcotics.

The Osmic Acid Treatment of Tic Douloureux.—Dr. W. WAYNE BABCOCK reported a case of trifacial neuralgia of extreme severity. The conditions had persisted for thirty-five years, despite eight operations, including two attempts to remove the Gasserian ganglion, and the excessive use of drugs had at one time led to temporary insanity. About nine months ago a two per cent. solution of osmic acid, under cocaine anæsthesia, had been injected into the inferior dental nerves. More recently the infraorbital, palatine, and supra-orbital nerves were injected. The patient had gained thirty-five pounds and his physical condition was revolutionized. The case was cited to indicate that osmic acid injections might be of value in cases of the most persistent and pronounced type of tic douloureux. No major operation, he stated, was warranted in the treatment of trifacial neuralgia until the futility of osmic acid injections into the peripheral nerve trunks had been proved.

Dr. L. J. HAMMOND called attention to the relations of the nerve fibres constituting the trifacial, and thought that absolute cure of these pains should not be expected until not only the trifacial, but the different branches of the fifth nerve, were dealt with.

The Problem of the Treatment of Laryngeal Tuberculosis.—Dr. W. G. B. HARLAND read this paper, which gave briefly what is known about the prevalence and natural history of tuberculosis of the larynx. The paper stated that the vocal cords, interarytænoid folds, and arytenoids were the parts most often affected, involvement of the epiglottis or epiglottic folds being more serious. Most forms of the disease pursued a harmless chronic course; oedema and deep ulceration, however, were dangerous. The laryngeal lesion probably did little harm, except when it caused dyspnoea, pain, or difficulty in swallowing; it formed an index of the general health and resistive power. Treatment was directed toward lessening irritation in the upper air tract, toward healing ulcerations, and toward building up the general health. The x ray he had found to be of use in some cases. He thought that serum therapy promised much.

Dr. W. WAYNE BABCOCK referred to a case of laryngeal tuberculosis seen within the last four or five months. On the day he first saw the pa-

tient she had received an intralaryngeal application. She had dyspnoea and became unconscious. A rapid tracheotomy was done, after which she improved and gained in weight. The tube was removed. Further applications were not made by the laryngologist, for fear of the oedema, but after two or three months the oedema again developed. A second tracheotomy was done, and since that time the patient had worn a tube continuously. Her voice was better and she had gained in weight.

Dr. ROSS SKILLERN thought that if the laryngologist gave the greatest possible amount of relief with the smallest amount of actual manipulation of the diseased structures, he was doing good work.

Dr. L. J. HAMMOND had operated in eight cases of laryngeal phthisis in the past sixteen or eighteen months with good results. He thought the operative procedure was based upon rational principles, in that in this condition, as in a tuberculous condition of the joints, the best treatment was to put the parts at rest.

Dr. GEORGE E. FEAHLER mentioned a case, referred to him by Dr. Cleveland, in which he was making the x ray applications externally, using the tube of high vacuum and at a distance of from fifteen to twenty inches. Distinct improvement had been noted in the case by Dr. Cleveland.

Dr. HARLAND referred to the surgical treatment as he had observed it as rather unsatisfactory.

Book Notices.

A Textbook of Histology. By FREDERICK R. BAILEY, A. M., M. D., Adjunct Professor of Normal Histology, College of Physicians and Surgeons, Medical Department, Columbia University, New York city. Profusely illustrated. New York: William Wood & Co., 1904. Pp. xiv-481.

The general science of histology at the present time is fairly fixed in its outlines, and the subject matter, which is useful to the student body, can be collected within sharply defined limits. But little that is novel can be expected at present from a new textbook, if we except the cytology of the cerebrospinal system. Either a new book should show improvement in arrangement over those which have preceded it, thus rendering the subject matter more easily accessible to the student mind, or the illustrations must bring something new or must be better than those previously produced.

The work just published certainly fulfills these conditions and offers to the student of medicine a well arranged, clearly written textbook, sufficiently comprehensive for the purpose, yet not obscured by details. The medical student does not intend to pursue histology as a science for itself; he merely desires the fundamental facts which he must acquire before it is possible to advance to the study of tissues altered by disease. A book of this type, which is intended for medical teaching, should therefore chiefly concern itself with human histology, and though perhaps somewhat less useful for the preliminary education of students who intend to devote themselves to research in after life than one which approaches histology from a broader point of view,

such a book is yet the best one to place in the hands of the beginner in medicine.

The arrangement of the chapters, the selection of the text type, and the division of the paragraphs by the use of different sizes of heavy face type for equivalent sections have all been carefully considered and the result is most successful. A considerable number of the illustrations have been drawn from the author's preparations, and we must congratulate him on the successful issue of many of the reproductions. The artist improves in his work as the text progresses, the earlier sketches not having been sufficiently reduced to subdue the grain of the paper upon which they were drawn, but the later preparations are most excellent. Some of the drawings illustrating the structure and development of bone, those showing the anatomy of the lungs and bronchi, and especially the sketches of the kidney, are equal to the best German work. Photomicrography has been used but little, which is perhaps just as well so far as the student is concerned, though the modern improvements in the art might warrant the use of three color color plates, some beautiful examples of which have lately been produced. The reproductions of the exquisite colored plates from the histological atlas of Szymonowicz show very well the loss of character which results in attempting to produce a colored plate in monochrome. These are the least successful of the illustrations in the text and should be discarded in a future edition. The latter half of the book, especially the chapter on the nervous system, contains but few original drawings, but those selected have been well chosen. It seems a pity that the color schemes from Lenhossek, illustrating the structure of the spinal cord, could not have been reproduced as in the original, instead of using hatching to represent the tints.

Throughout the book the author has been most conservative in his selection and presentation of subject matter, and the student will find the volume a safe and accurate guide for the study of normal histology.

Miscellany.

Cargile Membrane.—*Medical Notes and Queries*, for March, 1905, explains that cargile membrane is peritonæum from the intestine of the ox, subjected to certain processes and finally sterilized. It is a thin, translucent, almost homogeneous, acellular material in many ways resembling gold beater's skin. It is intended for use between denuded peritoneal surfaces, over stumps, or, in fact, any wounded areas, to prevent the formation of adhesions, the membrane itself undergoing absorption after a certain length of time. The exact practical value of the membrane has never been satisfactorily determined, though Dr. Robert Morris, of New York, gave a very favorable report after a series of experiments upon rabbits. Recent experiments in the laboratories of the Jefferson Medical College Hospital by Dr. A. B. Craig and Dr. A. G. Ellis, reported by them at the Philadelphia Academy of Surgery, February 6, 1905, did not yield such encouraging results. The experiments were made by Dr. Craig upon dogs and included operations in the peritoneal and cranial cavities and upon nerves.

and tendons. The membrane was found of but little value in the peritoneal cavity, adhesions forming in essentially every instance. Contrary to expectations, the membrane did not stay in place unless sutured. In the cranial cavity and around tendons and nerves the membrane appears to be of some value in preventing adhesions; the chromicized variety resists absorption longest and in general gives the best results. Histological study of the tissues by Dr. Ellis, the first microscopic investigation of this subject, showed that the membrane acts as an irritating foreign body, new tissue being formed around it in every instance. The ultimate fate of the membrane is absorption, which appears to follow the action upon it by lytic substances in the body fluids. This is indicated by the sections and particularly by the changes occurring in pieces of the membrane enclosed in sealed celloidin capsules, which were placed for varying periods of time in the peritoneal cavities of the dogs employed in the experiments. Phagocytosis as a factor in the removal of the membrane in the tissues was not demonstrable.

Fewer Matriculates in Medicine in Great Britain.—The desire to enter the ranks of British medicine is not so keen as in days gone by. The statistics, published in the *Medical Register*, for 1905, show that there has been a steady decline in registrations during the past decade. The high water mark was reached in 1893, when 1,579 registrations were made—770 in England, 638 in Scotland, and 171 in Ireland. Since then the figures have shown an annual decrease, 1904 being the lowest recorded (1,168) since 1881 (1,053). In 1904 the percentages of total registrations were 53.4 for England, 33.3 for Scotland, and 13.3 for Ireland. The principal decline during the decennial period has been in England and Scotland; Ireland contributing a fairly steady number of registered medical men to the world annually. The averages of restorations to the *Register* during the past five years were 105. During 1904, 558 names were removed from the *Register* on evidence of death, 2 on ceasing to practise, 95 failed to answer the registrar's inquiries regarding change of address and were erased, and 2 were struck off under the penal clauses (sections 28 and 29 of the Medical Act). Of the total number of persons registered from 1858 until January 1, 1905 (67,214), there are 38,492 names in the present *Register*.

Disturbances of Digestion in Infants Resulting from the Use of Too High Fat Percentages.—Holt, in the *Archives of Pediatrics*, for January, 1905, discusses this question and cites illustrative cases in which infants suffered great disadvantages from too free use of fats (cream). He thinks the errors into which both physicians and patients too frequently fall are due to their fondness for Jersey or Alderney milk and cream. Milk from herds which yield four or four and a half per cent. of cream is to be preferred. One of the chief causes of failure in feeding from the milk laboratory has been the excessive use of fat, and physicians are especially prone to make this mistake in cases in which they hope to overcome chronic constipation by the free use of cream.

Such mistakes can often be avoided if the physician knows approximately the richness of the milk in fat, that is, the percentage of cream or top milk. The mistake is often made of treating all specimens of milk and cream alike, using them in accordance with the prescribed formula of some work on infant feeding.

It is of importance that the physician should ascertain at the milk laboratory the percentage of fat in the milk which he is prescribing and calculate his dosage of cream accordingly. It is also desirable that he should examine the milk and cream for his own information. If he habitually uses milk from the same dairy his calculations as to percentages of fats will be fairly accurate. A Babcock tester or one of its modifications may be used to determine the quantity of fat or the milk may be tested and analyzed at a milk laboratory. He should learn to think in percentages. There is a limit to the quantity of fat which the infant stomach will tolerate and it is desirable to ascertain it and not go beyond it. The author has found it unwise to use more than four per cent. of fat for the average child. Bad results will surely follow the use of larger quantities than this. If there is gastric or intestinal indigestion it may be necessary to decrease it below four or even three per cent.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending April 14, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Florida—Jacksonville	Apr. 1-8	3	
Illinois—Cairo	Apr. 3	5	
Illinois—Danville	Apr. 1-8	3	
Louisiana—New Orleans	Apr. 1-8	26	1
Louisiana—Pointe Coupee Parish	Apr. 1-8		
Louisiana—St. James Parish	Mar. 1-31	Several.	
Louisiana—St. John Parish	Mar. 1-31	1	
Michigan—Grand Rapids	Apr. 1-8	2	1
Michigan—At 47 localities	Mar. 18-25	Present.	
Mississippi—Natchez	Mar. 25-Apr. 8	2	
Missouri—St. Louis	Apr. 1-8	28	8
Nebraska—Omaha	Apr. 1-8	1	
Nebraska—South Omaha	Apr. 1-8	1	
New York—New York	Apr. 1-8	4	
North Carolina—Goose Creek	Apr. 1-8	1	
North Carolina—Hog Island	Apr. 3	50	
Ohio—Cincinnati	Mar. 31-Apr. 7	6	
South Carolina—Charleston	Apr. 1-8	2	
Tennessee—Memphis	Apr. 1-8	1	
Smallpox—Foreign.			
Africa—Sierra Leone	Mar. 10-17	240	
Brazil—Bahia	Feb. 25-Mar. 11	24	1
Brazil—Escada	Mar. 11	8	Epidemic.
Brazil—Rio de Janeiro	Mar. 12	8	
Ecuador—Guayaquil	Mar. 7-14	2	4
France—Paris	Mar. 18-25	29	6
France—St. Etienne	Mar. 1-15	2	
Germany—Bremen	Mar. 18-25	1	
Great Britain—Cardiff	Mar. 25-Apr. 1	1	2
Great Britain—Hull	Mar. 18-25	2	
Great Britain—Leeds	Mar. 25-Apr. 1	12	
Great Britain—London	Mar. 18-25	3	
Great Britain—Nottingham	Mar. 18-25	1	
India—Bombay	Mar. 7-14	172	
India—Calcutta	Mar. 4-11	10	
India—Karachi	Feb. 5-12	18	2
India—Madras	Mar. 25-Apr. 1	1	
Italy—Catania	Mar. 23-30	1	
Italy—Lecce	Mar. 8-16	6	
Italy—Palermo	Mar. 18-25	13	3
Mexico—City of Mexico	Mar. 21-24	2	4
Russia—Moscow	Mar. 18-25	7	2
Russia—Odessa	Mar. 18-25	4	12
Russia—St. Petersburg	Feb. 11-Mar. 18	41	25
Russia—Warsaw	Mar. 21-24	1	
Turkey—Smyrna	Dec. 25-Jan. 1	1	
Turkey—Smyrna	Feb. 12-19	1	1

Yellow Fever.

Brazil—Rio de Janeiro.....	Mar. 12-19.....	8	3
Mexico—Coahuila.....	Mar. 26-Apr. 1.....	1	1
Panama—Panama.....	Jan. 1-Mar. 27.....	43	18

Cholera.

India—Calcutta.....	Mar. 4-11.....	32	1
Russia—Baku Government.....	Feb. 17-24.....	1	1
Russia—Don Territory.....	Feb. 5-17.....	7	3

Plague.

Africa, British—Durban.....	Jan. 29-Feb. 11.....	4	5
Arabia—Aden.....	Mar. 10-15.....	60	44
Brazil—Rio de Janeiro.....	Mar. 12-18.....	2	2
Chile—Capitlan.....	Mar. 10.....	Present.	
Chile—Cochimbo.....	Mar. 14.....	Present.	
Chile—Pisagua.....	Mar. 10.....	Epidemic.	
Egypt—Tukh.....	Mar. 4-11.....	1	
India—Bombay.....	Mar. 7-14.....	683	
India—Calcutta.....	Mar. 4-11.....	315	
India—Karachi.....	Feb. 5-12.....	77	71
Peru—Cajamarca.....	Mar. 10.....	Present.	

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 12, 1905:

CUMMING, H. S., Passed Assistant Surgeon. Granted leave of absence for ten days from April 15th.

DREW, A. D., Acting Assistant Surgeon. Granted leave of absence for two days, March 8 and March 24, 1905, under paragraph 210 of the regulations.

EARLE, B. H., Assistant Surgeon. To proceed to certain points in Oregon for special temporary duty.

FOWLER, J. B., Acting Assistant Surgeon. Department letter of February 13, 1905, granting Acting Assistant Surgeon Fowler leave of absence for thirty days, revoked. April 7, 1905.

FRICKS, L. D., Passed Assistant Surgeon. Granted three days' leave of absence from April 3, 1905, under paragraph 191 of the regulations.

MCKAY, M., Pharmacist. To report to chairman of board for physical examination to determine his fitness for promotion to the grade of pharmacist of the first class.

MEAD, F. W., Surgeon. Granted leave of absence for six days from April 24th.

MULLAN, E. H., Assistant Surgeon. Relieved from duty at New York (Stapleton), N. Y., and directed to proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.

SAFFORD, M. V., Acting Assistant Surgeon. To proceed to Portland, Maine, for special temporary duty.

STIMSON, A. M., Assistant Surgeon. Relieved from duty in the Hygienic Laboratory, and directed to proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.

WATERS, M. H., Pharmacist. Granted leave of absence for fifteen days from April 12th.

WIGHTMAN, W. M., Assistant Surgeon. Granted leave of absence for three days from March 18, 1905, under paragraph 191 of the regulations.

Promotions.

Assistant Surgeon T. D. BERRY, commissioned (recess) as passed assistant surgeon, to rank as such from March 24th.

Assistant Surgeon A. J. McLAUGHLIN, commissioned (recess) as passed assistant surgeon, to rank as such from April 10th.

Appointment.

Dr. MARY A. ISRAEL appointed medical inspector for duty at Manila. P. I.

Boards Convened.

Board convened to meet at Washington, D. C., April 10, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon H. MCG. ROBERTSON, recorder.

Board convened to meet at Boston, Mass., April 12, 1905, for the physical examination of Pharmacist M. MCKAY to determine his fitness for promotion to the grade of pharmacist of the first class. Detail for the board—Surgeon R.

H. WOODWARD, chairman. Assistant Surgeon W. C. RUCKER. Acting Assistant Surgeon F. H. CLEAVES, recorder.

Board convened to meet at Washington, D. C., April 17, 1905, for the physical examination of officers of the Revenue Cutter Service. Detail for the board—Assistant Surgeon General W. J. PETTUS, chairman. Assistant Surgeon H. MCG. ROBERTSON, recorder.

Board convened to meet at San Francisco, Cal., April 20, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. G. STIMPSON, chairman. Passed Assistant Surgeon J. M. HOLT, recorder.

Board convened to meet at San Juan, Port Rico, April 24, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon W. W. KING, chairman. Acting Assistant Surgeon P. DELV. ATILES, recorder.

Board convened to meet at Port Townsend, Wash., April 24, 1905, for the physical examination of officers of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon J. H. OAKLEY, chairman. Passed Assistant Surgeon D. E. ROBINSON, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 15, 1905:

BANISTER, J. M., Major and Surgeon. On arrival at San Francisco, Cal., ordered to proceed to Fort Riley, Kans., for station.

BIRMINGHAM, H. P., Major and Surgeon. Relieved from duty as chief surgeon, Department of Texas, and ordered to Fort McPherson, Ga., for duty.

CARTER, W. E., Major and Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

COLLINS, C. C., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

EASTMAN, W. R., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

FORD, C. S., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer, Artillery District, Potomac, Fort Washington, Md., not later than May 1, 1905, for duty in connection with joint Army and Navy exercises.

GIRARD, A. C., Assistant Surgeon General and Brigadier General. Retired from active service at his own request, having attained the age of 62 years.

GRAY, W. W., Major and Surgeon. Relieved from duty at Fort McPherson, Ga., and ordered to Atlanta, Ga., for duty as chief surgeon, Department of the Gulf.

GREENLEAF, H. S., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer, Artillery District of Baltimore, Fort Howard, Md., for duty in connection with joint Army and Navy exercises not later than May 1, 1905.

HARTNETT, E. H., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer, Artillery District, Potomac, Fort Washington, Md., not later than May 1, 1905, for duty in connection with joint Army and Navy exercises.

HATHAWAY, L. M., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence, to take effect when relieved from duty in Alaska.

HESS, L. T., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

HUMPHREYS, H. G., First Lieutenant and Assistant Surgeon. Left Washington, D. C., on thirty days' leave of absence.

MANLY, C. J., Captain and Assistant Surgeon. Granted thirty days' leave of absence.

METCALFE, R. F., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

MILLER, R. B., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer, Artillery District of Baltimore, Fort Howard, Md., for duty in connection with joint Army and Navy exercises not later than May 1, 1905.

MORRIS, E. R., First Lieutenant and Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

RAYMOND, H. I., First Lieutenant and Surgeon. On arrival at San Francisco, Cal., to proceed to Fort Riley, Kans., for station.

RICH, E. W., First Lieutenant and Assistant Surgeon. Relieved from duty in the Philippines Division, and ordered to proceed to San Francisco, Cal., and report to the Military Secretary for further orders.

ROCKHILL, E. P., First Lieutenant and Assistant Surgeon. Left Presidio of San Francisco, Cal., on thirty days' sick leave of absence.

STRAUB, PAUL F., Captain and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kans., and ordered to report in person to the Secretary of War for further orders.

WICKLINE, W. A., First Lieutenant and Assistant Surgeon. Left Washington, D. C., on twelve days' leave of absence.

WILSON, J. S., Captain and Assistant Surgeon. Ordered to report to commanding officer, Artillery District of Baltimore, Fort Howard, Md., for duty in connection with joint Army and Navy exercises not later than May 1, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending April 15, 1905:

BAKER, J. W., Surgeon, retired. Ordered to additional duty in performance of medical attendance of officers of the Navy and Marine Corps in the vicinity of Boston, Mass., not otherwise provided with medical attendance.

BENTON, F. L., Surgeon. Ordered from the Naval Recruiting Station, Philadelphia, Pa., for course of instruction at the Naval Museum of Hygiene and Medical School, Washington, D. C.

BISHOP, L. W., Passed Assistant Surgeon. Detached from the *Southery*, for course of instruction at the Naval Museum of Hygiene and Medical School, Washington, D. C.

CATHER, D., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the Naval Training Station, Newport, R. I., with additional duty on the *Constellation*.

CORDEIRO, F. J. B., Surgeon. Detached from the *Solace* and ordered home to await orders.

FARWELL, W. O., Medical Director, retired. Ordered to the Naval Recruiting Station, Philadelphia, Pa.

FIELD, J. G., Surgeon. Detached from the *Bennington* and ordered to the *Solace*.

FISKE, C. N., Passed Assistant Surgeon. Relieved from duty at the Naval Hospital, Boston, Mass., and ordered to Washington, D. C., for course of instruction at the Naval Museum of Hygiene and Medical School.

FURLONG, F. M., Passed Assistant Surgeon. Ordered to report to the Surgeon General for special duty in the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

IDEN, J. H., Passed Assistant Surgeon. Detached from the Naval Hospital, Narragansett Bay, R. I., and ordered to Washington, D. C., for course of instruction at the Naval Museum of Hygiene and Medical School.

LEYS, J. F., Past Assistant Surgeon. Ordered to Washington, D. C., April 28th, for course of instruction at the Naval Museum of Hygiene and Medical School.

LUMSDEN, G. P., Surgeon. Detached from the *Minneapolis* and ordered to the *Olympia*.

MURPHY, J. A., Passed Assistant Surgeon. Detached from the Navy Yard, Washington, D. C., and ordered to Washington, D. C., for course of instruction at the Naval Museum of Hygiene and Medical School.

NORTON, O. D., Surgeon. Detached from the *Olympia* and ordered to the *Minneapolis*.

OHNESORG, K., Passed Assistant Surgeon. Detached from the *Topeka* and ordered to the Museum of Hygiene and Medical School, Washington, D. C., for course of instruction.

PECK, A. E., Passed Assistant Surgeon. Detached from the *Pensacola* and ordered to the *Bennington*.

PRYOR, J. C., Surgeon. Detached from the Naval Hospital, Narragansett Bay, R. I., and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for course of instruction.

SHIFFERT, H. O., Passed Assistant Surgeon. Detached from the United States Revenue Steamer *Franklin* and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for course of instruction.

SHIPP, E. M., Surgeon. Detached from the Naval Hospital, N. Y., and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., for course of instruction.

SMITH, G. T., Surgeon. Ordered to the *Maryland*.

STEEP, J., Passed Assistant Surgeon. Detached from the Training Station, Newport, R. I., and ordered to the *Topeka*.

STRINE, H. F., Assistant Surgeon. Detached from the *Helena* and ordered to the *Barry*.

Births, Marriages, and Deaths.

Born.

BRANCH.—In Fort Wood, N. Y., on Tuesday, March 28th, to Dr. Frederick D. Branch, United States Army, and Mrs. Branch, a son.

Married.

BLANCHARD—LOSER.—In Grand Rapids, Wisconsin, on Wednesday, April 5th, Dr. William Blanchard and Miss Harriet Loser.

DENNETT—WHEELER.—In Brooklyn, N. Y., on Wednesday, April 12th, Dr. Roger Dennett and Miss Agnes V. Wheeler.

FISHER—KANE.—In Washington, D. C., on Wednesday, April 5th, Dr. James Grant Fisher and Miss Amy Frothingham Kane.

GUNBY—PATTERSON.—In Philadelphia, on Thursday, April 6th, Dr. Hiram H. Gunby and Mrs. Sallie R. Patterson.

LANIER—STROUD.—In St. Louis, Missouri, on Saturday, April 1st, Dr. L. Herbert Lanier and Miss Annie Stroud.

SMITH—CANTERBURY.—In Brooklyn, Mass., on Monday, April 3rd, Dr. Winfield Smith and Miss Gertrude P. Canterbury.

VIRGIN—SORIA.—In New York, on Thursday, April 13th, Dr. Frederick Oakman Virgin and Miss Florence Soria.

Died.

BAKER.—In Davenport, Iowa, on Friday, April 7th, Dr. J. W. H. Baker, in the eighty-fifth year of his age.

GRANT.—In Clarksdale, Mississippi, on Thursday, April 6th, Dr. Hector M. Grant, in the eighty-fourth year of his age.

FULLILOVE.—In Boerne, Texas, on Tuesday, April 4th, Dr. T. W. Fullilove.

HULL.—In Maple Ridge, Michigan, on Tuesday, April 4th, Dr. Thomas A. Hull, in the fifty-sixth year of his age.

SCHROEDER.—In Bloomington, Illinois, on Friday, April 7th, Dr. Herman Schroeder, in the eighty-fifth year of his age.

SMALL.—In Lewiston, Maine, on Thursday, April 13th, Dr. William D. Small, in the forty-second year of his age.

WILLIAMS.—In Dunkirk, N. Y., on Monday, April 10th, Dr. Julien Taintor Williams, in the seventy-seventh year of his age.

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Original Communications.

NEPHROPEXY, PRO AND CON.*

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MEDICINE, ETC.

Nephropexy has been strenuously advocated on the ground that in many instances a prolapsed, movable kidney is productive of well marked symptoms which can only be relieved by this means, and this premise would hold good (a) if the kidney remained fixed; (b) if the kidney alone was at fault, and (c) if the other abdominal viscera were not distended, distorted, or dislocated.

Looking backward to 1885, we find that Glénard, under the heading *Entéroptosis*, was the first to recognize, clearly describe, and practically demonstrate that in nearly every case of prolapsed kidney a careful examination of the whole abdomen would detect more or less dislocation or dilatation of the stomach and intestines, with or without ectopy of the liver and spleen; and Glénard's findings have been confirmed by a host of careful observers.

Prolapsed, movable, replaceable kidney occurs frequently, often produces serious symptoms, can be easily palpated, certainly differentiated, and easily fixed, and when combined with postoperative rest in bed, quiet, and diet, the fixation brings about (for a time at least) most gratifying results, but only to end in a more discouraging relapse and return of all the previous symptoms whether the kidney adheres to its new attachment or not (Case V).

From clinical study we have learned to attribute certain symptoms to the kidney mobility; another group to gastrointestinal atony, prolapse, and distention; and others to the combined effects of both.

The symptoms due to prolapsed kidney are characterized by (a) their acuteness; (b) frequent recurrence; and (c) rapid subsidence after the kidney has been replaced.

The attacks designated *Diet's crises* come on with little warning, severe headache, nausea and vomiting, pain, and unilateral swelling along the loin, or general abdominal swelling, a sense of suffocation, an irresistible desire to loosen and remove all clothing and lie down, followed in a short time by relief and freedom from pain.

Hydronephrosis.—The most common and striking result of the traction and dragging of the prolapsed kidney on its ureteral pedicle is an acute angulation, causing retention of urine and dilatation of the kidney pelvis and the kidney itself, often to a serious degree (Case I). In many instances the woman patient is perfectly well on arising, but soon notices soreness and distention and pain along the loin and back, rapidly increasing to a "maddening" degree, culminating in an overmastering demand to loosen everything at the waist, and lie down for a short time, during which all the symptoms subside except some soreness along the loin; on arising she is compelled to urinate frequently and "as if she could never stop." These attacks are repeated from day to day or at longer intervals, but seldom produce nausea and vomiting, especially if the patient lies down soon after the attack begins, otherwise there will be added elevation of temperature, pulse, and respiration.

Jaundice.—Due to the traction of a prolapsed kidney on the cystic or common duct (Treves) jaundice not uncommonly follows confinement, and is often seen in multiparæ with lax, flabby, distended abdominal walls, coming on rather suddenly or gradually, with pain in the hypochondrium (gall bladder), radiating to the back at the lower end of the scapula, often agonizing and only relieved by morphine in liberal doses. Nausea and vomiting may persist for several days; the skin may be jaundiced as early as the first day or discoloration may not be noticeable for two or three days; it diminishes rapidly when the patient is placed in bed with the foot elevated; and reappears within a few hours if she is permitted to sit up without a snugly fitting abdominal support or binder. In every case seen by the writer, the right kidney has been found very

* Read before the Section in Surgery, New York Academy of Medicine.

much enlarged, forming a mass, its lower pole projecting two and a half to four inches below the chondral border, non-replaceable, tender on pressure, and easily to be mistaken for an enlarged gall bladder or lobe of the liver. On careful palpation and percussion, however, the free border of the liver can be distinguished from the rounded lower pole of the kidney, and the latter can be gradually replaced by careful massage and manipulation, thereby ruling out the possibility of gallstones, gastroduodenitis, etc. (Case III).

Hæmaturia caused by prolapsed kidney has been recorded by W. Cheyne and A. T. Cabot, and noted by the author as in Case II.

Appendicitis is without doubt an accompaniment of movable kidney, but experience teaches that inflamed appendices continue to cause pain, etc., after the kidney has been sutured, and that their removal is the only means of securing their owner from the danger of recurrent attacks.

The gastrointestinal group of symptoms, in contradistinction to those peculiar to mobile kidney, are notable in that they first appear during early womanhood, run a chronic course, and are seldom if ever relieved by the ordinary methods (Case V). The symptoms are those due to

(a) Chronic gastritis from dilatation or displacement of the stomach and colon; retention—fermentation, belching of gas, acid regurgitation, pain (epigastric, cardiac, left shoulder, and back), inconstant appetite, fear of certain food, and discomfort sooner or later after eating; each pointing to the stomach as the source of discomfort (Case IV).

(b) Chronic constipation. As the result of gastric atony, food, incompletely prepared, is discharged into the duodenum, which must bear the burden and finish, if may be, the preparation of food for absorption, an amount of work which it is not wholly competent to accomplish, and which leads to intestinal lethargy, manifested by irregular defecation, prolonged fecal retention, often constipation-diarrhoea, with chronic or recurrent mucous colitis and *autointoxication*, the most insidious because unappreciated form of intoxication—paralyzing all muscular, mental, and moral activity by an overmastering malaise. The skin is dry, mottled, or of a dirty brownish hue, the feet and hands are moist, the nose is oily, cracks and “fever blisters” occur on the lips, the breath is foul, the tongue coated, the urine scanty and high colored; there are frequent headaches, sleeplessness, irritability, and lack of power of concentration. The slender figure, slowness of hips, and underweight, each proclaims *malnutrition*.

OPERATION.

To operate or not to operate, that is the question; and one which cannot be answered by a hasty yes or no. The proximity of the solid viscera to the diaphragm, their up and down movement, the constant effect of gravity, the instability of the abdominal contents, variability of the hollow viscera, often associated with a lax abdominal wall, are features which must receive due consideration ere we solve so complex a matter and decide that we (a) must replace all prolapsed viscera; (b) must fix some; (c) may fix others; (d) must support all with or without fixation; and (e) must restore the muscular, mental, and moral equilibrium.

A. Visceral replacement can best be accomplished by placing the patient in bed, the foot being raised twelve inches from the floor, the body extended, and the head resting on a pillow. Gentle rubbing over the abdomen and kidney region will then relieve pain and “short-stop” the “crisis,” hydronephrotic distention will subside, the jaundiced skin clear up, the urine become free from pus, blood, and albumin, and, what is of equal importance, the diagnosis will be established; furthermore, confirmed, for when the patient sits up for a few hours, the pain, etc., will promptly return.

B. Fixation imperative. No surgeon will question the justifiability of suturing a prolapsed kidney after operations on the kidney or ureter for removal of calculi, drainage of a pus kidney, tuberculous kidney, or cystic kidney, or to fix a displaced kidney in its new location if producing symptoms of pyelitis or stricture of the ureter (El-liott), if albumin is present, or, as in Bramwell's case, pyloric stenosis and constriction of the duodenum by peritoneal bands are found. I have found it necessary to fix a large, heavy kidney lying below the waist line, in a woman over 50 years old, with a very lax, thin abdominal wall.

C. Fixation selective. The great mass of records, enforcing the view that a prolapsed kidney is an indication of Glénard's disease, enteroptosis, splanchnoptosis, call it what you will, especially in its association with dilated or prolapsed stomach, “must give us pause” ere we recommend nephropexy for those tormented with multiple ptoses.

The position of the kidney. Owing to the greater obliquity of the ribs in women, that organ (lower pole), when in place, lies above the twelfth rib posteriorly and above the costochondral border of the eighth rib in front, and cannot be palpated during quiet respiration, a fact which, to the writer's knowledge, has never been mentioned

in any anatomical textbook, all diagrams showing the relation of that organ being made from male subjects post mortem. This point assumes great importance when we endeavor to replace and suture the kidney, as in all methods so far devised at least one half of the kidney must lie below the twelfth rib, and be subject to constriction and compression by the corset and waistbands and dragging of the heavy clothing, as must also be the case when prolapsed just far enough to lie at the waist line, causing such pain that the woman cannot wear tight laced corsets or tighten her clothes around her waist. Furthermore, any kidney which has prolapsed to the waist line cannot be sutured to the loin *without pulling it down somewhat farther*, certainly a procedure not wholly free from danger. On the other hand, a kidney on or near the false pelvis but rarely causes acute symptoms, as the support from below prevents dragging on its pedicle. The ureter accommodates itself to the abnormal relations, and hydro-nephrosis but rarely intervenes, but retention of some urine in the inverted pelvis must occur and set up a pyelitis, which would justify nephropexy or, what I deem would be a more rational plan, *resection of the ureter and uniting the kidney pelvis to the ureter on a level with the pelvic brim*, and thereby reestablishing perfect drainage.

Gastroenterostomy, etc. There can be no question that in appropriate cases of stomach dilatation, plication of the stomach by the method of Bircher and others, or gastroenterostomy will afford relief; and the cases collected by Warren show that splenectomy is far less dangerous than attempts at fixing a wandering spleen. Carstens and others have successfully replaced and sutured the liver, which Einhorn has found so frequently to be mobile.

Suture of the lax recti abdominis has proved of benefit in the hands of Webster, Robinson, and Morris, who, "following German surgeons," has sutured the recti together in fifty-one cases.

But few operators are willing to follow Ingalls when he advises nephropexy, hepatopexy, splenopexy, gastropexy, fixation of the transverse colon, and reconstruction of the abdominal wall on one and the same patient, to say nothing of operations on the pelvic floor.

Kidney fixation, when the kidney remains fixed, will in some instances entirely relieve the attacks due to kidney mobility—Dietl's crises, hydronephrosis, hæmaturia, and jaundice—and drain the kidney pelvis of residual urine. In too many instances, however, the kidney does not "stay fixed," the wound area is painful, rarely hernia occurs, and a few patients die. Furthermore, the

chronic gastrointestinal syndromes (gastritis, constipation, malnutrition) and neurasthenic manifestations are not relieved, and the patient feels that she has been subjected to an operation which she would have been better off physically and financially without.

Mechanical measures in the treatment of movable kidney, such as belts, binders, bandages, and pads, have in a great majority of cases proved unsatisfactory, chiefly for the reason that they *compress, but do not support, or compress without replacement*, thereby doing additional injury to the already much abused intraabdominal viscera.

In order to meet the indications, since 1898 I have applied a new principle, first enunciated in 1901 (*Am. Journ. of Obstet.*, 1901, xliv, p. 1), whereby:

1. The prolapsed viscera are replaced by gravity, the patient lying in the dorsal posture with the hips elevated, and at the same time the viscera are manipulated toward the diaphragm.



Semiopisthotonos posture: Woman lying in bed, hips raised, causing viscera to gravitate toward the diaphragm when fastening corset for movable kidney, etc.

2. To support the replaced viscera the patient is fitted with a specially designed corset, made from measurements taken while lying upon her back, put on while in the semiopisthotonos posture, laced with two strings, introduced from above down, and adjusted by hooking from the lowest upward. When made and put on in this way the corset fits very tightly over the suprapubic area, and prevents the viscera from prolapsing, provides ample room at and above the waist line for the replaced stomach and colon, and the replaced kidney cannot be forced down while the corset is thus worn. In thin women the lower and back part of the corset must be padded inside to prevent undue pressure over the anterior superior spines. As soon as the corset is properly adjusted the wearer experiences a grateful sense of relief and support, Dietl's crises do not return, and the general condition gradually improves. The corset is not a "cure all," but it will

confirm the diagnosis, stop the attacks, and put the patient in a curable condition.

Rest cure. In some cases, owing to emaciation, frequent recurrence of the hydronephrosis, and predominance of neurasthenic symptoms, it has been found necessary to place patients in bed for four to eight weeks' "rest cure," and to fit the corset before permitting them to get up.

In some instances Rose's plaster strapping of the abdomen has been found of temporary use, especially while waiting for the corset, but the irritation of the plaster, and the difficulty and danger of wearing it *with an ordinary corset*, are objections which cannot be overcome.

From the considerable number of cases of Glénard's disease which I have seen, I select a few examples illustrating the views herein expressed.

CASE I.—(No. 1862, Roosevelt Hospital, O. P. D.) Glénard's disease (hydronephrosis). White girl, 11 years old. For about a year had suffered from attacks of pain in her back, both iliac regions, right hypochondriac and epigastric areas; belching, bloating, and indigestion; bowels moved daily; urination painful and excessive at times. Lower pole right kidney palpable, and replaceable; greater curvature of stomach on level with the umbilicus. Abdomen protuberant. Treatment: A specially fitted corset to support the prolapsed kidney and stomach, after replacement in the semiopisthotonos posture. This measure relieved all symptoms.

CASE II.—Hæmaturia due to prolapsed kidney. H. B., 42 years old, mother of two children. For the past week had been suffering from "misery" in the small of her back and along the right loin. Urinated frequently and noticed previous night that urine looked like blood. Examination of the right loin and hypochondrium disclosed a very tense mass, which on careful manipulation could be pushed upward behind the chondral border. The urine microscopically showed blood *thoroughly mixed* with the urine. Treatment: Rest in bed, and an alkaline diuretic. She was advised to elevate the foot of the bed, keep quiet, and rub the lump upward if it could be felt. Three days later she reported no return of the pain or blood since I had replaced the kidney. No recurrence during the past two years.

CASE III.—Postpuerperal Glénard's disease (jaundice). E. W., 22 years old, only child born five months before. Patient of another physician. Had not been well for four months; could not lie down on account of burning in her chest and right loin. Skin jaundiced for the past week. Half of the right kidney, very much enlarged, could be palpated below the chondral border, causing pain at the sternal junction of the fourth rib on the right side the same as she experienced during the attacks. Greater curvature of the stomach two inches below umbilicus. Treatment: Rose's plaster bandage. Eighteen days

later, the plaster having become loosened, she had a very severe attack, relieved by posture and morphine. Next day plaster reapplied. Five weeks later a special corset was put on and no recurrence has taken place during the past year.

CASE IV.—Gastrectasia. Dr. J. L. B., 65 years old, for the past twenty-five years had suffered from indigestion and intestinal colic, much worse for past four years. The attacks lasted about four days, and were associated with a dull constant pain, worse on movement, extending from the right hip to the back and occasionally to the umbilicus; not infrequently there was also a sort of "strangulation" of the muscles of the neck on the left side, with jerking. The application of Rose's plaster bandage soon relieved the pain on the right side; later, however, on account of irritation and inability to bathe while wearing it, the plaster was replaced by a special muslin bandage, and as the doctor expressed it "he could not believe such a change possible."

CASE V.—Nephroptosis, gastrectasia, not relieved by nephropexy. October 2, 1901. Mrs. F. E., 23 years old, one child, 13 months old. Complained of a feverish feeling in suprapubic region, and soreness in the sacral region, "like cords pulling;" frequent micturition; daily stool; good appetite, indigestion, occasional heartburn, hypogastric pain, no belching. Had lost weight for three years (127 to 107 pounds). Unable to wear a corset for the past year and a half. Only vegetarian diet. Right kidney opposite the anterior superior spine, replaceable under the ribs. Her former physician advised nephropexy. A ready made corset was put on in the dorsal decubitus and she was not heard from until May, 1904, when she complained of a stitch-like feeling in the right kidney region; felt weak and not good for anything. Greater curve stomach two and a half inches below umbilicus, succussion well marked. New corset adjusted; stomach lavage. November 25, 1904. Reported that since last seen she returned to her former physician and had the kidney sutured (August 29th) to the loin, the retroverted uterus to the abdominal wall; and was "just as bad as ever, in spite of operation and wearing an expensive abdominal belt." The ventrofixation caused pain by the drag of the uterus; the right kidney lay fixed three and a half inches below the chondral border, and was compressed by the waistbands; and the gastritis was as troublesome as of yore. Her financial condition now permitting she was fitted with a made to order corset and immediately experienced great relief.

CONCLUSIONS.

As the majority of clinicians now accept Glénard's theory that the movable kidney is merely an incident in the general ptosis, and symptoms referred to the kidney are much more likely to be the result of intestinal displacement, as is also the case in troubles caused by deformity or abnormal mobility of the spleen, liver, or kidney, and dilatation of the stomach, and as the symptoms due to kidney mobility (Dietl's crises, with hydro-

nephrosis, jaundice, or hæmaturia) can be differentiated by their acuteness, recurrence, and subsidence when the patient has been placed in the inclined dorsal position, and the kidney replaced; and *per contra*.

As the evidences of gastrointestinal displacement and disorders (gastritis, constipation, malnutrition, nervous instability, splashing sound, and distorted abdominal outline) are notable for their chronicity and rebelliousness to treatment; we deem that

1. Nephropexy is justifiable on a displaced kidney after operation thereon, involving it or its pelvis or ureter, or to relieve hydronephrosis or hæmaturia from a non-replaceable kidney.

2. Hepatopexy, splenectomy, gastroplication, gastrojejunostomy, and suture of the recti may be occasionally indicated.

3. The main obstacle to nephropexy in women lies in the greater obliquity of the lower ribs, which prevent suturing the kidney high enough to avoid harmful compression by the ordinary corset and waistbands.

4. Nephropexy is unjustifiable when, in order to place the sutures, it is necessary to drag the kidney farther down.

5. Nephropexy may relieve the symptoms due to kidney mobility, but in order to overcome those caused by the general ptoses it has been necessary to adopt a new principle, viz. (a) gravity replacement by the semipisthotos posture; (b) support of the replaced viscera by a corset made to order from measurements taken while the woman is lying down, laced with two strings, inserted from above down, put on while in the inclined dorsal posture, and fastened in front from below upward. By this method the viscera cannot prolapse while the corset is worn, and with this support nephropexy for replaceable kidney, *per se*, is but rarely indicated, multiple operations can be avoided, and the patient be placed under curable conditions.

60 WEST FIFTY-SIXTH STREET.

A New Hospital for Baltimore.—The North-western Hospital and Free Dispensary will soon be opened at 1147 North Fremont Avenue, Baltimore, where the executive board has secured temporary quarters and is fitting them for a waiting and drug room, a department for general medical treatment, one for the treatment of eye, ear, nose, and throat afflictions and one for gynecological diseases. It is the intention of the board to erect a building for the exclusive use of the dispensary, and it is probable that a general hospital will be included. Dr. William S. Gardiner is president of the association and Dr. Lee Cohen secretary and treasurer. The executive committee is composed of Dr. A. G. Barrett, Dr. Lee Cohen, and Dr. Albertus Cotton.

GALLSTONE DISEASE; REMOTE EFFECTS AND TREATMENT.*

By SAMUEL P. GERHARD, M. D.,

PHILADELPHIA.

To the efforts of the surgeon we owe much for a better knowledge and a clearer idea of the pathology of gallstone disease and from this we can deduce our view of the prognosis, treatment, and prevention of the remote effects.

The therapist has made very little progress in the application of remedies for this condition; therefore, the disease must be considered mostly from a surgical standpoint. Still there are many conditions and phases that call for medical treatment as palliative and cases where the surgeon would not feel justified in assuming the responsibility of an operation.

There is no doubt that many persons have gallstones and suffer no discomfort. Riedel states that in Germany ten per cent. of all adults have them, and that in five per cent. of this number they cause trouble. Thus in some persons the disease is latent, but trouble is liable to begin when the calculi escape from the gall bladder, excepting where the stones are so small that they pass out unobstructed and without inconvenience to the patient. However, in some cases where the stone is too large for the biliary ducts, great pain and obstruction of the channel supervene, and here is where the damage may begin. If, however, the spasm of the duct caused by the presence of the stone, which is practically a foreign body, is overcome and the flow of bile is strong enough to push the incarcerated stone along, it may pass out into the intestines, and, as far as that stone is concerned, the trouble is over; but there is no certainty how many more there may be in the gall bladder, how long they will remain there, and what their career may be after they pass out of the viscus. The attacks of biliary colic may then be frequent and indefinite. The gallstones of themselves never prove fatal and are perfectly harmless while they remain in the gall bladder, but there is no telling what accident may happen to any one on its journey through the ducts, and it is in place here to consider some of these accidents and their results.

If a calculus should become lodged in the neck of the gall bladder or in the cystic duct, the biliary fluid cannot pass in and out and the gall bladder becomes filled with a yellowish mucous mass, increasing in size. If infection is present cholecystitis comes on with its train of fatal effects, such as empyema and gangrene of the gall bladder, or a mild inflammatory condition may progress, and

* Read before the North Branch of the Philadelphia County Medical Society, December 8, 1904.

adhesions with the neighboring structures will be produced, causing repeated pains and gastrointestinal disturbances after the primary biliary attack has passed. The calculus may go back into the gall bladder, or it may escape from the cystic duct and pass down into the common duct and out into the duodenum; but its progress may be arrested in the common duct near the orifice, and if it remains there very long it is apt to grow larger from the continued precipitation of cholesterolin and completely close up the channel. Then on account of the anatomical relation of the biliary duct with the other organs we may have a chain of effects, especially if there is infection, which is most likely at this point. The calibre of the canal is decreased by the consequent inflammation and swelling, which still further fastens the stone and backs up the bile into the liver, causing cirrhosis, cholemia, and inflammation in the overworked kidneys. Adhesions as a result of the inflammatory process may occur between the neighboring and contagious structures, such as the omentum, stomach, and intestines, producing vague gastrointestinal symptoms.

As shown by Opie the pressure upon the head of the pancreas may cause pancreatitis, hemorrhagic pancreatitis, and pancreatic fat necrosis. A fistula into a neighboring organ through which the stone may escape into the stomach or bowel may be produced by suppuration. The danger of peritonitis cannot be overlooked at this point, nor the possibility of carcinoma of the gall bladder and passages.

After the gallstones have reached the gastrointestinal tract they usually pass out through the bowels without further trouble, but Schuyler has shown that they sometimes occlude the bowel from irritating the wall and cause reflex contraction and ulceration. This happens mostly at the ileocaecal valve and is rare. Yet with the great number of gallstones that remain quiet or are passed without any discomfort or dangerous symptoms it would not be wise to worry ourselves too much with the *remote effects*, but be always on our guard and watch for them so as to give timely warning for the proper surgical interference.

With our increased knowledge of the pathological processes involved in this condition, it is our duty to present a prognosis from a surgical standpoint, or where an operation has been advised. The best authorities and operators agree that in uncomplicated cases the mortality in operation is about three per cent., and this low percentage may be due mostly to the condition of the patient and not to the operation; but where there is infec-

tion, or the calculus has passed out of the gall bladder and become lodged in the duct, the mortality is higher and reaches sixteen per cent., so that we can infer that in those cases where the condition has not been allowed to progress too far and where an early operation is done the chances for recovery are very good, and doubtful only where surgical interference has been postponed too long. From this we see that it is the complicated cases that cause a high death rate from operation.

TREATMENT.

A few years ago the treatment of gallstone disease was entirely within the domain of internal medicine and the tendency of to-day is to put the disease under the head of surgery. This is due to the successful work of the surgeon who has given us an insight into the pathological condition as it exists in the living. Thus by a more exact diagnosis a better method of treatment can be outlined than was possible heretofore. As mentioned previously the medical treatment has made very little progress, and it seems that we have come to a point where we should study the prophylactic treatment, and we must admit that we know very little in this direction.

How to prevent the formation of gall stones is the mystery to be solved.

We may do something in the way of managing the habits and diet of our patients, advising the proper method of dressing, such as the avoidance of tight lacing or anything that may interfere with the natural flow of the bile, for it is admitted that bile stasis is one of the chief causes of the formation of calculi. Deep breathing should be encouraged so as to assist in clearing out the gall bladder.

When the calculi have once been formed there is no solvent yet found that will disintegrate them within the viscus. Many drugs have been lauded as solvents, such as sodium succinate, sodium oleate, and sodium glycolate, which are theoretically indicated because they increase the amount of bile salts, thereby preventing the precipitation of cholesterolin, which is the principal constituent of biliary calculi. But how can we get these drugs directly to the gall bladder without change? The experiment of dissolving calculi works splendidly in the test tube, but it is not possible to make a drug pass into a gall bladder against the natural outflow of its contents. We have heard much of the Carlsbad treatment which claims a great number of successful cures, but we can agree that if the same system was carried out at home we would obtain just as good results.

Many practitioners can mention numbers of

cases of success in biliary colic. Richardson submits a plan that may have some ground for the careful attention of those who have cases in charge. He advises the administration of sodium glycolate, which is a product of the liver and a bile salt, with a diet rich in fat, making a soap which he thinks may be absorbed through the intestinal wall and be carried by the circulation into the hepatic secretion and through this directly upon the calculi, thereby holding in solution the cholesterol and dissolving any precipitated cholesterol that may be present.

Olive oil was praised by many in the profession a few years ago and was thought to be a specific; even to-day the laity has great faith in its power to eliminate biliary calculi, but it has been demonstrated that it has no direct action and operates probably in a mechanical way, dilating and lubricating the channels as far as it can reach. It may act as a means of relieving the local catarrhal congestion of the neighboring intestine and clearing out the obstructing fecal matter, thereby allowing an imprisoned stone to pass along more easily.

The busy practitioner, however, is called upon in most cases to relieve a sudden biliary colic. It may be the first attack, the pain is intense and most agonizing and relief is desired at once. He is justified when he finds no signs of suppuration or tenderness or an enlarged gall bladder to give a hypodermic injection of morphine sufficiently large to relieve pain. A few whiffs of chloroform until the morphine acts, with hot fomentations over the region of the liver are very grateful. This may overcome the spasm of the duct and allow the stone to escape and relieve the most intense agony a body can suffer. It is remarkable how promptly this condition responds to morphine, but where you have a continuance of the colic after this medication, or a distended gall bladder, it should not be repeated and a search should be made for complications. The question then arises, Shall we operate?

I have recommended all my biliary colic patients to submit to operation, but in every instance they refused and declared they would rather take their chances of being relieved with medication than to suffer the loss of time and expense of an operation, and in every case their judgment was good, for in no case were there any remote effects.

The cases that require the most careful watching are those with vague symptoms without jaundice and only slight recurring pains over the region of the gall bladder; these are the cases that run on to suppuration and deceive the attendant.

The natural tendency of the gallstone is to pass

out by the nearest route, and this is through the biliary ducts, and so far as that is concerned we can trust nature to accomplish it. Therefore, in a well marked case of biliary colic we assist the process of nature with palliative treatment until the stone has safely passed beyond the danger of damage. But what of those calculi that remain? Now that one of the number has left the rest are more liable to follow by reason of the disturbance of their arrangement, and there will be an indefinite number of attacks of biliary colic. Shall we operate, or watch the course of each stone and ease the patient for the time being, hoping that they will all pass out safely? No one can tell what accident may befall the progress of any one of them; that there is danger in each stone there is no doubt, and for that reason the surgeon advises operation before there is trouble. But supposing they are all removed, what will prevent the formation of new calculi? Here lies the problem for the internist to solve.

The surgeon can remove them, but he cannot prevent the formation of new ones, excepting by the removal of the gall bladder, and even this will not prevent their recurrence in the biliary passages. However, we must not lose sight of the fact that wonderful strides have been made since 1878, when Marion Sims performed the first cholecystostomy, and the brilliant results that have been accomplished in the surgery of the gall bladder.

The operative treatment and technics have been so perfectly developed that we need have no fear to advise operation early in well marked cases of recurrent biliary colic, especially where there is the slightest sign of prolonged obstruction or inflammatory process present. Where the jaundice persists for more than a month it would undoubtedly be wise to cut in and drain the gall bladder. The operative technics of the biliary passages has not been developed so perfectly as that of the gall bladder, therefore it is urged by many to operate and remove the calculi as soon as recognized, and before they pass down into the passages where they cannot be so easily reached; hence the plea for early surgical interference.

The Carlsbad treatment is supposed to overcome this difficulty, but it seems to consist only in the ingestion of large quantities of water and the absorption of alkalies to encourage the production of bile salts. Means for the expulsion of the calculi are questionable, for it should be the duty of the physician and the aim of the treatment to prevent the disturbance of the calculi in the viscus and keep them quiet. From this we can see the fallacy of massage of the gall bladder,

for it is quite possible thus to produce a cholecystitis or force a stone down into the ducts and cause an obstruction.

Excessive purgation should not be permitted for the same reason, but the bowels should be regulated to move naturally with proper doses of sodium phosphate or sulphate or both in combination. The catarrhal condition in the duodenum about the orifice of the common duct after a stone has passed out or after an operation can be very nicely overcome by the administration of tincture of colocyth in doses of ten to twenty drops three times daily before meals.

The drinking of large quantities of alkaline water should be encouraged with a view of increasing the bile salts, and if it is true as some think that cholelithiasis is caused by cholecystitis or by an infection beginning in the bowel, then it would be our duty to administer intestinal antiseptics, but these two conditions may coexist and it would be too late to begin the antiseptics. The treatment then resolves itself into palliative and surgical, and we must use our good judgment and decide which to follow under the circumstances.

CONTRIBUTION TO THE PLASTIC SURGERY OF THE URETHRA.

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CHICAGO,

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The plastic surgery of the urethra is in general one of the most unpromising fields of surgical endeavor. The conditions surrounding attempts to restore the normal continuity and calibre of the canal in cases of fistula, especially where there is marked loss of tissue, are such as peculiarly tend to prevent the accomplishment of asepsis, and to prevent the immediate union that is so essential to successful plastic operations in this region. Some of the lesser degrees of destruction of the urethral wall are more trying to the surgeon than others of much greater degree. In the extreme degrees of hypospadias and epispadias, for example, the conditions are often such as to render operation unwise. Again, where operations for these major defects of the urethra are performed, the patient is usually content with even a moderate degree of improvement, and of necessity must be reconciled to failure. In the slighter cases of hypospadias and urethral fistula the patient expects more; the closure of the canal seems easier of accomplishment, and the surgeon is likely to be tempted into simple and incomplete plastic pro-

cedures, which, *ab initio*, should not rationally be expected to succeed.

In the slighter forms of fistula a very important drawback to operation is the fact that, as plastic operations are ordinarily performed in this region, so much normal tissue is sacrificed that in case of failure, the patient is worse off than he was prior to the operation. It is nothing unusual to meet with cases in which a succession of operations have been performed by operators of a greater or less degree of competency, each of which operations has resulted in an aggravation of the urethral defect. Accumulating experience of this kind has led the profession in general to believe it inadvisable to operate upon the minor degrees of hypospadias, notwithstanding the great mental disquiet and physical discomfort incidental to the congenital defect.

After a considerable experience in the line of operative work under consideration, I feel justified in presenting to the profession the methods which I have found most satisfactory in my own cases.

The operation devised by my friend, Carl Beck, of New York, consisting of freeing the urethra and reattaching it at the extremity of the glans through a tunnel made in the latter, has a certain range of application, and has proved a very valuable method of relieving penile hypospadias. The shortening of the urethra, however, resulting from the operation and the occasional contraction of the glandular part of the new urethral canal are drawbacks of sufficient importance to render a successful substitute for the method welcome to the surgeon.

In that most frequent variety of hypospadias, in which the glandular portion of the urethra is represented by a cleft, and the congenitally defective meatus is situated just behind the base of the glans, Beck's operation seems rather too radical a procedure.

I have devised an exceedingly simple plastic operation for these cases, which has met with a large proportion of successes, and to which no exception can be taken on the ground of danger or loss of urethral tissue which shall enhance the deformity. The operation is done as follows:

When there is no cleft representing the roof of the urethra on the under surface of the glans a cleft is made as a preliminary step for the operation. This cleft is kept open so far as possible, so that when healed it will constitute the roof of the new canal, the formation of which is comprehended by the plastic operation. When healing of this cleft has been completed, two triangular surfaces are denuded, one upon either side, in the form of an isosceles triangle. The bases of these triangles are parallel with the proposed line of the urethra (Fig. 1). Between the bases of the triangles is left a narrow strip

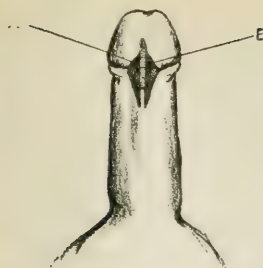


FIG. 1.—The denuded surfaces, triangular in shape.

of intact epidermis, which represents the floor of the new urethra. The posterior portion of this intact strip consists of penile integument; the anterior of the roof of the cleft in the glans, which is to form the roof of the newly constructed portion of the canal.

The work may be done entirely under cocaine. The denudation having been completed, a very fine catgut suture is introduced, beginning at the centre on one or the other side at A. This is anchored, and a continuous suture made in such a manner that as the stitching proceeds the triangular surface is doubled upon itself at the centre. It is not always necessary to introduce one or more sutures at the outer edge of the triangular surfaces after the inner stitching is completed. The suturing of one side having been completed, the other side is stitched in a similar manner. (Fig. 2.)

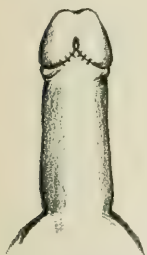


FIG. 2.—Appearance after stitching.

By the procedure described the integument of the penis is brought forward in such a way that an intact epithelial floor of the new canal is provided, the floor itself consisting of a double layer of integument and subintegumentary structures, similar to that of the prepuce.

In cases in which circumcision has not been performed, the inferior surface of the base of the prepuce constitutes the integument involved in the flap from which the new floor of the urethra is constructed.

A catheter is introduced into the bladder and retained for about a week. I am by no means certain that in these minor cases the retained catheter is absolutely necessary, and I have suspected in certain cases in which primary union failed that the irritation of the catheter, acting as a foreign body, and followed secondarily by mild pus infection, was responsible for the failure. It has been my experience, however, that all is by no means necessarily lost in case of failure of primary union, for in several instances, as cicatrization proceeded, the flaps were drawn forward in such a way that what seemed likely to be only a partial success or possibly a complete failure proved an excellent result.

Small fistulae with a short tract in either the perineal or penile portions of the urethra may sometimes be dealt with in a very simple manner. The granulations lining the tract are first rubbed away with gauze wrapped about a probe by a rotary motion, or by a small curette. Hydrogen peroxide is freely used, so as to make the tract as nearly aseptic as possible. A longitudinal incision, the length of which necessarily varies with the location of the fistula, is made in the overlying tissues, the centre of which is made to correspond with the centre of the fistulous opening. The tissues are dissected away for a short distance upon either side of the incision, thus making a pocket.

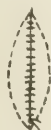


FIG. 3.—The operation for small fistulae; dotted line shows pocket formed.

(Fig. 3, dotted line.) The fistulous tract is now carefully dissected out, the dissection just falling short of entering the urethra.

The cicatricial tissue and integument about the orifice of the fistula are next cut away. With a small torsion forceps the fistulous tract is twisted upon its axis, rope-wise, care being taken not to twist the tissues surrounding the fistulous tract to the extent of rupture, or to make it so short as to cause tension when it is stitched.

A suture is now passed from side to side, and made to transfix the pedicle, thus anchoring it in the wound. (Fig. 4.) The edges of the pocket formed by the preliminary incision are now brought together and stitched with horsehair or fine catgut. A collodion dressing is placed over the whole.



FIG. 4, a



FIG. 4, b.

Transfixing the pedicle.

It will be readily observed that in case of failure no tissues have been sacrificed. It is obvious, moreover, that the earlier the operation is done after the fistula has formed, the more promising the outlook. Where the simpler torsion method fails, and the penile fistula is small, the lateral buried flap method of Symanowski is an excellent one. It is most serviceable for the penile urethra, but in my experience is not so useful where there is a considerable loss of the urethral floor as the procedure that I will shortly describe.

It is a frequent experience after perineal operations involving the urethra that the wound is very slow in healing; not rarely a permanent fistula results. The latter may very often be avoided when the case shows stubbornness in healing by securing secondary union. The perineal wound is first denuded of granulations by rubbing vigorously with

gauze or by curettement, or both, as occasion may demand. The tract of the fistula is treated as already described in the torsion operation. A sound is introduced into the bladder, and double silkworm gut ligatures are introduced from side to side, care being taken to have the points of entrance and emergence of these sutures well away from the margins of the perineal opening. The larger the bight of the sutures, i.e., the more of the urethra included, the better the prospect of success. A small, hard roll of iodoform gauze is introduced beneath the loops of the sutures upon one side of the perinæum, the margins of the wound being brought firmly together by pressure upon the sides of the urethra, the fingers dipping well down into the perinæum. A second roll of gauze is placed within the pairs of ends of the sutures upon the opposite side. The ends are now tightly tied over the second roll of gauze. (Fig. 6.) The principle is the same as in the old



FIG. 5.—Method of securing secondary union.

fashioned quilled suture. The rolls of gauze are intended to act in lieu of the fingers, the pressure of which forms the best method of closely approximating the fistula. Fine catgut sutures may be introduced at the cutaneous margins of the fistula before the retaining sutures are tied over the gauze, if this procedure seems requisite. The number of retaining and of superficial sutures of necessity varies with the extent of the perineal opening which it is necessary to close.

Where there are no contraindications, it is well to introduce a catheter to be retained in the bladder, although this is by no means always necessary. In many cases secondary adhesion is perfect within a few days, although the patient is passing his urine *per vias naturales* at the usual intervals.

A successful result is usually obtained. Unless there is some special source of infection, failure is never complete, and a partial closure is obtained, which is often followed by prompt healing without any further surgical intervention. If it is necessary to suture again, this may, of course, be done.

It will, of course, be understood that the method just described is not applicable to long standing fistulae, the tracts of which have become callous and perhaps multiple.

In these cases a perineal section, with free division of all points of resistance to the urinary outflow, and the excision of the fistulous tracts, usually gives excellent results. Where necessary, the method of secondary suture which I have described may be undertaken during the healing of the perineal wound that has been made for the relief of obstruction and cure of the fistulae.

The operation of secondary suture of the perineal wound may usually be done under local anæsthesia, but even this simple operation is not always devoid of danger in nervous, irritable patients suffering from damaged kidneys. In two instances in my own experience acute suppression of urine and death from uræmia have resulted from the introduction of three or four sutures in the perinæum under cocaine. In both instances the apparently slight operation was performed several weeks after the original perineal section.

Fistulae of moderate or extreme size in the penile urethra may be closed in the following manner: As a preliminary to the plastic work any stricture or strictures in the urethra should be removed by dilatation or urethrotomy. The flap which is to be used in the construction of the new urethral floor may be formed either anteriorly or posteriorly to the fistula, according to the exigencies of the case. When the fistula is well forward toward the base of the glans, or located posteriorly in the vicinity of the scrotum, the posterior flap is usually best. When the fistula is located near the middle of the organ, there may be a slight choice in favor of the posterior flap, because of the fact that the circulation of the flap is less interfered with than when it is formed anteriorly. When there is very little loss of the urethral floor especially, the location of the flap, provided always it is longitudinal, is not important. In such cases the base of the flap is very broad relatively to its length, and the circulation is thereby made secure.

One advantage in the posterior flap, when the fistula is located near the scrotum, is that the scrotal tissues may be utilized for the new urethral floor, and these tissues being relatively thick, as compared with the penile integuments, the advantages thereby accruing are obvious. Should non-union occur when a thick scrotal flap is used, a partially successful result at least is liable to be secured, and subsequent plastic procedures are thereby rendered much simpler.

Where a scrotal flap is used, it may be necessary to destroy the hairs as a preliminary step.

Possibly I could do no better in describing the technics of the operation under consideration than to recount two typically illustrative cases.

CASE I.—Man, 45 years of age. History as follows: At the age of 3 years a small calculus escaped from the bladder and became lodged at the perinæo-scrotal junction. The physician who was called, unmindful of the disasters attendant upon external cutting operations into the penile urethra, cut directly down upon the stone and removed it. More or less suppurative and destruction of tissue resulted, and a fistula nearly an inch in length remained. The posterior commissure of this fistula was well down into the penoscrotal angle. Several attempts had been made to close this fistula by the ordinary methods

of freshening the edges, cutaneous flaps, and suture. These operations not only signally failed, but left behind more or less cicatricial tissue, which was destined to be an obstacle to further attempts at repair. Several attacks of gonorrhoea had been contracted during the patient's adult life.

I found upon examination three strictures, one in the middle portion of the penile urethra and another at each commissure of the fistula. The surface corresponding to the roof of that portion of the urethra involved in the fistula was formed of a smooth, level, cicatricial skin surface.

The preliminary steps of the operation consisted in cutting the strictures, followed by systematic dilatation. Simultaneously with the internal urethrotomy, a cleft was made with the knife in the tissues exposed by the fistula, with the intention of forming a continuation of the roof proper of the urethra. A fairly successful result was obtained from the operation upon the strictures, and a distinct sulcus continuous with the roof of the normal portion of the urethra was obtained.

After healing was complete, the patient was prepared for operation. A general anæsthetic was given. A semi-oval flap of penile integument, three quarters of an inch in width and an inch and a half in length, was marked out upon the skin of the penis anterior to the fistula. This was carefully denuded of epithelium down to a point corresponding with the anterior boundary of the fistula. (Fig. 6, A.)

A strip of intact epithelium a little less than a quarter of an inch in width was allowed to remain, extending from the anterior commissure of the fistula to within one quarter of an inch of the anterior extremity of the flap. (Fig. 6, B.) This was intended to form the epithelial surface of the new urethral floor that was to be constructed from the flap. A transverse incision was made at the base of the proposed flap from each side of the anterior commissure of the fistula to the outer border of the flap. Beginning just below this point, a pocket was made by dissecting the integument and subcutaneous connective tissue free from the underlying fascia. This pocket extended down into the scrotum, and extended to a point a little more than a quarter of an inch external to the border of the fistula. The posterior portion of this pocket involved the scrotum. The dimensions of the pocket are indicated by the dotted line. (Fig. 6, C.) The flap which had been outlined anteriorly was now dissected up carefully to the anterior commissure of the fistula, care being taken not to buttonhole it, until when drawn

down, it was continuous with the floor of the normal urethra without detaching it at any point at its base. This part of the operation obviously requires some delicacy of manipulation.

The flap having been detached, it was transfixed by two ligatures in its anterior extremity. Upon each end of the ligature was threaded a needle. (Fig. 6, D, shadow flap.) The flap was now drawn down, and the needles passed down to the bottom of the pocket and made to emerge, as indicated at A, Fig. 7. The flap was finally turned down over

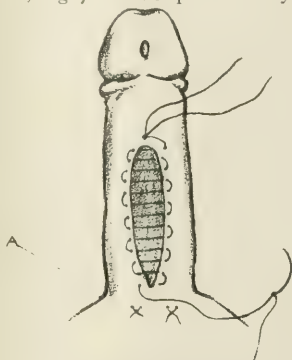


Fig. 7.—The operation in Case 1. A, of the flap are needles emerging from bottom of pocket.

the fistulous opening and tucked into the scrotal pocket, this being furthered by tension upon the sutures. When it was snugly applied into the bottom of the pocket, the ligatures were tied. This procedure leaves the appearance shown in Fig. 7. The edges of the pouch being turned outward, the margins by the sides of the pocket by several superimposed layers of continuous fine catgut. The corners of the pocket now being trimmed off, the edges of the entire raw surface are brought together by continuous suture of catgut. This suture is best introduced in such a manner that something less than one quarter of an inch of raw surfaces is opposed. The whole is reinforced by a continuous suture at the skin margins.

It will be seen that a double layer of skin and cellular tissue is formed in this procedure, the whole being reinforced by a ridge of skin and subcutaneous tissue arranged in such a manner that there is a double line of suture between the flap and danger of infection. A perineal puncture was made and drainage established by a catheter of moderate size. The wound was sealed with iodoform gauze and collodion. The result in this case was ideal, and when last seen, some months after operation, conditions were still satisfactory.

CASE 2.—Man, 48 years of age, presented himself with the following history: He had been operated upon five different times for the closure of a defect in the urethral floor. He was not clear as to what the first operation was performed for, but I gleaned that it was probably an attempt to close a minor hypospadias. Each operation had resulted in failure, and what was worse, in the loss of a certain extent of the urethra.

On examination I found the floor of the entire urethra gone from the meatus to the scrotum. The pseudomeatus was located at the penoscrotal angle. At a point corresponding with the superior commissure of the normal meatus was a bridge of skin, evidently the remnants of the prepuce, about three

quarters of an inch in width. This was in a double layer, as is the case ordinarily in the prepuce. There was a slight chronic urethritis, in the discharge of which no gonococci could be found. The calibre of the portion of the urethra which was still intact was normal. Urinalysis showed a slight trace of albumin, but no casts. The excreted solids, and the quantity of urine were slightly subnormal. On account of the slight abnormality of the urine, and notwithstanding the extent of the urethral defect, I determined to use as a local anæsthetic a preparation used extensively by dentists, known as *acestoria*, which contains about one per cent. of cocaine in combination with essential oils and a very small dose of nitroglycerin. This preparation I have found safe and exceedingly reliable. The operation was as follows:

A posterior scrotal flap, three quarters of an inch in width and two and one half inches in length, was outlined. The superior extremity of this flap was rounded at each angle. This flap was now denuded, leaving a strip of intact epithelium about one eighth of an inch in width down its centre to within one half inch of the extremity. This flap began anteriorly a little in front of the posterior border of the defect in the urethral floor. The intact epithelium was continuous with the surface of the mucous membrane of the urethral floor. Beginning at the base of the proposed flap anteriorly, the penile integument and cellular tissue were dissected up on either side, forming a pocket. This dissection was carried into the preputial band already described by splitting the latter of the two layers. The pocket being completed, the flap was dissected up and brought forward, after transfixing its extremity with two double ligatures, as described in the previous operation. The needles were made to transfix the bottom of the pocket anteriorly in the preputial pouch already mentioned, and the ligatures tied. The edges of the pocket now being retracted upon either side, the thick flap was stitched down to the fascia propria of the penis by a continuous suture of fine catgut. This suture was inserted a little externally to the line of intact epithelium, stitching the urethral surface of the flap at this point to the edge of the quasimucous surface representing the urethral roof. This tier of sutures, it will be observed, is completely concealed by the flap. Two reinforcing lines of sutures, one above the other, were now superimposed, the triple suturing being made possible by the thickness of the scrotal flap. It will be noted that by this procedure leakage was opposed by three distinct lines of suture, the edges of the flap extending well out beyond the newly formed urethra. An attempt was now made to slide lateral flaps formed by the edges of the pocket toward the median line. This was found to be possible only for a small extent of the surface anteriorly, on account of the large amount of cicatricial tissue left by previous operation. On account of this impediment, a semilunar surface, the convexity of which was forward, was left upon the under surface, at the base of the penis, and at the point from which the scrotal flap had been removed. This was readily covered in by a second lateral flap, taken from the scrotum, which was twisted into position and sutured.

It will be seen that the new urethral floor was of

considerable thickness, the posterior portion of it being composed of two layers of scrotal tissue. I will state that it was not found necessary to remove any hairs from the posterior flap, from which the new urethral floor was made, the skin being largely cicatricial, the hairs having been destroyed by previous operations.

A small perineal puncture was made, and a No. 14 catheter introduced into the bladder for drainage.

The course of this case, so far as the success of the plastic operation was concerned, was ideal. It had, however, a very unfortunate ending. On the seventh day slight symptoms of uræmia developed, with a sudden diminution in the quantity of urine excreted, with considerable albumin and a few blood and numerous hyaline casts. The tube was removed, and the patient allowed to urinate *per vias naturales*. There was complete primary union, and although the patient urinated normally in greater or less amount from that time until the end, there was at no time a single drop of leakage, nor the slightest suppuration.

The patient died upon the eleventh day. Autopsy showed older interstitial nephritis, with recent acute inflammation, and hemorrhagic infarcts.

The outcome of this case was especially deplorable, in view of the fact that so far as shock was concerned the operation was a trifling one, and further because of the extreme care that had been taken to guard against just such an accident as occurred by employing local rather than general anesthesia.

From my experience in plastic surgery of the urethra, I have concluded that the average percentage of successes would be very much greater than it now is if perineal puncture and drainage were always instituted in plastic operations of any magnitude. The danger is not so much in the mere contact of the urine *per se*, but in the septic quality which it often possesses primarily or its destructive effect upon tissues and consequent interference with primary union when it remains in the interstices of wounds and there decomposes.

A frequent source of failure is the endeavor to get a large surface of intact epithelium for the formation of the new urethral floor in repairing large solutions of continuity. Where the surface of intact epithelium is broad, it is likely to become fixed in the outer margins of the wound in locations in which raw surface should be applied to raw surface. Obviously, when one of the surfaces brought in contact is covered with intact epithelium, no union can possibly occur. The necessity for a wide strip of intact epithelium in the urethral floor is greatly exaggerated. The narrowest possible strip of epithelium is amply sufficient, by virtue of the reproductive power of the cells of which it is composed. I learned this principle early in my surgical experience by observation of the growth of military skin grafts on chronic ulcers and granulating wound surfaces. A small military graft, for example, where it takes, will usually develop a round surface of epithelium of nearly if not quite the size of a silver dime. A very narrow strip of intact epithelium upon the floor of the urethra can be relied upon to form a new epithelial surface extending a variable distance from its border. The intact epithelial cells which were already normally adherent to the flap not only will not perish, but are very much more

likely to reproduce themselves and form a considerable surface of new epithelium than are miliary grafts.

I do not know of a more important point in the plastic surgery of the urethra than this. The method of repairing by a double layer of tissue the urethral defect, the flaps being taken from a location that insures considerable thickness, is as nearly ideal as it is possible to make a plastic operation in this region.

INFLAMMATION OF THE GLANDS OF BARTHOLIN.

By CHARLES C. MILLER, M. D.,

CHICAGO.

(Continued from page 802.)

TREATMENT.

Palliative treatment which has heretofore been recommended need not be considered. Soothing lotions, leeching, hot or cold applications, poultices, and other applications are of no value. Waiting from three days to a week for pus to form is neither logical or desirable in any case. If pus has not formed we have at least an accumulated fluid, which is responsible for the tension, and as the tension is the cause of the pain, relief of tension is the cardinal indication, and this should be accomplished only by the evacuation of the fluid causing it. This fluid has been present from the moment pain has manifested itself, and its evacuation is possible from the beginning. No interval of waiting and suffering is to be recommended.

These patients have almost without exception suffered a prolonged chronic infection, and I believe it is justifiable to recommend in all these cases the most radical plan of treatment, that is, the extirpation at once of the small tumor present. Such a plan is not imperative and will not be accepted in many cases, but it is no doubt the best way of disposing of a gland which menaces the woman's health and comfort in several ways, and renders her a source of danger to any with whom she may have sexual relations.

We will first consider the palliative treatment, where permission to extirpate is refused. The cyst of duct or gland should be emptied at once. In some cases this may be accomplished through the duct. The orifice of the duct should be found if possible. This will require a good light and a fine probe. At the junction of the posterior and lateral walls of the vaginal entrance the largest myrtiform caruncle will be found as a rule, and near its base will be found the opening of the duct. Sometimes several openings can be seen. Each of these should be tried in turn and if one is found which allows the passage of the probe

for a half inch it is most likely the duct of Bartholin. The dilated mucous follicles are as a rule not more than one half this length. If a very fine probe cannot be slipped into the cyst, we can sometimes overcome the resistance and facilitate the passage of the probe by forcibly distending the patulous portion of the duct with glycerin. This is accomplished with a piston syringe, which is supplied with a tip which will permit of entrance into the duct. After the glycerin injection we may again try the probing. Should we fail to insinuate the probe into the cystic accumulation, but pass it nearly to the tumor, it is justifiable, in the woman who is particularly afraid of any cutting, to attempt to force the probe into the cyst. To do this the tumor should be located and steadied by the disengaged hand. The force is then gradually increased to the probe, and it is directed directly toward the tumor. A fairly large probe may be used for this purpose, so that a somewhat free opening is secured. If the probe is forced into the cyst upon its withdrawal the contents will escape. Gentle pressure may be used to facilitate this. When the cyst is emptied, the duct is again likely to become occluded. One factor may act to cause an immediate closure, and this can be guarded against in some cases. The forcing of the duct will cause some laceration and bleeding into the duct. This cannot be avoided. The blood may clot and occlude the duct. The bleeding can be controlled by the injection of a one to five thousand solution of the active principle of the suprarenal glands. I have used for this purpose both the suprarenalin and the adrenalin solutions. Several drachms of the solution should be allowed to flow into and out of the cavity. That portion which remains in the cavity should not be disturbed. By the time its effect has worn off the tendency for bleeding to occur may have passed, and with no blood clots to assist in the blocking of the duct we may have it remaining patulous until the inflammation of the tissues about the gland has subsided, and then the strictured duct and diseased gland should be treated as I have previously described. Inflammation of the labia and perinæum, which may have developed before the patient was seen, may be treated by soothing applications to promote the disappearance of the inflammation so that treatment of the duct can be begun before it is again obstructed.

Where the opening of the duct cannot be found we must evacuate the accumulated secretions at once. This can be done from the inner side of the labium majus, but this site must never be selected for the incision in a case of this kind.

where no fistulous openings communicate with the inner surface of the labia or the vagina. Such an incision would drain virulent secretions too close to the vaginal orifice for safety. An exception might be made of the woman suffering from a purulent vaginitis. The incision should be made on the skin surface of the labium majus well away from the genital cleft. Where we merely intend to open the gland and drain off the secretions, cocaine injections will sufficiently obtund sensation to permit of the incision.

The tissues are steadied with one hand and the incision made directly down to the tumor. When the pus escapes, and the bleeding has been permitted to cease, a careful inspection of the parts should be made. The wall of the cyst can now usually be seen without difficulty. The margin of the cyst wall should be grasped with fine forceps, and after making traction it should be drawn out and separated somewhat, so that it can be drawn up near the skin margin on each side. It should now be stitched to the skin margin on each side by a single stitch. A ten per cent. cocaine solution should be used to mop out the cavity and this should be followed by pure carbolic solution. The excess of the carbolic should be wiped out and the cavity should be packed with sterile or antiseptic gauze. This gauze should be changed as often as soiled with pus. The irritation of the carbolic and the gauze will cause the formation of granulations, and when the cavity is allowed to heal from the bottom it will be thus obliterated. This will cut off the gland from the vaginal entrance, and it will almost invariably atrophy without difficulty. We should also make sure that the duct is obliterated so that a portion of it cannot remain as a nidus for the growth of the gonococcus. It is to be remembered that this treatment applies to those cases where the cyst has just appeared, and inflammatory symptoms have been present only for a few hours. Where the patient has not been seen until an inflammation of all the parts about the gland has developed cocaine injections will not permit of painless operations.

Thomas and Mundé in their work on gynecology recommended an operation from the mucous surface. It is in my opinion only applicable to those cases in which fistulae have formed on this surface and are imperfectly draining the cyst. In this operation an elliptical piece of the mucous membrane over the tumor is excised. The cyst is then partly emptied and a portion of its wall excised. They recommend that tincture of iodine be used to mop out the cavity and then that it be packed with iodoform gauze. I would warn

against the iodine as it will cause intense burning pain for some hours after the operation. I have had such an experience with it in two operations of this kind and from this experience in both instances advise against its use.

Hart and Barbour recommended opening these cysts with the cautery, but the only advantage of the cautery is that primary union of the cut is prevented. We can secure the same result by keeping the cavity packed for a few days after incising it.

The injection of irritating solutions such as the ten per cent. zinc chloride solution after aspiration of the cavity has been recommended, but should no longer be practised in the light of present surgical methods. It will be followed in all probability by continuation of the painful symptoms, as these strong irritating injections are liable to augment the inflammation, and result in the rapid throwing out of inflammatory material.

THE ACTUAL CAUTERY IN THE RADICAL TREATMENT OF SUPPURATING GLANDS.

Where the gland is enlarged and inflamed and there is a retention cyst filled with pus and mucus, we can treat the condition by freely opening the cyst; then, carrying our finger into the cavity, dilate the various subdivisions of the cavity so that all become accessible, and then with the actual cautery we can destroy all secreting surfaces and treat the cavity by gauze packing.

In doing this operation we must decide as to the site of our incision. If we place it well down in the interval between the labia minus and majus, it will be effectively hidden after healing has occurred, but this incision has several disadvantages.

If suppuration is quite free, there is danger of reinfecting the vagina or even the urethra after the operation, and this may prove anything but a simple matter. The woman may have previously escaped a pelvic inflammation, and following the reinfection we may find it ascending to the uterus, tubes, and ovaries and irreparable damage may be the consequence.

Following this operation packing must be used and healing must occur after the development of granulations, and in this way a considerable scarring may occur at this point, and it is possible that this scar will be tender so that sexual relations are rendered painful. I have used the incision several times, but have never noted any such untoward consequence as a subsequent tender scar. It is mentioned by other writers as a possible untoward consequence.

The best incision, in my opinion, is made well out of the skin surface of the labia majora and

well back toward the perinæum and encroaching upon this latter structure.

It will be a surprise to the man who operates upon these cases for the first time to see how far backward and how close to the rectum the incision should extend to permit of perfect drainage from the cavity which he makes or finds after opening or extirpating this gland. Therefore at first it is well to begin the incision at least no farther forward than on a level with the posterior vaginal wall.

If a large cystic tumor exists, the knife will very quickly enter the cavity of the cyst. The opening should be made large enough to permit of the entrance of the index finger of the operator. The finger is carried in and a number of intervening *sæpta* will be found which subdivide the cavity into a number of compartments. These should all be explored to their limits by the finger of the operator, and the *sæpta* broken down where this exploration is prevented.

The finger should now be carried backward, and then with scissors or scalpel the incision should be enlarged posteriorly until the limit of the cavity is reached. This enlarging of the incision is of importance as the patient will lie upon her back after the operation and it will thus allow of perfect drainage. In some cases it will be necessary to lengthen the incision anteriorly to give perfect access to the entire secreting surface of the gland, but in many this will not be required.

If forceps are applied to the lips of the wound and good retraction is secured, the gland surface will lie exposed before the operator. It will be found to be quite irregular, as a rule, and it is my custom to trim away all irregular glandular masses which project into the cavity before using the actual cautery. This is accomplished with scissors and causes some bleeding, which is checked by the cautery.

The cautery is to be used freely and the operator must make sure that all portions of the cavity receive a thorough application of the cautery while it is hot. The Paquelin cautery is cooled very quickly when it is sunk into oozing tissues.

After all surfaces have been treated with the cautery the cavity should be mopped out with gauze, and then packed with either the sterile gauze or gauze impregnated with iodoform. In these cases I prefer the iodoform gauze.

These patients are put to bed after the operation, and the packing is changed daily for three days. After this time only enough gauze is inserted into the cavity to hold the posterior portion of the skin incision open until healing by

union of granulations has occurred. The cavity is filled more or less with granulations.

Where the incision has been carried well forward and it has been necessary to make it rather long to allow of perfect access to all the gland surface, the anterior portion of the incision can be closed by sutures, and scarring is thus minimized.

Where there is but a slight reaction, and the parts do not become much inflamed, the patient may be allowed to be up and about in a day or two after the operation, but where the reaction is at all severe the patient will feel but little inclination to leave the recumbent posture.

The time of healing varies in these cases. In some free suppuration develops: In all these cases the suppuration is checked most quickly in my own experience with irrigations with a one to five thousand solution of formalin.

The irrigations of formalin are used from one to three times in the twenty-four hours, when the suppuration is free, and the iodoform gauze packing kept up until it is checked. As soon as suppuration is checked, the cavity should not be dilated by packing, the walls should be allowed to fall together and only a very small strip of gauze used to hold open the skin incision.

The scarring following this operation is not objectionable as a rule, as it is not great and the scar is so far back as to be quite out of sight of the patient. The parts are also more or less covered with hair at this point, and when such grows out it further serves to render the scar less conspicuous.

THE REMOVAL OF THE SLIGHTLY ENLARGED GLAND
IN ALL CASES WHERE THE OPPOSITE SIDE IS TO BE
OPERATED UPON FOR A FREELY SUPPURATING
INFLAMMATION OF THE GLAND.

Whenever a gland is to be operated upon in which free suppuration has caused the development of a distinct tumor, the operator should always carefully palpate the opposite side, and if it is possible to feel the gland on that side, an incision should be made and it removed before the operation upon the suppurating gland is attempted. Some may object to this suggestion on first thought, but it is not to be forgotten that if the gland is palpable it is infected. Trouble to the patient may not come for some time, but the gland is a menace to her and to any with whom she should have sexual relations, so that its removal will be more of an advantage than otherwise and the wound made will heal long before that of the opposite side.

It is important to operate on one of these glands by

first, as after the operation upon the suppurating gland infection is much more likely to occur. The gland should not be considered uninfected.

Operation upon these glands is very simple. The gland is steadied between the fingers of one hand, and with a scalpel it is exposed. Now in many more instances than the beginner would suspect, the gland will be found to contain considerable secretion and pus, so that it should be handled carefully and should not be cut into if possible.

The dissection should be made to the outer side and behind before the portion toward the vagina is separated, and should a pearly smooth surface come into view, it should be kept well away from, as it is probably a dilated duct, which should be severed last.

Should the gland be removed without soiling the wound with secretions or pus, it is advisable simply to close the wound by one or two stitches, and then to seal the skin surface by several coats of collodion before attacking the opposite side. If the gland contains pus, or secretions mixed with pus, and they escape into the wound, it is advisable to pack the cavity with iodoform gauze, after a silkworm gut suture or two have been inserted. These sutures are not to be tied until we have controlled any suppuration which may develop.

Sometimes there will be quite a persistent oozing from the bottom of the cavity, or anteriorly, as a result of injury of numerous small veins. This condition is controlled with difficulty by hot irrigations, and as there is no particular bleeding point we cannot catch it with hæmostats and twist or tie it. These bleeding surfaces are controlled without the least difficulty, if a mattress suture of fine catgut is carried beneath the surface which is bleeding, and tied. In tying such a suture it is not necessary to tie at all tightly. The suture is grasped and tied gently with a single knot. An assistant now mops out the cavity with gauze, and if the suture is tight enough no further bleeding occurs from this point. Should the oozing persist the suture is tightened slightly, and the parts are dried again by the assistant. As soon as the oozing is controlled, a second knot is made in the gut and it is cut short. These sutures I have never found to cause any harm, even in infected cases where they have been carried rather deeply into the surrounding parts.

(To be concluded.)

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THE PROBLEM OF EXTERMINATING MOSQUITOES; DISCOVERY OF IN-ACCESSIBLE BREEDING PLACES.

By H. A. EBERLE, M. D.,

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During a term of service spent at various army posts in the Philippine Islands in the capacity of sanitary officer and assistant surgeon United States Army, the subject of mosquito destruction and propagation became an interesting study to the writer.

At the army post of Jolo, Jolo Island, P. I., from one to two battalions of soldiers were stationed, and from the number of admissions into the hospital of soldiers suffering from malarial and dengue fevers caused by the bites of mosquitoes, the subject of exterminating the pests became an important one.

The walled city of Jolo has well paved streets and is well drained with open cemented sewers. The streets were swept twice daily, the yards and alleys cleaned, and all accumulation from kitchens and back yards were daily carted away. No pools of water were allowed to exist and no grass or weeds were permitted to grow in the public gardens.

Every receptacle capable of holding water was removed and efforts were made to do away with all suspicious breeding places where mosquitoes might propagate.

Yet with all these precautions to prevent their propagation there were myriads of mosquitoes, and the important question arose as to where they came from. It chanced one morning, as the writer hitched his horse to a papaya tree, he observed a knot hole on the trunk of the tree full of water, and on close observation it was found that the water was alive with countless mosquito larvæ (grigglers). This interesting discovery hinted that the numberless knot holes in the trees might be a source from which the bothersome pests originated.

To test the suspicion the writer mounted his horse and went to the hospital, where he procured a wide mouthed bottle and a spoon, then returned to the papaya tree and carefully transferred the contents of the knot hole (consisting of about four ounces of water, sediment of decayed leaves, and dirt) to the bottle. Taking this at once to the laboratory the contents were emptied into a gallon glass jar filled with distilled water, and covered over with two layers of mosquito bar.

Next morning, on examining the jar, there

could be seen myriads of mosquito larvæ in all stages of development. Pupæ were numerous, and twenty-five fully fledged mosquitoes perched on bits of cork as a resting place were noticed. These newly fledged mosquitoes were collected, chloroformed, and classified with the aid of a powerful lens. Daily, during the next ten days, a new crop of mosquitoes was collected from the jar, and in all five hundred were hatched from the contents of one knot hole.

Three species of mosquitoes were noted, and several varieties found of each of the species. *Culex*, or the common mosquito, predominated; next in number was *Stegomyia fasciata*, or the yellow fever mosquito, and *Anopheles*, or the malaria producing variety came next.

The second discovery in regard to the breeding places of mosquitoes came about in the following manner: One morning while on his way to attend a sick call at the hospital the writer noticed a branch which had recently fallen from a cocoanut tree and on examining it found, where the stem becomes broad and concave at its point of attachment to the tree, a mass of undisturbed black sediment. This was carefully gathered in a clean paper, and taken to the hospital laboratory, where it was placed in a jar of distilled water. The next day newly hatched mosquito larvæ could be seen wriggling their way to the surface of the water to breathe. Daily examinations were made and within ten days many fully developed mosquitoes were collected and classified.

The writer's observations were extended to the banana tree with the result that in the sulci which always were found to contain water, mosquito larvæ could be found and subsequently developed into lively mosquitoes.

A great majority of tropical trees are of the palm variety, having at the joining of each leaf with the tree sulci or concave depressions where-in mosquitoes may breed and hatch safe from disturbance, the only possible means of eradicating them being by the complete destruction of the palm crop. In view of the impossibility of destroying a country's most profitable crop what becomes of the mosquito control question? Must diseases like yellow fever, malaria, filaria, and dengue always prevail in tropical countries?

Among the laity there is a widespread though erroneous belief that the mosquito bite of itself causes the disease and that the infection is from the mosquito *per se*. This is no doubt due to hearing the various species of mosquitoes classed as "malarial mosquito," "yellow fever mosquito," etc., but the fact is that the mosquito is merely the transferring agent and must become infected

itself before it can inoculate a human being with disease. Some species are capable by their organism of carrying one disease, while others are limited to an entirely different one, each species spreading its own peculiar variety of infection. The bite of a mosquito of any species is innocuous, however, unless it has itself been previously infected.

In view of this it is the opinion of the writer, who has done much sanitary work both in the Philippines and Porto Rico, that the only method of preventing the spread of transferable diseases is to teach the people to observe the strictest sanitation, both of their persons and surroundings. Not only yellow fever, but many other transferable diseases are filth diseases and their micro-organisms spring no doubt *de novo* from filth causes, but the contagion must be transferred to us, who are incapable of receiving the infection direct from the filth, through the mosquito which is so infected.

Hence if absolute sanitation was observed there would be no primary infecting of the mosquito, and hence no infection carried by their bites.

The sanitary officer has a burdensome task to perform, yet one that will show the most brilliant results in stamping out transferable diseases by teaching the people to observe the simple rules of sanitation.

218 SUMMIT AVENUE.

Cerebrospinal Meningitis.—Coincident with the appointment by the department of health of a commission of eminent physicians for the investigation of cerebrospinal meningitis, a corps of medical inspectors, five in number, was organized and assigned to the sanitary supervision of the disease in the borough of Manhattan. These physicians attend to the isolation and quarantine of patients at their homes, order the necessary disinfection of premises and bedding in patients who have recovered, died, or been removed to a hospital, and report as to the sanitary condition of the premises and any violations of the sanitary code. They have had the opportunity of observing a large number of cases of the disease, and their services are at the disposal of any physician who may wish assistance in the diagnosis of suspected cases. A physician trained in such work has been assigned to the performance of lumbar puncture at the request of the attending physician. The department of health advises that lumbar puncture be done in all cases where practicable; both as an aid to diagnosis, and in order to obtain more material for bacteriological study and consequent advancement in our knowledge of the disease. Requests for the services of a physician for diagnosis, disinfection, or lumbar puncture should be made direct to the Department of Health, Fifty-fifth Street and Sixth Avenue (telephone, 1204 Columbus), where they will receive prompt attention.

PRIMARY EPITHELIOMA OF THE UVULA, WITH REPORT OF A CASE WHERE RECURRENCE TOOK PLACE AFTER TWO OPERATIONS FOR RE- MOVAL.*

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The infrequency of epithelioma in this locality warrants a few remarks upon this subject in addition to the mere recital of the features of this particular case. Nearly all authorities are agreed that smoking may possibly enter as a causative factor, and in nearly every instance the subject has been a male. Heredity has apparently played no important part in the etiology of the disease. Another fact at variance with the customary symptoms of epithelioma, is the relative early age at which the growth appears. McCaw¹ reports a case of epithelioma in a woman aged 37 years. Lenox Browne a case aged 48 years,² and the patient whose case I now report is 51 years old.

The adjacent glands have not been frequently involved, showing that the growth has not spread by the lymphatics, except when the tonsils and lateral wall of the pharynx have been implicated. This should lead us to the definite conclusion that the growth is one involving the muciparous glands of the soft palate, and consequently of slower growth than one extending through the lymph channels. This conclusion is verified by all the pathological reports, in the light of which the operator has more reason to believe that an operation of sufficient magnitude would entirely circumscribe an epithelioma in this location and thoroughly eradicate it. In both Downie's³ and Lennox Browne's cases the operation was a success within a period of seventeen months in the former, and nine months in the latter. In a case reported by S. Oppenheimer, the age of the patient (81 years) and extensive involvement of adjacent structures excluded the feasibility of operation. In this case the cervical glands were enlarged, but I presume that this occurred only after the neighboring structures were included in the growth. Here the employment of the x ray or radium might have given us important data as to their effectiveness. In the case of McCaw's the method pursued was of such combination of surgical procedure and x ray application that a definite conclusion as to the effectiveness of either is wanting. In his case the family seem to have had some

malignant tendencies, as one sister died from an operation for the removal of an abdominal tumor, and a second sister living is suffering from an obscure abdominal growth.

The partial excision by the cautery knife of the uvula and part of the soft palate in the first instance, together with x ray treatment in the interim, possibly reduced the rapid extension of the tumor; while the second removal with the same agent may have entirely eradicated it. However, the time is too short to form any definite opinion relative to the merits of either procedure. I must confess some skepticism as to the efficiency of the x ray in the cure of malignant growths. I have seen pain reduced and discharge stopped, but either a deeper penetration of the tumor resulted or a metastasis was produced. The invariable symptom complained of in all these cases has been irritation in the throat, and not pain. The inconsequent innervation of this part would account for the absence of pain, while the irritation is possibly due to the mass scratching the pharynx during the act of deglutition. I believe the only rational way of treating these cases is thorough extirpation with scissors or the cautery knife. I shall give subsequent reports upon this case, and should the last operation prove inefficient, I will try the x ray for a time sufficient to note whether there is improvement or not, and then use radium. Should neither of these remedy the case, I shall have recourse to a new light ray advocated by⁴ Dr. Piffard.

From the examination of 12,000 cases of cancer, the committee for the investigation of cancer in Germany found the relative frequency of cancer of the nose and throat in males, as compared to its frequency in females, to be as follows in 1,000 cancer patients:

	Males.	Females.
Nose	13	17
Lips	77	8
Mouth	13	2
Tongue	21	3
Larynx	17	2

This bears out the statement already made of the greater proportion of cases existing in males.

PATIENT.

W. I., aged 51 years, a cooper by trade, was received at the clinic of the Manhattan Eye and Ear Hospital, June 13, 1904, with a history of difficulty in swallowing and dryness of throat for nearly one year. All the discomfort was referred to the larynx. Denied any specific or tuberculous conditions, and had been on iodides a sufficiently long time to exclude syphilis. He had been a great pipe smoker.

Examination revealed an angry strawberry-looking mass on the uvula, with induration extending outward on the soft palate of the right side for half an inch, some erosion of the surface, and creamy exudate thereon. No glandular involvement on the

* Read before Section in Laryngology of the New York Academy of Medicine, December 28, 1904.

¹ N. Y. Med. Jour., August 9, 1902.

² Diseases of the Nose and Throat, 5th edition, page 322, case 27.

³ Glasgow Med. Jour., February, 1898.

⁴ Med. News, December 3, 1904.

right side, but a very large, hard gland was felt in the opposite submaxillary region. Patient had some pain in the right ear and was emaciated and cachectic. Could not sleep, eat, or work. The clinical diagnosis was epithelioma, and arrangements were made for immediate operation, likewise for the examination of a frozen section to determine the extent of the substance to be removed.

The patient was anesthetized June 20th and a piece of the growth was removed for the frozen section examination, the result of which proved the tumor to be an epithelioma. A wide incision was then made with scissors around the mass on both sides, including a considerable portion of the soft palate. Some difficulty was encountered in controlling the hemorrhage, as the soft palate through which the incision was made was very much indurated and was at least half an inch thick. The hemorrhage was finally controlled by tying off sections of the palate around the line of incision. Such induration existed that it was impossible to coaptate the edges of the wound, consequently a large U shaped opening was left.

The tumor was submitted to a further microscopical examination by the pathologist of the hospital, Dr. Zabriskie, who confirmed the former diagnosis. The vascular changes were those of chronic arteritis with dilatation.

Recovery was rapid and satisfactory. The patient left the hospital July 1st. The highest temperature during the entire time was 101° F.

I saw the patient once a week after this, and noted that he had gained in weight (15 pounds). He resumed work and seemed to be getting well. On July 20th, however, I noticed a slight redness and induration on the right border of the wound which suggested a recurrence. After a week's consideration, during which time the appearance became more conclusive, another operation was performed in which the lower and right border of the palate was removed as far as the right pharyngeal pillars. The piece was submitted to the pathologist at the hospital, and the report is of sufficient interest to warrant its being given in full.

"The sections show the principal mass of the tumor lying on vascular tissue containing glands which are undergoing atrophy. The tumor consists of epithelial cells lying in whorls and irregularly scattered about, with no supporting intercellular substance. As there is a distinct layer of muscular tissue undergoing this which shows only a very moderate degree of inflammatory reaction, I should say that the mass had been pretty thoroughly eradicated, at least judging from that portion submitted for examination. This, however, is no positive indication that it will not recur."

The patient was able to leave the hospital on the next day after the operation and I removed the sutures put in for controlling the hemorrhage one day later. The patient was still held under observation and seen once a week. He gained altogether 30 pounds and has felt well since.

Three months later, about November 1st, a small granular tumor, of the size of an apple seed, appeared at the upper angle of the wound, and was sensitive to the touch, pain being referred to the larynx. This tumor continued to grow until it was the size of a

pea, when it was advised to perform another operation in the endeavor to completely eradicate the growth. It was also deemed advisable to remove the enlarged gland from the left submaxillary region. The patient was again operated upon December 2nd, when everything at all suspicious on the right side was taken out, including part of the pharyngeal pillar. The gland of the opposite side was removed and was found to be attached to the submaxillary, a part of which was likewise removed. Hemorrhage was controlled by clamps, and after their removal a combination of compound tincture of benzoin and iodoform applied.

The patient left the hospital on December 7th, and the wound healed without incident. There was some speculation as to the character of the glandular involvement, and I give herewith the pathological report of Dr. Jonathan Wright upon the gland removed, likewise his report upon the tissue removed, which to observation appeared to be a recurrence of the epithelial growth:

"On examining microscopically sections of the submaxillary tumor it is evident at once that we have here a racemose gland and that it is much altered by disease. There is great increase in the fibrous framework, but through the main structures I am unable to find any invading epithelium either glandular or heterogenetic.

"The glandular epithelium itself is so greatly proliferated and degenerated in places apparently quite mucoid in character, that it is impossible to be sure that heterogenetic epithelium has not invaded it. I am inclined to think, however, that this is not the case in view of the fact that I can discover no epithelium in the lymph channels, but that we have here a chronically inflamed submaxillary gland, which from the history has existed for a long time, and so far as these sections go, presents no evidence of extraneous infiltration. Some of the arterioles in the stroma present also a mucoid degeneration of their coats, and this in places under the low power gives rise to the suspicion of an epithelial nest. Without a complete examination of all the sections of the gland I am unable positively to assert the non-existence of such a focus.

"*Microscopical Examination of Piece Removed from Soft Palate.*—There is a small area in this epithelium which takes a lighter stain than the rest and at two or three spots there are some abnormally large and degenerate epithelial cells. There is, however, no satisfactory evidence that the epithelium is infiltrating the stroma, or that this hyperplasia is really malignant."

At this date, some five months after the last operation, the patient is in fine health, and no evidences are apparent of the recurrence of the growth.

44 WEST FORTY-NINTH STREET.

The Oneida County, N. Y., Medical Society elected the following officers on April 11th: President, Dr. Herbert G. Jones, of Utica; vice-president, Dr. C. A. Frost, of Rome; secretary, Dr. F. H. Brewer, of Utica; treasurer, Dr. E. D. Fuller, of Utica; librarian, Dr. Smith Baker, of Utica.

INFECTION THROUGH THE TONSILS.

By WILLIS S. ANDERSON, M. D.,

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LARYNGOLOGIST, HARPER HOSPITAL POLYCLINIC.

The tonsils, ubiquitous in medical literature, have received much consideration during the past decade, and it would seem from the voluminous literature devoted to these structures that little could be added that is new. The vast amount of literature and the widely differing opinions expressed by various observers as to the importance of these structures, both in normal and pathological conditions, show that there are still many points that need to be settled. Even their function has elicited much discussion. It is now generally accepted that the tonsils are lymphoid in character, and have a function similar to that of the lymphoid tissue in other parts of the body.

In various portions of the body Manfredi has shown that the lymph nodes protect in three ways: 1, By filtration; 2, by weakening the microorganisms that reach them; 3, by the whole organism obtaining a greater or less degree of immunity while the first two processes are in operation. The tonsils, which resemble the lymph nodes, probably exert an influence in lessening the virulence of organisms which they filter out. The prejudice that exists against the removal of diseased tonsils is ill founded, as whatever may be their use, they certainly cannot functionate when markedly pathological, and may and often do become a serious menace to the health of the individual.

During the past few years considerable attention has been given to the tonsils as portals of infection, and many somatic diseases have been traced to them as a starting point. Infection through the tonsils from various organisms may occur at any age, but is found more frequently in children than in adults. The susceptibility in early life is due to the greater development of the lymphatic system in childhood. Sappey, in his studies of the lymphatic system, was accustomed to use newly born infants for purposes of injection, and often found that the lymphatic vessels in various portions of the body could be injected in the newly born when it would be impossible to demonstrate them in older subjects.

Dr. Francis R. Packard, in the Wesley Carpenter lecture, reviews the subject carefully, especially in connection with acute articular rheumatism. He cites the studies which have been made on the flora of the buccal and pharyngeal cavities, enumerates the many pathological organisms frequently found, and mentions the protective function of the mucous membrane and secretions. Experiments upon ani-

mals have demonstrated that not only pigments but microorganisms may be taken up by the tonsils, and carried to the neighboring lymph nodes. Clinical experience gives abundant evidence that this frequently takes place, and that remote organs may become infected by the tonsillar route. In May, 1899, at the meeting of the Association of American Physicians, Packard reported five cases of endocarditis following acute angina. In three of these cases it was definitely known that the heart was normal before the attack of angina. During the attack endocardial murmurs developed; after the attack cardiac signs and symptoms persisted. This same author cites numerous instances reported by other observers where cardiac lesions followed acute amygdalitis. Mention is also made of the frequency of cardiac lesions without the history of preceding rheumatism, but with a history of one or more attacks of severe sore throat. A number of cases have been reported of pleurisy following acute amygdalitis, also a number showing the close relation existing between chorea and throat affections.

Koplik calls attention to the tonsils as portals of tuberculous infection. He mentions the possibility of a primary isolated process unaccompanied by tuberculous foci elsewhere. He cites the exceedingly rare case of Friedman's of a child, aged sixteen months, dying from causes other than tuberculosis, in which the tonsil was the only organ affected by the disease. The secondary forms of tuberculosis of the tonsils are more common. In both forms the cervical lymph nodes are involved. Children are more often affected than adults. Tuberculous ulcers of the tonsils are only rarely observed. One observer reports 19 cases of tuberculosis of the tonsils out of 161 specimens examined. There was no clinical evidence of tuberculosis of other organs. A case is reported supposed to be a primary tuberculosis of both tonsils with a distinct tuberculous ulceration of one tonsil. The patient was a male child, fifteen months old, who associated closely with his grandfather, a subject of tuberculosis. The tonsils and infected cervical glands were removed. Secondary infection of the larynx and lungs took place, which resulted fatally. Another case of a twelve year old girl is reported where the lymph nodes were tuberculous from tonsillar infection. Most writers believe that the inspired air plays but a small part, and that the infection is brought about through the ingestion of infected food. Hypertrophy of the tonsils predisposes to tuberculous infection. A case is reported of a child who died of tuberculous meningitis. The lymph nodes of the left side of the neck and the left tonsil were found tuberculous. Most of the organs were affected with acute miliary tuberculosis. Woodhead has demon-

strated in pigs that the course of tuberculosis is through the pharyngeal and tonsillar structures, through the glands of the neck into the thorax, and finally to the lung itself. A few cases of primary tuberculous infection of the tonsils have been reported, but a histological examination of a large number of tonsils, together with the examination of other organs, shows that the condition is rare. Wood from experiments has shown that the tubercle bacillus can pass through the tonsillar tissues into the lymphatics without causing any local disease in the tonsil itself.

Morse reports four cases of acute nephritis following amygdalitis. Two of these cases were in adults and two in children. In all it seemed possible to absolutely exclude scarlet fever and previous disease of the kidneys. Lymphatic leucemia, or Hodgkin's disease, may manifest itself primarily by tonsillar enlargement. Swain refers to a case of a young man, of twenty years, suddenly stricken with acute Hodgkin's disease following a simple streptococcic amygdalitis. Death resulted in six days. He cites another case where tonsillar enlargement was an early symptom, and eventually led to death. Cases are reported where skin eruptions have followed acute follicular amygdalitis. The marked toxæmia, with high temperature, which accompanies acute follicular amygdalitis, illustrates the absorptive power of the tonsils. Acute inflammation of the pharyngeal tonsil may occur in children with high temperature and all the toxic symptoms of a faucial amygdalitis.

Many other cases might be cited to illustrate the importance of the tonsils as portals of infection. There are a number of cases where mild, chronic infection is constantly taking place through the diseased crypts of the tonsils that are frequently not recognized. The enlarged cervical glands of childhood, and less often in adults, are examples of such infections. The large majority of children dying in foundling institutions from any cause have enlarged bronchial nodes. In cases of enlarged glands we ought to search for the site of infection. It may be found in the tonsils, nose, nasopharynx, mouth, or teeth. A tonsil does not have to be markedly hypertrophied in order to act as a portal of infection. It is necessary to examine a tonsil with a suitably bent probe for pockets or diseased crypts. An accumulation of cheesy material will be found frequently in one or more of these blind sacs. If this is removed, and the crypt destroyed, the source of irritation and infection will be removed.

The slow absorption of septic material is illustrated by the case of a medical student examined several years ago. He had had a small glandular swelling near the angle of the jaw, on the right side,

for several months. It varied somewhat in size, but never disappeared. An examination of the pharynx showed the right tonsil to be slightly enlarged, but with a probe a deep pocket filled with cheesy material was found. The crypt was destroyed by the galvanocautery, and without further treatment the enlarged gland completely disappeared. Cases occur where the general health is impaired by the slow absorption of septic material from the throat. Many delicate children, who are poorly nourished, peevish and fretful in disposition, and susceptible to changes in temperature and humidity, are sufferers from chronic toxæmia. This condition is usually accompanied by obstruction of free nasal breathing due to adenoids, which partly accounts for their condition. When nasal breathing is established, and sources of infection are overcome, these patients improve rapidly in general health. The writer has observed a number of cases of enlarged glands of the neck in childhood due to infection through the tonsils. A case of spasmodic torticollis has been seen recently which seemed to have as an ætiological factor an accumulation of cheesy material in a tonsillar crypt. A foul odor to the breath often accompanies this condition, and the swallowing of the infected material may cause gastric disturbance. On the other hand gastric disease and a coated tongue predispose to chronic lacunar disease of the tonsils.

TREATMENT.

The treatment of these various conditions depends upon the condition found after careful examination. There is some difference of opinion as to whether all hypertrophied tonsils should be removed. It seems that it is not necessary to insist upon the removal of every tonsil simply because it is larger than normal. If the tonsils are the source of obstruction or irritation, or if the crypts are diseased and the seat of septic absorption, then it is our duty to advise the removal of the tonsils or the destruction of the crypts. If, on the contrary, no symptom can be traced to the tonsil, then it is not necessary to urge their removal unless for the purpose of improving the voice or lessening the predisposition to frequent colds.

The treatment of enlarged tonsils may be divided into medical and surgical. Medical treatment may be of value to improve the general health, but neither constitutional remedies nor local applications have any permanent beneficial effect on a chronically hypertrophied tonsil. In fact, the long continued application of astringents, such as nitrate of silver, to the tonsils favors fibrosis, which is undesirable. The surgical removal of the offending tonsil is the easiest, the quickest, and the surest method of treatment. Electricity has limited value. The use of

electrolysis is slow, uncertain, and not to be recommended. The galvanopuncture destroys a certain amount of tissue with each puncture, which is followed by contraction, but if the tonsils are at all large, repeated punctures will be necessary and the reaction and pain following each application are nearly if not quite equal to those of their complete surgical removal. The fibrous scar tissue left after repeated punctures may in itself be the source of considerable irritation. The galvanocautery is of value when a single crypt is to be destroyed. The bent electrode is passed to the bottom of the pocket, and the current turned on, and the heated electrode is drawn toward the median line, cutting through the intervening tissue. This converts a blind pocket into a furrow which, as it heals from the bottom, obliterates the crypt. The crypt can also be opened by a bent tonsil knife, and trichloroacetic acid applied.

In the majority of cases it is more satisfactory to remove the tonsil. The method most often used is by one of the many forms of amygdalotomes. In children, where the tonsil is soft and projects from between the faucial pillars this is a quick and usually satisfactory method. The hæmorrhage generally ceases within a few minutes. In adults, and in all cases where the tonsil is adherent to the pillars, or is flat and irregular, the results with the amygdalotome are not so satisfactory. It is difficult to engage the flat, irregular tonsils in the loop of the instrument, and in case of adhesions the pillars may be injured. In fibrous tonsils, the hæmorrhage may be severe and even dangerous.

One of several methods may be used for fibrous, irregular, or adherent tonsil; first, the galvanocautery knife; second, the dissection of the tonsils with a bistoury, curved scissors, or cutting forceps; and third, the snare. In all cases where adhesions are present the tonsil should be freed before any attempt is made to remove it. This may be done by any of the many forms of curved tonsil knives. The advantage of the galvanocautery knife for dissecting out the tonsils is that the danger of hæmorrhage at the time of operation is overcome. The disadvantages are more pain at the time of and following the operation; the formation of a slough, which increases the danger of sepsis and secondary hæmorrhage; and the danger of cauterizing the pillars at the time of the operation. Dissecting out the tonsils by means of the bistoury, scissors, or cutting forceps is a surgical procedure which gives good results, but the danger from excessive hæmorrhage is so real that this method finds little favor with the majority of operators. The cold snare has many advantages. It can be adapted to tonsils of different shapes and sizes. The tonsils can be cut through slowly, which minimizes the risk of hæmorrhage,

and there is little danger of injuring other structures. The tonsils can easily be grasped with a forceps, and pulled toward the median line, so that the snare can be made to grasp as much or as little as is desired. Care should be used not to pull the structures more than is necessary, as tension of the muscles is often followed by pain referred along the course of the stylopharyngeus muscle. The after-treatment consists of the use of antiseptic gargles or sprays until healing is complete. No operation is a success unless there is sufficient tissue removed to prevent the formation of pockets. Cases frequently come under observation with a history of having the tonsils "burned" or "cut" without any benefit and sometimes with positive injury. The explanation in the majority of cases is simple. Many apply the cautery to the surface of the tonsils, which closes the opening of the crypt and allows the secretions at the bottom of the crypt to form a retention cyst or, if infected, an abscess. This retention of the secretions often causes considerable irritation, with cough and a constant desire to clear the throat. The improper or partial removal of the tonsil may lead to a similar result. There is an ill founded fear that the removal of the tonsil may injure the voice. The removal of diseased tonsils improves the voice in proportion as it restores the pharynx to a more nearly normal condition. The voice becomes clear and more resonant. Injury may be done to the flexibility of the voice if the faucial pillars are injured.

The keynote to the successful treatment of catarrhal affections of the nose and throat is to remove the causes which impair respiration and excite irritation, and when this is done, the danger of infection through the nasopharyngeal mucous membrane is reduced to the minimum.

912 CHAMBER OF COMMERCE.

The Société Internationale de la Tuberculose, the object of which is to study the most efficacious means of defense against treatments of tuberculosis, held its general annual meeting in Paris on March 14th, under the presidency of Mr. Richelot, member of the French Academy of Medicine. After an address by Dr. Samuel Bernheim, in which he clearly set forth the actual state of the question, the society proceeded to elect its bureau for 1905 and 1906, and the following gentlemen were elected:

President, Professor Lancereau, of the French Academy of Medicine, of Paris; vice-presidents, MM. Huchard, Richelot, S. Bernheim, of Paris; Professor von Schrötter, of Vienna; Sir Hermann Weber, of London; Professor de Lancaster, of Lisbon; general secretaries, George Petit, of Paris; Count Ivan Tolniewski, of London; treasurer, M. Papillon, of Paris; assistant treasurer, M. L. Garnier, of Paris; secretaries of séance, MM. Tartiére, Bourdin, Richelot, and Chauveau, of Paris; archivist, M. Ruault, of Paris.

All applications for membership, etc., to be addressed to Dr. George Petit, 51 rue du Rocher, Paris.

MODERN MOTHERHOOD.

By THERESA BANNAN, M. D.,

SYRACUSE, N. Y.

There are religious communities whose members spend their lives in prayer to atone for the impiety and wickedness of the world. So there are women who by their yearning for maternity unconsciously expiate the sins of their sisters who desecrate the holy temple of motherhood.

The ideal mother is fast passing from the scene, and though she may reappear from time to time, the atmosphere of these days will long cling to her garments. The time has passed when the young bride easily and naturally assumed the duties of her wifehood, when children were accepted as gifts of God and sterility bemoaned as a sign of His displeasure. To-day, even the maiden will flippantly disclaim ambition of her natural office, so widespread is the doctrine which threatens the existence of nations. The superb American woman in society, in the professions, in the home, the shop, the factory, the kitchen, is the apostle of this doctrine which dwarfs her whole being. Her most faithful follower is her husband, who gives her instruction and aid in their common immorality.

The diminishing birth rate among the most progressive nations is well recognized, but its cause and its remedy are both equally obscure. Many theories explain it in part, but there yet remains the fact that the vast majority of those upon whom unwilling the duty of reproduction rests have no other reason than their own will and pleasure. They give many reasons, which in their very multiplicity confess their weakness. They do not want children and will not have them is the final argument, and whatever causes this state of mind will explain the diminishing birth rate.

It required many centuries to teach man to limit the number of his offspring by art, but after half a century of such knowledge it becomes necessary to teach him the duty of procreation. God alone has the power to give life, yet man dares to hinder and destroy. The bride, most unwisely learned, leaves the fruitful path for the barren highway. Her instincts are conquered by her own selfishness, her husband's acquiescence, and the commiseration or scoffs of her friends who successfully evade their duties. Evil counsel leads her to the druggist, the physician, or the professional homicide until the fair robes of maternity are torn and bedraggled. Augury inauspicious when she who is well seeks the healer of the sick to invite disease. Yet the young

woman, with the mother love just beginning to shine in her face, with her whole being answering the impulse of her unborn, will hold to her stubborn resolve and turn deaf ears to argument or entreaty, dominated by an influence opposed to her well being, an influence which degrades, defiles, and slays. Fountains of tears and infinite yearning never bring back that hour of choice. The mind conscious of wrong is a persistent avenger.

There are many types among the voluntary barren and the sporadically fruitful. Without the infusion of new blood the natural tendency of families and nations is to extinction. Sterility is a stigma for which heaven has been wearied by prayer, and rites, and sacrifice.

Caspar: Calphurnia,

Stand you directly in Antonius's way
When he doth run his course. Antonius,
Forget not, in your speed,
To touch Calphurnia: for our elders say
The barren, touched in this holy chase,
Shake off their sterile curse.

In these days extinction is anticipated, sterility is invited and bears no reproach. The few who bemoan it as a curse are lost in the crowd who seek it. Here are the barren from choice, who prevent conception. Here are those who repeatedly destroy the product of conception by drugs, or instruments, or other means. Many by such practices bring upon themselves diseases which cause sterility. Many by preventing conception find themselves at last unable to conceive, and their cleverness only too effective. Those who risk and contract venereal disease swell the ranks of the voluntarily unfruitful.

The sporadically fruitful woman may bring forth one child, or several children at long intervals, as her pleasure dictates. Or, having borne one or more, she refuses another burden, either dreading the pains of childbirth or having been lately instructed in the doctrine of prevention. Many, advised by their physicians of ailments which might make child birth dangerous, accept his opinion with a docility unwarranted by his learning or skill, and follow his advice with a fidelity most unusual and exemplary.

These subjects are treated and discussed with a levity which has no relation to morality or conscience. A few decades ago public opinion stamped a woman suspected of these practices so that children fled in terror at her approach. Now the giant who consumed boys and girls is a forbidden story, while "mothers but smile when they behold their children quartered."

The significance and enormity of the diminishing birth rate in this country is masked by the

tide of immigrants who, for a time, increase and multiply. But soon these very people note, admire, and imitate the habits of their neighbors.

Before this union of elements, the most populous nation may well fear for its future existence. "The wages of sin is death," but "there is not in the mind of man a passion so weak but it mates and masters the fear of death."

There is not one sound argument in favor of these practices. Nature herself cries out against them, and idle, indeed, and vain the crusade to bring their followers back to her ways. Relentlessly she avenges herself by the survival of the fittest.

503 WARREN STREET.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 808.)

Adrin (epinephrin hydrate), the active principle of the suprarenal gland, as made and marketed by the H. K. Mulford Company, Philadelphia, is now supplied in the following new forms and combinations: Adrin powder, almost white, stable, non-hygroscopic. Adrin 1 to 1000 solution. Adrin tablets 0.001 gramme ($\frac{1}{85}$ grain) for the extemporaneous preparation of 1 to 1000 solution; each tablet dissolved in 1 c.c. (15 minims.) sterile water yields a 1 to 1000 normal saline solution. Adrin suppositories contain $\frac{1}{25}$ grain of adrin, the equivalent of 40 minims of a 1 to 1000 solution. Adrin throat tablets are composed of adrin, $\frac{1}{800}$ grain; menthol, $\frac{1}{35}$ grain; acid benzoic, $\frac{1}{12}$ grain; oil gaultheria, $\frac{1}{10}$ grain; eucalyptol, $\frac{1}{16}$ grain; and sugar, q. s.

Cornutol is the proprietary name for a concentrated and permanent preparation of ergot of rye intended for hypodermic and general use. The following claims for cornutol are made: (1) It contains all of the effective principles of ergot and is absolutely pure and therapeutically active; (2) it is free from fat and all substances which irritate and cause abscesses, and is aseptic; (3) it does not produce nausea when administered by the mouth, and may be given in repeated doses without cumulative effect; (4) it is a stable product, not being affected by age or temperature; (5) it is the most eligible of all preparations of ergot for hypodermic use, since it is freely soluble in water and the solution remains perfectly clear; (6) it is highly concentrated, 1 minim representing $2\frac{1}{2}$ grains of the best Spanish ergot; (7) its therapeutical effect can always be relied upon, since it is carefully assayed and standardized, both chemically and physiologically. The dose is, hypodermically, 5 to 30 minims (or $\frac{1}{8}$ to 2 c.c.); by the mouth, 10 to 30 minims, or $\frac{2}{8}$ to 2 c.c. Cornutol is furnished in 1 ounce vials, and in hermetically sealed aseptic bulbs, each bulb containing 2 c.c. (30 minims).

Epinephrin Hydrate is the chemical designation of adrin, the active principle of the suprarenal gland.

Hæmatosin is stated to consist of a composition of the following ingredients: Albumin, 35 parts; organic iron, 7 parts; nutritive salts (Nährsalzen), 3 parts; blood salts (Blutsalzen), 2 parts; pepsin, 3 parts; sodium glycerophosphate, 5 parts; lecithin, 1 part; malt, 15 parts; oatmeal, 15 parts; and cocoa, 15 parts. It is administered in doses of one teaspoonful, either cooked in water or milk or mixed with lemonade, beer, or wine.

Ichden is the name applied in Switzerland to an ichthyol substitute which in other countries is known as piscarol. It is understood to have the same chemical composition as ichthyolammonium sulphionate.

Ichthyokreosote is a compound of ichthyol, 1 gramme; creosote, 1 gramme; eucalyptol, 0.05 gramme, with an excipient, which originated in France; it is recommended in the treatment of pulmonary disorders.

Iodinol is an iodized sesame oil, similar to iodipin.

Iodoil is a dry, powdered preparation, similar in constitution to bromoil, but owing its activity to iodine.

Iothion is a combination of iodine and mustard oil, containing either 10 per cent. of iodine and 1.6 per cent. of sulphur, or 25 per cent. of iodine and 2.5 per cent. of sulphur. The union between the two is a chemical one. Iothion is in the form of a syrupy, yellowish brown liquid, and may be used internally or by subcutaneous injection.

Iodgelatin is made by melting a mixture containing gelatin, 3 grammes; potassium iodide, 2 grammes; iodine, 1 gramme; water, 100 grammes; sodium and calcium hypophosphites, of each 2 grammes. When filtered, this makes a clear, colorless solution, and is believed to be well adapted for internal administration where iodine is indicated.

Isoform is an iodoform substitute, the correct chemical name of which is paraiodanisol. It is obtained by the oxidation of iodanisol. It forms glittering silvery scales, sparingly soluble in cold water, more soluble in dilute acetic acid, insoluble in alcohol and in ether. The pure body is not put on the market, but the powder, consisting of equal parts of calcium phosphate and isoform, is supplied. Isoform paste, containing equal quantities of isoform and glycerin, is also prepared. Isoform is given internally as an intestinal disinfectant, as well as being employed as an external bactericidal preparation. In the latter connection, a 1.3 and 10 per cent. isoform gauze is employed as a protective for wounds.

Itrol Crede is a silver citrate in a state of extremely fine powder, which is intended for use in the treatment of diseases of the eye. It is put up in small black bottles containing 0.5 gramme and 1 gramme. Itrol is very sensitive to light and air, and cannot be kept longer than two weeks if the container is frequently opened.

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THE BACTERIOLOGY OF PNEUMONIA IN INFANCY.

Dr. Martha Wollstein, of the Babies' Hospital, New York, has recently made a notable study of the pneumonia of infancy from the bacteriological point of view, and she gives an interesting account of her observations in the February number of the *Journal of Experimental Medicine*. They were made on the cadavers of a hundred infants that had died of the disease. The areas of consolidation were rapidly exposed, and the author lays some stress on the fact of their not having been subjected to heat in the process of taking the specimens, and on the fact that glucose, glycerin, and agar formed the culture medium in the experiments.

In age the infants, fifty-six boys and forty-four girls, ranged from eighteen days to three years and a half, but the great majority of them were less than a year and a half old. In thirty-three cases of primary bronchopneumonia, the pneumococcus alone was found in fifteen, associated with the streptococcus in seven, and with *Staphylococcus pyogenes aureus* in two; the streptococcus alone in two, and associated with *Staphylococcus pyogenes aureus* in two; the staphylococcus alone in two, and associated with *Bacillus coli communis* in one; and the streptococcus and *Oidium albicans* in one. In all but four of the cases the pneumonic areas

were scattered, and in sixteen the whole or the greater part of one or more of the lobes was affected. In eleven the pleura was normal; in the others it was covered with fibrin or pus. In twenty there was pus in the bronchi, in the pleural sac, in pulmonary abscesses, or infiltrated.

The remainder of the study was devoted to secondary pneumonia associated with athrepsia, enterocolitis, diphtheria, measles, meningitis, cerebral abscess, malarial disease, septicæmia, or tuberculous disease. The author gives useful references to similar research work by Dürck, Netter, Neumann, Mosny, Queisner, Blumer, and Pearce.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOUS DISEASE.

The importance of this subject calls for its frequent and careful consideration, and the public should be thankful to the Illinois State Board of Health for a very valuable pamphlet recently issued by it. The multifarious aspects of the matter are handled in the board's accustomed admirable manner, "Every suspected case," says the pamphlet, "should be treated as a suspected case and examined accordingly. More cases of tuberculosis are overlooked for want of examination than for lack of knowledge on the part of the physician." The diagnosis should be made as soon as possible, and then there should be no concealment of the nature of the disease; hesitation to inform the patient himself as to its nature is indefensible at the present day, in view of the resources now at our command for virtually curing the disease.

Perhaps there has of late years been too great a tendency to underrate the importance of the family history. It is pointed out in the pamphlet that the peculiar type of chest and tissue that indicates less than the normal power of resistance to tuberculous infection is perhaps inherited; and, moreover, that the previous occurrence of tuberculous disease in a given family, if we assume that the family remains in the same habitation, furnishes a probable source of infection. In addition, the patient's personal history, especially as to such points as age, occupation, habits, manner of life, and previous illness, should be taken into account.

In his general remarks on these matters the writer of the pamphlet teaches much that both the profession and the community at large ought to bear constantly in mind with regard to incipient tuberculous disease of the lungs, and he follows them with what we must pronounce a most excellent condensed treatise on the early diagnosis of such disease. In this pamphlet the Illinois State Board of Health has added notably to the services it had already rendered to the public health.

CONDITIONS OF HEALTH IN THE BAHAMAS.

Dr. Clement A. Penrose tells, in an interesting pamphlet, published under the auspices of the Geographical Society of Baltimore, the story of the part that he took in a recent expedition to the Bahama Islands. Many topics are touched upon by Dr. Penrose, but we have not the space to mention more than a few of them.

It seems that race peculiarities may be studied to advantage in the scattered little islands. Some of them are inhabited entirely by whites, who have excluded the blacks; and in some others the blacks have almost wholly excluded the whites. The white inhabitants show a decided mingling of races, being descendants of early Spanish, English, and American colonists, and in some localities intermarriage has been carried to an extent that is thought to account for a considerable prevalence of bodily and mental abnormalities. Moreover, there has been much miscegenation, for between the pure whites and the pure blacks every gradation of color is to be found.

Dr. Penrose tells us that leprosy is becoming prevalent in the islands, but that no attempt at isolating the lepers has been made, save in Nassau, on the island of New Providence, where there is a retreat for them, to which, however, they resort only on their own volition. He properly remarks that the geographical and commercial relations of the islands make it important that the disease should be thoroughly studied and the lepers segregated. There is a great prevalence of diseases of the organs of special sense, especially the eye, and on most of the islands there seems to be no provision at all for medical attention, the inhabitants having nothing of the sort to depend on

beyond the chance visits of physicians, visits which they consequently hail with delight.

THE ÆTIOLOGY AND TRANSMISSIBILITY OF CARCINOMA.

It is clinically quite as probable that carcinoma is contagious as that tuberculosis and leprosy are transmissible. This theory may, for that matter, be quite in accord with the views of the two great schools which have been at war upon this question, one considering cancer as a constitutional or diathetic affection, a disease of the blood, the other believing it to be a purely local affection from its beginning. This latter hypothesis being admitted, carcinoma may be likened to a soft chancre, and consequently should be both contagious and inoculable. It is well known that carcinoma has not been inoculated, at least up to the present time; the great number of essays which have been undertaken during the last twenty years, not only on animals, but also on man, have all failed, or at least have given only such uncertain results that it has been quite impossible to draw any conclusion. In man, inoculations have been made at different times, but have given no marked results. The contagiousness can consequently be demonstrated only by clinical data, and not only are facts of this kind of extreme rarity, but they also lack the necessary precision for conclusions which cannot be attacked.

Cases of carcinoma have been observed in several members of the same family or among people living under the same roof, but all such instances can always be explained as simple coincidences. Thus, for example, cases of epithelioma of the penis have been observed in husbands of women afflicted with carcinoma uteri, and it is precisely upon this fact that we base ourselves in order to combat the theory of contagion. All general practitioners meet with many cases of carcinoma of the uterus, but they very infrequently encounter carcinoma of the penis. Is there a more sensitive mucosa or one more susceptible to inoculation than that of the glans? And is there an organ more favorable to morbid receptivity? Now, it is well known that epithelioma of the penis is a very rare condition, while malignant tumors of

the uterus are of extreme frequency. Uterine carcinoma may be present for a year or even more, manifesting itself by slight clinical symptoms without any reaction on the general health and not even attracting the patients' attention. During this period the women have a sexual existence of a most active nature, and coitus has been practised hundreds and thousands of times without any distinctive fact of contamination resulting. I have had under my care a number of prostitutes afflicted with carcinoma of the cervix, all having frequent sexual relations with different individuals; if transmissibility were possible, it would certainly have occurred, because the intimate contact of the glans, often excoriated, with the cervix during coitus about equals an attempt at inoculation. It would seem probable, for this reason, that one cannot invoke carcinoma of the penis as a proof of contagion; the extreme infrequency of malignant growths of the penis, compared with the frequency of these same tumors in the cervix, would appear, on the contrary, the very best demonstration of the non-transmissibility of the disease.

As to other cases of carcinoma observed in members of the same family, they appear to me to demonstrate, not contagion, but heredity, a fact that all writers since Hippocrates have been unanimous in recording. The results of recent statistics made in Holland, Germany, and Italy have shown that heredity occurs in twenty per cent. of cases of cancer. Consequently heredity is found in one case out of every five, and it would seem that this was an ætiological point which should particularly meet with attention, rather than those very doubtful observations of direct contagion.

At the present time it would appear that the ætiology by contagion is quite *à la mode*, especially since a large number of physicians have proposed specific sera. Far be it from me to contest the value of certain therapeutic procedures which time alone can settle and which always give hope to patients, at the same time that they often relieve the practitioner who is at the end of his resources in hopeless cases. I would say only, apropos of the new sera which have recently been noisily announced, that other sera quite as effi-

acious have already been put on the market in preceding years and have died. I do not condemn the proposed therapeutic methods in hopeless cases; I desire only that they be inoffensive and honestly applied. I consequently believe that it is not in the theory of contagion that one will find either scientific or therapeutic indications.

Apart from measures of cleanliness, of prophylaxis, and of hygiene, which impose themselves upon healthy as well as cancerous individuals, apart from the moral satisfaction that every human being feels in the idea that the disease which attacks him is *not born in him*, but has been communicated to him by another, apart from these general considerations, where does the hypothesis of contagion lead us from the therapeutic standpoint? To nothing. Now, medicine is not only prophylactic, but is above all curative, and I consequently believe that the rational therapeutics of cancer must be looked for elsewhere than in the hypothesis of contagion. In the first place, I believe that the microbic theory should be given up; it has been a thick cloud which for twenty years past has kept physicians from entering into true pathological research, and it is now time to return to the starting point of all formations of normal or abnormal tissues; in other words, the cell. Before endeavoring to ascertain whether or not carcinoma can be transmitted from one individual to another, one should first learn how the neoplasm forms in the individual and how it becomes transmitted from one tissue to another in this same individual. It is in the cell transformation, in the intranuclear changes which the normal cell undergoes, that the ætiology of carcinoma should be looked for, and it is just on this side of the question that the most recent researches have been carried.

Carcinoma has been the object of most important work in England, started under the inspiration of a committee with the patronage of the King, who has given a considerable amount of money for carrying out this work. In the first paper, which was published in the *Lancet* on December 26, 1903, relative to the analogy existing between the development of the cells of malignant tumors in man and the normal cells of the tissues of reproduction, Professor Farmer makes

the following observation: 1. Mitotic phenomena are identical in all somatic cells. 2. These mitotic phenomena are different in the cells which develop in the ovaries and testicles, forming what this authority designates under the name of heterotypic mitosis. Now, observation has led experimenters to this interesting remark, that in malignant tumors the nuclear division is far from being that of the type occurring in the somatic cell, and comes nearer to the mitosis observed in the cells composing the tissues of the reproductive organs. To sum up, cell mitosis is normal, or homotypic, in benign tumors, and heterotypic in the tissues composing carcinoma.

This analogy in the development of carcinomatous tissues and the development of the organs of reproduction had already been pointed out by Beatson, of Edinburgh, in 1896, who emitted the opinion that carcinomata consisted in an epithelial proliferation similar to that observed in germinative epithelium. He also adds that, in his way of thinking, the carcinomatous process might be explained by the fact that the epithelium of the affected mucosa had taken on the properties of germinative epithelium. As may be seen, this hypothesis is relatively confirmed by recent researches. It may be added that Beatson endeavored to apply his theory in practice by performing double oophorectomy in women having "inoperable" carcinoma of the uterus. This therapeutic measure, imitated by a certain number of operators, has appeared to give favorable results, inasmuch as it has retarded the evolution of the uterine neoplasm.

The still more recent writings of Bashford and Murray have confirmed Farmer's opinions. I will merely mention the essential points: 1. Vertebrate animals have the same malignant tumors that occur in man, and these growths present identical characters in their histology, pathology, and clinical course. 2. A carcinoma of one animal cannot be transmitted by inoculation to another, but only by transplantation, or graft; the cell reproduction takes place only in the portion of the tumor transplanted and not in the tissues of the animal upon which it has been transplanted. These authorities come to this general conclusion, that carcinoma is a local and abnormal manifesta-

tion of a process which occurs naturally in all organized beings. But before making any deductions from these facts, it is well to take into consideration the judicious observation of Isch-Wall, on the coexistence of leucocytosis and malignant growths. Lutaud has made the same observation, but he has not been able to determine whether the leucæmia is the consequence or the cause of the carcinoma, though he believes that both theories may be upheld.

It is evident that the general condition designated under the term cachexia, which is always met with when a malignant growth has exercised its ravages on the economy, is nothing other than a leucæmia of unknown cause, but does leucæmia predispose to carcinoma when it exists before the appearance of the growth? The observations made by Lutaud lead him to suppose that it does. Now, it is well known that leucæmia always coincides with an exaggerated development of the lymphatic vessels and with an abnormal production of lymphoid tissue; this shows that there already exists a tendency to cell proliferation which, in the first place normal, constitutes a morbid process by excessive proliferation, but it is very probable that the development of the lymphatics can only favor the rapid development in the organism of the cancer cells which form accidentally at some point of the economy.

The migration of the morbid cell is one of the most interesting features of the pathology of carcinoma, and one may rightly ask why malignant tumors have a tendency to rapidly invade other tissues than those in which they start, while benign tumors, the type of which is represented by lipomata, usually remain localized. It is because a carcinomatous growth is almost always wedged in healthy tissues without any limiting capsule, and mitosis takes place without any hindrance, rapidly extending into the neighboring structures by a proliferation of newly formed germinative cells. It is consequently quite rational to admit that lymphadenia considerably aggravates the prognosis of carcinoma by favoring the migration of the morbid cell.

To sum up, it may be said that carcinoma is neither a constitutional nor a diathetic disease; it cannot be inoculated, and no experiments ob-

served up to the present time can allow one to conclude that it is contagious. Carcinoma has always a local origin due to the abnormal proliferation of cells normally existing in the body. The initial production of the cell which determines the malignant growth does not differ greatly from the abnormal production which results in the formation of the so called non-malignant neoplasms. The gravity of the prognosis appears to be due to the absence of encapsulation of the growth, to the development of the neighboring lymphatics around the point at which the morbid cells have taken their origin. Leucæmia appears to favor the rapid development of carcinomatous tissue and its generalization throughout the economy.

CHARLES GREENE CUMSTON.

A GRAVE ACCUSATION.

At a recent hearing before a legislative committee of the State of New York, on the optometry bill, a supporter of the bill read a letter from an optician in which it was stated that for fourteen years the writer had paid to about sixty physicians commissions varying from twenty-five to fifty per cent. of his charges for executing their orders, but that two years ago he had refused to continue the practice, whereupon the physicians concerned had used their influence in favor of those of his competitors who were still willing to pay them a commission. Hence, he remarked, the physicians who opposed the bill were not altogether disinterested. A representative of the legislative committee of the Medical Society of the State of New York was present at the hearing, but of course he could not on the spot refute the statements made in the letter. It is to be hoped that they can be refuted, although they are by no means important as affecting the fate of the bill.

EXPERIMENTAL ARTERIOSCLEROSIS.

At a recent meeting of the Society of Vienna Physicians (*Wiener klinische Wochenschrift*, 1905, No. 6; *Berliner klinische Wochenschrift*, March 27th) Dr. Ludwig Braun reported that he had varied Josué's experiments in producing arteriosclerosis in rabbits by intravenous injections of adrenalin in that he had injected amyl nitrite at the same time, and yet the arterial sclerosis had followed. This showed, he remarked, that its production was not due to the action of adrenalin in raising the blood pressure, but to its action as a poison. The subject seems worthy of further investigation.

THE DOCTOR'S CARRIAGE.

In our large cities the distinctive vehicles formerly used by physicians are fast disappearing, partly, perhaps, because the public conveyances have been so improved that they meet the needs of a practitioner having a large amount of visiting work to do, and partly because the few motor carriages that are owned by physicians do not differ in appearance from those employed by the general public sufficiently to attract notice.

AN UNUSUAL MERCURIAL RASH

The exceeding sensitiveness of some persons to mercury is well shown by a case reported by Dr. Max Joseph, of Berlin (*Dermatologisches Centralblatt*, October, 1904; *Berliner klinische Wochenschrift*, March 27th). The rash, which appeared on the face, followed the filling of teeth with amalgam, and disappeared on the removal of the fillings.

Obituary.

COLONEL CHARLES SMART,

OF THE MEDICAL CORPS OF THE ARMY.

Dr. Smart died in St. Augustine, Florida, on Sunday, April 23rd, aged sixty-four years. He was Scotch by birth. He served as a medical officer of a New York regiment of volunteers in the civil war, and entered the medical corps of the regular army in 1864. His service in the army was varied and always creditable. Three years ago he became an assistant surgeon-general with the rank of colonel.

It was not in the military service alone that Dr. Smart was known and esteemed. He long ago won an honorable rating with the profession at large by reason of his numerous investigations in the interest of sanitation, on which subject many valuable reports of his have been published. In addition, he was the author of a very popular book entitled *Handbook for the Hospital Corps of the United States Army and State Military Forces*, which appeared in 1889.

PATRICK J. LYNCH, M. D.,

OF NEW YORK.

Dr. Patrick J. Lynch, a well known physician of New York, died on April 21st. Dr. Lynch was born in Virginia, County Cavan, Ireland, in 1828, and came to the United States fifty-five years ago. Taking up the study of medicine, he graduated from the University of the City of New York in 1857, and was chief of clinic to Dr. Valentine Mott for several of the latter years of that great surgeon's life. He is survived by his wife and seven children, one of whom, Dr. Charles T. Lynch, is a practising physician in New York. The deceased gentleman was a member of several important medical societies. In addition to the beneficent practice of his profession, he was active in the charitable work of the Roman Catholic Church.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 1st.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Hartford, Conn., Medical Society; South Pittsburgh, Pa., Medical Society; Chicago Medical Society.

TUESDAY, May 2nd.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City; annual); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, May 3rd.—New York Academy of Medicine (Section in Public Health); New York Genitourinary Society; Harlem Medical Association of the City of New York; Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, May 4th.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis.

FRIDAY, May 5th.—Practitioners' Society of New York (private); Clinical Society of the New York Post-graduate Medical School and Hospital; Baltimore Clinical Society; Manhattan Clinical Society, New York.

SATURDAY, May 6th.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK

Change of Address.—Dr. Frederick M. Ives, to 213 West Seventy-ninth Street, between Broadway and Amsterdam Avenue. Telephone number, 3364 Riverside.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending April 22, 1905:

	April 22.		April 15.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	356	16	473	9
Diphtheria and croup	294	42	325	31
Scarlet fever	212	12	269	11
Smallpox .....	..	2	..	1
Chickenpox	61	..	180	..
Tuberculosis	314	189	372	175
Typhoid fever .....	..	7	16	6
Cerebrospinal meningitis	111	104	182	117
	1,363	370	1,710	350

Marriage.—Dr. William Sturgis Thomas, chief surgeon of the out-patient department of St. Luke's Hospital, was married on April 25th to Miss Emma Rheinfrank.

The New York Medical Association has elected the following officers: President, Dr. Francis J. Quinlan; first vice-president, Dr. John A. Bodine; second vice-president, Dr. H. H. Seabrook; secretary, Dr. W. R. Stone; corresponding secretary, Dr. Charles G. Child; treasurer, Dr. Charles E. Denison. Dr. H. A. Dodin was elected a member of the executive committee for three years.

City's Gift to Hospitals.—At the annual meeting of the distribution committee of the Hospital Saturday and Sunday Association, held in Mayor McClellan's office in City Hall on April 18th, \$76,000 of city money was apportioned among thirty-eight hospitals and charitable institutions upon the basis of charitable work done by them last year. The Montefiore Home and Hospital heads the list with \$7,600, and the New York Ophthalmic and Aural Institute ends it with \$250.

American Gastroenterological Association.—At the eighth annual meeting of this association, held at the Academy of Medicine, New York, April 24 and 25, 1905, the following officers were elected for the ensuing year: President, Dr. H. W. Bettmann, of Cincinnati; first vice-president, Dr. S. W. Lambert, of New York; second vice-president, Dr. John P. Sawyer, of Cleveland; secretary and treasurer, Dr. Charles D. Aaron, of Detroit; councillors, Dr. William G. Morgan, of Washington; Dr. A. L. Benedict, of Buffalo; and Dr. J. Kaufmann, of New York.

To Quarantine Meningitis Cases.—The weekly meeting of the commission appointed to investigate the spread of cerebrospinal meningitis was held April 22nd at the department of health building. While the commission does not feel in a position to advise the board of health, Dr. Darlington believes that the communicability of the disease has been sufficiently well established to warrant isolation. He said that in the future all such cases must be reported at once to the department. It is probable that the health department will order that all cerebrospinal meningitis cases in private houses be quarantined in the future.

Hospital Boat for Health Department.—At a cost of \$70,000 the New York Health Department is now building a hospital boat. It is to take the place of the *Franklin Edson*, and is to be used in transporting contagious cases from various parts of the city to North Brother Island, and also in returning convalescents from that island to their homes. The hospital wards, eight in number, will be on the main deck, all separately inclosed in steel, with air tight doors and windows to allow separate fumigation at suitable times. There will be room for six patients in each ward. The ceilings of the wards are to be dust proof. On the main deck will also be a small morgue. There will be room on the deck for an ambulance and a fire engine. The windows of the ward rooms will be large enough to escape through in case of an emergency. The hull will be of steel, with five water tight compartments. There will also be on board a powerful fire pump. The boat will be lighted by electricity. On the top deck will be a saloon for convalescents. The boat will be ready by next October.

The Late Dr. James Alexander Ferguson.—The following resolutions upon the death of Dr. James Alexander Ferguson were passed at a meeting of the medical board of Fordham Hospital, held April 1, 1905:

Whereas, The medical board of Fordham Hospital has heard with profound sorrow of the death of their colleague

and visiting surgeon, Dr. James Alexander Ferguson, which occurred March 7, 1905;

Whereas, Dr. James Alexander Ferguson was an esteemed member, and for several years president, of the medical board; he was a kind friend to many, and especially cordial in his relations with the younger members of the profession. Therefore be it

Resolved, That the members of the board hereby express their great grief at the removal of their esteemed colleague by death, and extend their sincere sympathy to the widow, relatives, and friends of the deceased;

Resolved, That a copy of this tribute to the memory of Dr. James Alexander Ferguson shall be spread on the minutes of this board, and a copy thereof be sent to the family and the board of trustees of Bellevue and Allied Hospitals.

(Signed) JOHN J. QUIGLEY, M. D.,
 president;
 THOMAS F. MAGUIRE, M. D.,
 secretary.

PHILADELPHIA.

Change of Address.—Dr. Elizabeth L. Peck, to 4113 Walnut Street.

Marriage.—Dr. J. C. Knipe and Miss Ruth D. Krauss were married on April 24th.

Municipal Hospital.—The following is the census of the Municipal Hospital for March:

	Remaining March 1.	Received.	Discharged.	Died.	Remaining April 1.
Diphtheria	51	85	62	15	67
Scarlet fever	93	48	44	2	95
Smallpox	0	2	0	0	2
Other diseases	1	6	1	3	3

Smallpox in Philadelphia.—Two cases of smallpox occurred in the city during March, the first to be reported since December, 1904. Both cases were imported, one from Mt. Union, Pa., and the other from York, Pa. Neither patient had ever been vaccinated.

Death.—Dr. D. Newlin Stokes died in Moorestown, N. J., on April 19th, in the seventy-second year of his age. Dr. Stokes graduated from Jefferson Medical College in 1854. He was a member of the board of managers of the State Asylum for the Insane at Trenton and a member of the Burlington County Medical Society.

Scientific Society Meetings for the Week Ending May 6, 1905.—Monday, May 1st, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences; Society of Normal and Pathological Physiology, University of Pennsylvania. Tuesday, May 2nd, Academy of Natural Sciences. Wednesday, May 3rd, College of Physicians; Association of Clinical Assistants, Wills Hospital. Thursday, May 4th, Obstetrical Society; Medical Society of the Southern Dispensary. Friday, May 5th, American Philosophical Society.

New Yorkers in Philadelphia.—Dr. A. Jacobi, of New York, addressed the Section in Medical History of the College of Physicians on Monday, April 24th, on The Most Eminent American Physician of European Birth.

Dr. Carl Beck addressed the Philadelphia County Medical Society on Wednesday evening, April 26th, on The X Rays in the Diagnosis of Tuberculosis of Bones and Joints.

Dr. James Ewing, of Cornell University, addressed the annual conversational meeting of the Pathological Society on April 27th on Some As-

pects of the Problem of Immunity in Typhoid Fever. A reception was tendered Dr. Ewing after the meeting at the University Club.

Bureau of Health Statistics.—In the division of medical inspection of the Bureau of Health, for March, 1905, 3,942 inspections were made, exclusive of schools; 614 fumigations were ordered, and 49 cases were reported for special diagnosis. One thousand and ninety-seven children were excluded from school; 355 cultures were taken; 79 injections of antitoxine given, and 765 vaccinations done. In the division of milk inspection 143,118 quarts of milk were inspected, of which 1,755 quarts were condemned. Chemical examinations were made of 129 specimens and microscopical examinations of 740 specimens. In the bacteriological laboratory 1,513 diphtheria inoculations were examined; 536 specimens of typhoid blood; 733 specimens of milk; 189 specimens of sputum; and 1,135 doses of antitoxine supplied.

Cerebrospinal Fever in Philadelphia.—Between January 1 and March 31, 1905, forty cases of cerebrospinal fever were reported to the Bureau of Health. Of these, 13 or 32.6 per cent., were fatal. Eight of the forty cases occurred in four houses, two in each house. From two of the houses the cases were reported on the same day. From the third house there was an interval of three days, and from the fourth house an interval of six days between the dates of the reports. In the last two houses, therefore, it is possible that the disease may have been transmitted from one individual to another. With these exceptions the authorities have had no evidence of the direct transmission from person to person. The cases are scattered all over the city. The majority of the cases occurred in persons between the age of one and twenty-one years. Only two cases were in children less than one year old.

The Health of the City.—During the week ending April 15, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever	147	21
Scarlet fever	36	2
Chickenpox	59	0
Diphtheria	63	12
Cerebrospinal meningitis	7	3
Measles	56	1
Whooping cough	21	2
Tuberculosis of the lungs	41	79
Pneumonia	64	4
Erysipelas	13	3
Puerperal fever	1	4
Trachoma	1	0
Anthrax	1	0

The total death rate for the week was 517, in an estimated population of 1,438,318, corresponding to an annual death rate of 18.69 per 1,000 population. The total infant mortality was 105; 87 under one year, 18 between one and two years. There were 28 still births, 19 males and 9 females. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 5; diarrhoea and enteritis, under two years, 25. The weather was rather warm. The thermometer recorded 74° on the tenth and 78° on the eleventh. There were two thunderstorms on the tenth; 1.25 inches of rain fell during the week.

GENERAL.

Medical Society of New Jersey.—The next meeting of the Medical Society of New Jersey will be held in West End, at the Hollywood Hotel, on June 20, 21, and 22, 1905, the dates previously given having been altered.

Youngstown, O., Antituberculosis Association.—The following officers of this association have been elected: President, Mayor W. T. Gibson; vice-president, Dr. C. R. Clark; secretary, Dr. J. L. P. Clarke; treasurer, Dr. B. Hirshberg.

Appointment of Medical Examiner, Boston.—Dr. William G. Macdonald, of Boston, has just been appointed by Governor Douglas medical examiner of Suffolk county, to succeed Dr. W. F. Draper, whose term of office expires June 30, 1905.

The Tompkins County, N. Y., Medical Society has elected the following officers: President, Dr. C. P. Biggs; vice-president, Dr. Edward A. Meany; secretary, Dr. R. Mandeville Vose; member of the executive committee, Dr. H. Burr Besemer.

The Yalobusha County, Miss., Medical Society was organized on April 4th and elected the following officers: President, Dr. J. S. Sanders; vice-president, Dr. L. T. Fox; secretary-treasurer, Dr. J. J. Landreth. Dr. H. L. Noel was elected delegate to the State association.

Montgomery County, Mo., Medical Society Organized.—The physicians of Montgomery county have organized a county medical society. The following officers were elected: President, Dr. J. L. Jones; secretary, Dr. M. M. Wheeler, of High Hill; treasurer, Dr. G. E. Muns, of Montgomery City.

Buffalo Quarantine Hospital.—Dr. C. F. Durand, of 76 West Genesee Street, Buffalo, has been appointed superintendent of the quarantine hospital. Dr. Durand's name was taken from the civil service list. The position pays a salary of \$1,200 a year. Dr. Durand succeeds the late Dr. John O'Hara.

Personals.—Dr. V. C. Vaughan has been elected president of the Michigan State Board of Health.

Dr. E. K. Herrmann has been reelected city physician of Ann Arbor, Mich.

Dr. Fred Grady Hodgson has been appointed to the staff of the Wesley Memorial Hospital, Atlanta, Ga.

The American Academy of Ophthalmology and Otolaryngology.—The Buffalo meeting of the American Academy of Ophthalmology and Otolaryngology will be held on Thursday, Friday, and Saturday, the 14th, 15th, and 16th of September, instead of August 23rd to 25th, as previously announced. George F. Suker, M. D., secretary.

The Association of Assistant Physicians of State Hospitals, of Ohio, has elected the following officers for the ensuing year: President, Dr. Nelson H. Young, of Toledo; vice-president, Dr. Edson C. Brown, of Massillon; secretary, Dr. Frank J. Latshaw, of Toledo; treasurer, Dr. Mary E. Cadwallader, of Dayton.

The St. Clair County, Mo., Medical Society, at its meeting on April 6th, elected the following officers: President, Dr. W. E. Wiatt, of East St. Louis; vice-president, Dr. Hugo Wangelin, of Belleville; corresponding secretary, Dr. George Hillgard, of Belleville; recording secretary, Dr. W. C. Spannagel, of East St. Louis.

Meeting of Suffolk District Medical Society, Boston.—The annual meeting of this society will be held at the Boston Medical Library this evening. The subject to be considered is The Treatment of Typhoid Fever. Papers are expected from Dr. F. C. Shattuck, Dr. Maurice H. Richardson, Dr. Mark W. Richardson, and Dr. C. D. Easton.

The Broome County, N. Y., Medical Society elected the following officers on April 11th: President, Dr. L. D. Farnham; vice-president, Dr. J. H. Martin; secretary, Dr. C. W. Greene; treasurer, Dr. W. H. Knapp. Dr. Orton and Dr. Greene were named as delegates to the State medical association to be held in New York in October. Dr. Farnham and Dr. Quackenbush were elected alternates.

Schuyler County, N. Y., Medical Society.—The Schuyler County Medical Society has been formed as a branch of the State Medical Society. Its objects are to promote fellowship among its members, elevate the standard of medicine and surgery, and protect the public from medical quacks. The officers elected for the first year are: President, Dr. M. L. Bennett; secretary, Dr. J. K. King; treasurer, Dr. D. W. Scutt. Dr. J. F. Barnes and Dr. G. C. Fordham constitute the legislative committee.

Birmingham, Ala., Medical College.—The eleventh annual commencement of the Birmingham Medical College took place on April 3rd at 8 p. m. Dr. B. L. Wyman, dean of the college, conferred the degree of doctor of medicine upon the following fourteen young men:

E. A. Wilson, Robert Nelson, E. G. Little, D. C. Walker, Marvin Scott, G. W. Wood, D. A. Painter, C. B. Crawford, J. G. Vance, J. A. Harris, Jr., F. W. McDonald, O. Manasco, R. C. Black, and J. S. Gray.

Physicians Licensed to Practise in Minnesota.—The State board of medical examiners has granted licenses to Dr. C. S. McKee, Dr. A. L. Laliberté, of Minneapolis; Dr. A. M. Cattauach, Dr. C. D. Conkey, of Superior, Wis.; Dr. H. Cannon, Dr. E. H. Bohland, of St. Paul; Dr. J. S. White, of Fort Snelling; Dr. D. Kalinoff, of Stillwater; Dr. F. R. Curney, of Chicago; Dr. P. H. Sundt, of Pine River, Minn.; Dr. W. A. McEachern, of Sandstone, Minn.; Dr. J. H. Fowler, of Tower, Minn.; Dr. C. H. Wall, of Mellen, Wis.; Dr. F. A. Christensen, of Lake Mills, Iowa.

The Union County, Miss., Medical Association was organized in New Albany on April 11th. Dr. F. W. Cullens, of Wallerville, was elected president; vice-president, Dr. W. A. Whitten, of Keownville; secretary-treasurer, Dr. H. N. Mayes, of New Albany. Dr. G. F. Cullens was elected delegate to the State association, with Dr. R. L. Goodman alternate. The first Mondays in Feb-

ruary, April, June, August, October, and December were fixed as dates for the regular bimonthly meetings.

First Naval Hospital in Philippines.—The first naval hospital established in the Philippines was thrown open for the reception of patients on the 14th instant. It is situated on high ground jutting out into the sea at Canacao, and has a capacity of eighty beds. It is expected that it will be of great value to the medical department of the navy. The hospital site was formerly occupied by an old Spanish hospital, every vestige of which was removed before work was commenced on the present hospital.

Lee County, Tenn., Medical Association.—A number of physicians of Lee county have organized the Lee County Medical Association. The following officers have been elected: President, Dr. T. A. Boggan; vice-president, Dr. J. A. Orr; and secretary and treasurer, Dr. W. C. Spencer. A board of censors was elected, composed of Dr. W. B. Holland, Dr. C. T. Keyes, and Dr. C. G. Stone. The members of this board were also made a committee on public health and legislation. Dr. W. C. Spencer was elected delegate to the State Medical Association, with Dr. T. F. Elkin as alternate.

Montgomery County, Md., Medical Association.—At the meeting of this association, held at Rockville on April 18th, the following officers were elected: President, Dr. Horace B. Haddox, of Gaithersburg; vice-president, Dr. Edward Anderson, of Rockville; secretary-treasurer, Dr. John L. Lewis, of Bethesda; censors, Dr. Edward Anderson, Dr. William L. Lewis, and Dr. J. H. Stonestreet; committee of legislation and public health, Dr. C. H. Mannar, Dr. J. H. Stonestreet, and Dr. Farquhar; delegates to State society, Dr. James E. Deets and Dr. Edward Anderson; alternates, Dr. William L. Lewis and Dr. O. M. Linthicum.

Oneida County, N. Y., Medical Society.—At the annual meeting of the Oneida County Medical Society in Utica on April 11th, the following officers were elected: President, Dr. Herbert G. Jones, of Utica; vice-president, Dr. Conway A. Frost, of Rome; secretary, Dr. F. H. Brewer, of Utica; treasurer, Dr. E. D. Fuller, of Utica; librarian, Dr. Smith Baker, of Utica; censors, Dr. Walter C. Gibson and Dr. M. J. Davies, of Utica; Dr. Charles Bernstein, of Rome; Dr. T. Z. Jones, of Waterville; Dr. Charles E. Smith, of Whitesboro; delegates to State Medical Society, Dr. T. H. Farrell and Dr. F. M. Miller, of Utica; Dr. H. D. White, of Rome.

Tennessee State Medical Association.—The following officers of this association have been elected for the coming year: President, Dr. Cooper Holtzclaw, of Chattanooga; first vice-president, Dr. S. W. Woodyard, of Greenville; second vice-president, Dr. Alfred Moore, of Memphis; third vice-president, Dr. A. F. Richards, of Sparta; secretary, Dr. George H. Price, of Nashville; treasurer, Dr. W. C. Bilbro, of Murfreesboro. Following the election of officers the meeting place for

next year was decided upon, and Memphis will get the meeting in 1906, and the by-laws prescribe the date, which is the second Tuesday in April of each year.

The Central District Medical Association, of Indian Territory, elected the following officers on April 12th: President, Dr. F. L. Watson, of Alderson; vice-president, Dr. Thomas J. Long, of Atoka; secretary-treasurer, Dr. Leroy Long, of South McAlester. The association will hereafter meet semi-annually, the next session being at Atoka, October 10th.

Fairfield County, Conn., Medical Society.—This society has elected the following officers for the coming year: President, Dr. W. J. Tracy, of Norwalk; vice-president, Dr. William S. Randall, of Shelton; secretary, Dr. Edward W. Smith, of Bridgeport; county reporter, Dr. Donald McLean, of Stamford; censor, Dr. F. M. Schavoir, of Stamford; fellows to State society, Dr. R. L. Higgins, of Norwalk; Dr. F. L. Smith, Dr. F. J. Adams, Dr. F. W. Stevens, and Dr. H. E. Smyth, of Bridgeport.

Association of American Medical Colleges.—A uniform minimum curriculum was adopted by this association at the Great Northern Hotel, Chicago, on April 10th. The requirements for matriculation were raised so as to make the term of preparation the full four years of the high school course, representing a certain specified number of hours' credit in each subject. A committee was appointed to pass upon the value of medical studies taught by colleges of liberal arts. The following officers were elected: President, Dr. Samuel C. James, of Kansas City, Mo.; first vice-president, Dr. William H. Earles, of Milwaukee; second vice-president, Dr. Eli H. Long, of Buffalo; secretary-treasurer, Dr. Fred C. Zapfee, of Chicago; judicial council, Dr. William J. Means, chairman, of Columbus, O.; Dr. Parks Ritchie, of St. Paul; Dr. Thomas J. Hawkins, of Denver; Dr. Randolph Winslow, of Baltimore; Dr. H. B. Ward, of Lincoln, Neb.; Dr. J. M. Dodson, of Chicago; Dr. George M. Kober, of Washington, D. C. The association will meet in Pittsburgh the third Monday of March, 1906.

Licensed to Practise Medicine in Massachusetts.—The following physicians have been licensed to practise in Massachusetts, having passed the examination held on March 14th and 15th:

Edmund Sanford Thomson, John O'Donoghue, George Floyd White, George Gibson Parlow, Frederick Marshman Kennison, Howard Fellows Morse, Walter Daniels Bieberbach, Marshal Fabyan, Edward Lawrence Salmon, Joseph Aloysius Trainor, Werner Adolf Reinhold Lagus, Fred Austin Stowell, Patrick Joseph Carney, Freeman Augustus Tower, Charles Sleeper Gilman, Lorne Wilborne Harris, Herbert Edmund Peckham, John William Lane, Joel Packard Bradford, Nathan Andrews Goddard, John Alexander MacDonald, Frank William Tilley, Abie Warren Sylvester, Eleanor Way-Allen, Charles Joseph Hanson, John Emen Gillis, David Damon Pratt, Orion Vassar Wells, Helen Francis Cleaves, William Entwistle Garlick, Frederick Dugdale, Archibald John Douglas, Joseph Simpson, Kent Oakley Brown, Walter Clement Kenney, Kendall Lincoln Achorn, Thomas McCurdy, George Henry Sanborn, Henry Church Pillsbury, Julian Dyer Lucas, Henry Harrison,

Archibald McMillan, John Bryant Hartwell, John Wilson Trask, Charles Bradley Russell, Margaret Elizabeth Carley.

Osteopathy Not Recognized as a System of Practice in Utah.—The governor of Utah, under date of March 20, 1905, has addressed the following letter to the Secretary of State:

Dear Sir: I have the honor to file in your office, without approval, Senate Bill No. 92, entitled "An Act to regulate the practice of osteopathy in the State of Utah, etc." In passing upon this act, I have kept in mind the fact that the object of medical legislation is not to benefit the doctors of any school or class, but to protect the public against practice in lines of medical work which the practitioner does not fully understand. Senate Bill No. 92 gives to osteopaths the right to practice minor surgery, and to treat cases, including contagious and infectious diseases, without having first passed examination before the regularly constituted board of medical examiners, in fundamental principles of medicine and surgery, as prescribed by the law. It appears to me that this would open the door for incompetent practitioners to enter our State. The present law seems to me to be broad enough to insure fair treatment to competent physicians, of all schools; and under its provisions osteopaths are allowed the privilege of practising, upon passing examination in the principles underlying their practice, before a board, consisting of graduates of various medical schools, and representing broad medical training and sympathy. And I believe that no one should be regularly licensed to practise even minor surgery without first passing a thorough examination in the fundamental principles of anatomy and surgical practice. Since, therefore, the present law seems to me sufficient, I am led to withhold my approval from this act.

Very respectfully,

JOHN C. CUTLER.

Statement of Mortality in Chicago for the Week Ending April 22, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	Apr. 22, 1905.	Apr. 15, 1905.	Apr. 23, 1904.
Total deaths, all causes.....	558	548	643
Annual death rate per 1,000.....	14.56	14.35	17.41
By sexes.....			
Males.....	307	305	371
Females.....	251	243	272
By ages.....			
Under 1 year.....	108	105	96
Between 1 and 5 years.....	67	67	40
Over 60 years.....	100	96	154
Important causes of death.....			
Acute intestinal diseases.....	17	24	24
Apoplexy.....	15	11	19
Bright's disease.....	40	55	54
Bronchitis.....	25	30	21
Consumption.....	78	59	75
Cancer.....	32	23	23
Convulsions.....	12	6	16
Diphtheria.....	8	5	7
Heart diseases.....	45	51	57
Influenza.....	1	3	5
Measles.....	13	15	1
Nervous diseases.....	18	16	24
Pneumonia.....	72	84	141
Scarlet fever.....	3	..	6
Smallpox.....	2	..	..
Suicide.....	8	9	11
Typhoid fever.....	6	4	7
Violence (other than suicide).....	20	36	28
Whooping cough.....	8	15	..
All other causes.....	135	113	123

Except for the almost epidemic prevalence of measles and whooping cough, heretofore noted, public health conditions are unusually satisfactory for the season of the year. The total deaths from all causes recorded during the week are 85 fewer than for the corresponding week of last year and the decrease represents a decrease of more than 16 per cent. in proportion to population. As to the two child diseases above mentioned the health department can do nothing but repeat its warning to those having charge of the young: Guard them against exposure. It is hoped that the Easter recess and the cleansing of the

school buildings may help to check further spread of the contagions.

Nebraska State Medical Association.—This association will hold its thirty-seventh annual meeting at Beatrice, May 2, 3, and 4, 1905. The following papers are expected:

Oration in Medicine, He's Only a Doctor, by Dr. P. E. Plumb, of Gothenburg; Oration in Surgery, Surgical Enthusiasm. Is it Declining? by Dr. S. C. Beede, of David City; Oration in Obstetrics and Gynecology, Ideals, by Dr. M. L. Hildreth, of Lyons; A Plea for Surgical Intervention in Suspected Malignant Disease of the Abdominal Cavity, by Dr. B. B. Davis, of Omaha; Proper Management of Labor by the Country Doctor, by Dr. A. E. Cook, of Randolph; Obstetric Forceps, by Dr. Andrew B. Somers, of Omaha; The Choice of Operations for the Restoration of the Pelvic Floor, by Dr. J. W. Bullard, of Pawnee City; Chronic Metritis, by Dr. Ewing Brown, of Omaha; Conservatism in Gynecology, by Dr. A. B. Anderson, of Pawnee City; Chronic Salpingitis, by Dr. Frank Park, of Omaha; "Symposium" on Extrauterine Pregnancy—(a) Clinical Picture and Treatment, by Dr. W. O. Henry, of Omaha; (b) Histology and Pathology, by Dr. E. C. Henry, of Omaha; A Simple Method of Hysteromyectomy by the Aid of a Dagger Clamp, by Dr. H. M. Hepperlen, of Beatrice; Suprapubic Prostatectomy, by Dr. A. I. McKinnon, of Lincoln; The Abortive Type of Typhoid Fever, by Dr. William R. Young, of Ansley; Pain in the Upper Abdomen—What It May Mean, by Dr. J. E. Summers, Jr., of Omaha; Something New in Antiseptic Procedure, by Dr. William B. Ely, of University Place; Some Incomplete and Some Wrong Diagnoses, by Dr. George Haslam, of Fremont; The Diagnosis of Cancer of the Stomach, by Dr. H. L. Alkin, of Omaha; The Laryngeal Affections of Singers, by Dr. H. B. Lemere, of Omaha; Smallpox, by Dr. Francis P. Dorsey, of Hartington; Indications for Operation in Mastoid Disease, by Dr. S. E. Cook, of Lincoln; Report of Two Cases of Leucæmia and Two Cases of Splenic Anæmia and Their Differentiation, by Dr. W. O. Bridges, of Omaha; Intestinal Obstruction, by Dr. R. D. Mason, of Omaha; Nephritis—Etiology and Treatment, by Dr. John Mills Mayhew, of Lincoln; Actinomycosis of the Lungs, by Dr. E. Fletcher Ingals, of Chicago; Trypanosomes and Disease, with Demonstration of Nebraska Specimens, by Professor Henry B. Ward, of State University; Cysts of the Anterior Mediastinum, by Dr. A. P. Condon, of Omaha; The Diagnosis of Hemorrhage from the Alimentary Tract, with Cases, by Dr. W. F. Milroy, of Omaha; Variation from Routine Necessary in Some Operations for Inguinal Hernia, by Dr. John Prentiss Lord, of Omaha; "Symposium" on Diabetes Mellitus—(a) Physiopathological Consideration, by Dr. I. N. Pickett, of Odell; (b) General and Special Etiology, by Dr. P. L. Gillispie, of Wymore; (c) Diagnosis—With Special Reference to the Præglicosuric Stage, by Dr. George H. Brash, of Beatrice; (d) Ocular Complications, by Dr. John I. McGirr, of Beatrice; (e) Nervous Phenomena, by Dr. C. P. Fall, of Beatrice; (f) The Precautions a Surgeon Should Take for Operating on Diabetic Subjects, by Dr. H. M. Hepperlen, of Beatrice; (g) Diabetic Treatment, by Dr. C. A. Love, of Beatrice; (h) Medical Treatment, by Dr. B. M. Deardorf, of Clatonia; Some Notes on Mastoiditis with Spontaneous Perforation in the Digestive Fossa, by Dr. F. S. Owen, of Omaha; Endocarditis—Its Etiology and Symptomatology, by Dr. C. W. M. Poynter, of Lincoln; Adhesions About the Sigmoid Flexure, by Dr. Harry H. Everett, of Lincoln; The Pharmacology of Antipyretics, by Dr. A. L. Muirhead, of Omaha; Upon the Treatment of the Individual Case in Appendicitis, by Dr. C. C. Allison, of Omaha; Diagnosis of Bright's Disease, by Dr. L. B. Pillsbury, of Lincoln; The Symptoms Which Demand Operative Interference in Intestinal Obstruction, by Dr. Charles O'Neil Rich, of Omaha; Chorea—Its Etiology and Treatment, by Dr. H. M. McClanahan, of Omaha; General Surgery, by Dr. H. C. Moore, of Omaha; Too Much Medicine, by Dr. J. Lue Sutherland, of Grand Island; Foreign Bodies in the Esophagus, and Foreign Bodies in the Larynx and Trachea, by Dr. Warwick M. Cowgill, of Lincoln; The Diagnosis of Gastric Ulcer, by Dr. H. J. Lehnhoff, of Lincoln; Plaster of Paris in the Treatment of Surgical and Traumatic Wounds of the Soft Parts, by Dr. H. Winnett Orr, of Lincoln; Diseases of the Accessory Sinuses of Nose, by Dr. D. C. Bryant, of Omaha; When and How to Operate for Prostatic Hypertrophy, by Dr. A. C. Stokes, of Omaha.

Pith of Current Literature

REVUE DE MEDECINE.

March, 1905.

1. Contribution to the History of Sexual Neurasthenia,
By FÉRÉ.
2. Menstrual Fever in Those Who Are Suffering with
Pulmonary Phthisis, By SABOURIN.
3. A Case of Angioma of the Carotid, By HARDOUIN.
4. Bronzing in a Case of Diabetes, By MARGAIN.
5. The Hypophysis (Pituitary Body) and the Pathogenesis
of Basedow's Disease, By SALMON.
6. The Rôle of Glycogenesis in Consumptive Diabetes,
By LÉPINE.

1. Contribution to the History of Sexual Neurasthenia.—Féré narrates the history of two peculiar cases in which there was a general condition of depression which may be regarded as a favorable preparation for neurasthenia. The latter condition resulted in the one case after a sexual storm and in the other after a fall from a ladder.

2. Menstrual Fever in Phthisical Women.—Sabourin in a lengthy communication concludes that this recurring fever in women who, in many instances, menstruate not at all or only very little, is not a matter of great importance, notwithstanding the monthly repetition of more or less pronounced congestive phenomena relating to the lungs. He was unable to discover that it had any bearing upon the development of tuberculous lesions. They may remain in bed or not during the existence of this fever, the same as if the sufferers were not tuberculous. For those who have a tendency to hæmoptysis it is better to remain in bed when the catamenial crisis is present, and remain there during its entire duration. Hæmoptysis almost always precedes the menstrual flow and is arrested after the flow has been established. In cases of dysmenorrhœa one may administer hot drinks, sinapisms, foot baths, hot applications to the abdomen, etc. Should hæmoptysis persist after the menstrual flow has occurred it may be treated by simply restricting the diet for twenty-four or forty-eight hours as a means of reducing the congestion. If amenorrhœa has supervened no treatment will be of much use, except that which will improve general nutrition.

5. The Pituitary Body and the Pathogenesis of Basedow's Disease.—Salmon considers this disease to be due to initial intoxication of the nervous centres, which gives rise to superactivity of the thyroid gland. The primary cause is functional derangement of the pituitary body, the internal secretion of which is essential to the nutrition of the nerve elements, and is an antitoxine for the nerve centres. It is also functionally related to the thyroid gland, so that disease in one is accompanied by disturbance in the other. Thus in acromegaly and in tumors of the pituitary body the thyroid undergoes change, and there is always hypertrophy of the pituitary body with myxœdema and goitre. Bruda found the pituitary body very small and hard in two autopsies after Basedow's disease, while in a third it was normal. This relationship furnishes an explanation of the

complex ætiology of Basedow's disease; it explains the emotional phenomena, the traumatisms of the head, the relations between disease of the nasal passages and exophthalmic goitre, etc. Further, post mortem investigations in cases of Basedow's disease are very desirable for the further study of its relationship to the pituitary body.

6. Glycogenesis in Consumptive Diabetes.—Lépine remarks that in most cases of diabetes there is a diminution of the glycolysis in the tissues. But in most diabetics the element of denutrition must also be considered. This occurs in spite of abundance of albumenoid and fatty food and in spite of the tolerance of such drugs as opium and antipyrine. The author believes that in such cases glycogen does not constitute the exclusive source of sugar. This was proved by experiments upon dogs in which the sugar in the blood was increased from a few milligrammes per litre to more than twenty centigrammes within half an hour. This increase occurred during the passage of the blood through the lungs, the dogs being narcotized with chloroform. The same result was obtained after administration of carbonic oxide, after venesection, etc. Other experiments as well as clinical experience have shown that diabetics should avoid a diet rich in albumenoids. One of the most recent suggestions as a diet for diabetics consists in the exclusive use of potatoes, the vegetable albumenoids replacing those from animal sources.

REVUE DE CHIRURGIE.

March, 1905.

1. Castration for Sexual Perversion, By FÉRÉ.
2. On the Entrance of Air Into the Veins During Surgical Operations, By DELORE and DUTEIL.
3. The Surgery of the Heart, By GUIBAL.
4. Gastrorrhagia in Simple Ulcer of the Stomach,
By TUFFIER and JEANNE.
5. Intestinal Hæmorrhage Following the Operations for Hernia, By SAUVÉ.
6. Contributions to the Study of Functional Impotence Consecutive to Traumatisms of the Joints,
By MALY and RICHON.

2. On the Entrance of Air Into the Veins During Surgical Operations.—Delore and Duteil advise puncture of the right auricle when the accident in question has occurred. This may be done by thrusting a needle attached to an aspirator into the third intercostal space of the left side, one centimetre and a half from the border of the sternum. This will enable one to avoid the internal mammary vessels. A layer of lung tissue may be penetrated, but this will do no particular harm. By doing this operation promptly it may result in saving life.

4. Gastrorrhagia in Simple Ulcer of the Stomach.—Tuffier and Jeanne propose the following indications for surgical interference in gastrorrhagia: 1. Ulcers limited to the different layers of gastric tissue. When it is easy of access and involves only the mucous layer the latter should be ligated en masse, and transmucous sutures passed. When it involves the entire wall of the stomach, resection by gastrectomy or pylorotomy should be performed, according to

the situation of the ulcer, and sutures passed in two layers. When it is difficult of access and involves only the mucous membrane, cauterization may be practised. When it involves the entire wall a row of ligatures should be passed from each extremity of the curvature, which is nearest the ulcer. 2. Ulcers which have gradually extended beyond the stomach, adhesions to neighboring tissues having formed. When there is no stenosis of the pylorus, and the ulcer is easy of access, the edges should be laid bare, with or without curettage, and the wound sutured. If it is difficult of access the tissues at a distance from the wound must also be ligated. When there is stenosis of the pylorus gastroenterostomy should be performed, careful hæmostasis being observed. 3. Ulcers which are multiple and disseminated. Gastroenterostomy associated if necessary with direct hæmostasis. 4. Ulcers which cannot be discovered; gastroenterostomy is indicated.

FORTSCHRITTE DER MEDIZIN.

March 1, 1905.

1. Concerning Intermittent Lameness, By ZESAS.
2. The Morphology of Carcinoma and the Question of Its Parasitic Origin, By ORTH.
3. The Intravenous Administration of Salicylic Acid, By MENZER.

2. **The Morphology of Carcinoma and the Question of Its Parasitic Origin.**—Orth remarks that the only peculiarity of cancer consists in the presence of epithelial cells which appear in uninterrupted series from preformed epithelium. From a scientific standpoint, therefore, every cancer should be designated an epithelioma. To differentiate it from other epithelial new growths it can be designated as a malignant, destructive, or heterotopic epithelioma. There is no metaplasia of connective tissue cells or other cells into cancer cells and the stroma of cancer has no peculiar significance. Two groups of heterotopic epitheliomata can be distinguished: 1. Those in which there is a typical arrangement of the cancer cells, including adenomata and caneroids; 2. those in which the cells are arranged atypically and which may receive the general name cancer. Inasmuch as parasites constitute a feature in suppuration, tuberculosis, etc., one may be justified in concluding that this must also be the case in cancerous new growths. If parasites do indeed form a feature of cancer they must differ from those which occur with suppuration, tuberculosis, etc., because they must stand in the closest relation to the cancer cells. But the occurrence of such parasites has not yet been demonstrated. In experiments which have to do with the transmission of tumors, the question concerns only transplantation, the formation of a secondary tumor and metastasis. It is not necessary to assume the presence of parasites; on the contrary, various explanations are possible for that which occurs in connection with cancer. The unsystematic, heterotopic proliferation of epithelial cells can be very well comprehended without resorting to the hypothesis of parasites.

3. **The Intravenous Administration of Salicylic Acid.**—Menzer informs us that the methods of

administering salicylic acid, by the mouth, rectum, and inunction, have been reinforced by Mendel's proposal of intravenous injection. His solution consists of sodium salicylate 17.5 grammes, caffeine 2.5 grammes, distilled water to 100 grammes. Two cubic centimetres of the mixture are injected, containing 0.35 grammes of sodium salicylate. Rubens has tried this method in 60 cases. An illustrative case is that of a man who had inflammatory rheumatism, with fever, swollen joints, and great pain. Five minutes after the above solution was injected the swelling disappeared from his joints and his pain left him. The pain returned, however, in half an hour. Burgsch, who has also tried this method, reports that it is very painful, and could not well be introduced into general practice. It has no advantages in the treatment of acute articular rheumatism, and in the mild subacute and chronic cases it is less effective than other measures.

March 10, 1905.

1. The Use of Thiol in Dermatology, By LEREDDE.
2. Concerning Intermittent Lameness, By ZESAS.

1. **The Use of Thiol in Dermatology.**—Leredde states that no specific effect is to be attributed to thiol. He knows of no pruriginous disease, however, in which it may not be used with advantage. He has used it for pruritus vulvæ, prurigo, urticaria, and lichen planus. It may be employed as long as the changes in the skin are superficial. In chronic pruritus it will relieve, but not cure. A cure may be obtained from radiotherapy. It has been used advantageously for acne and for burns. It has also given good results in the treatment of pityriasis rosea.

March 20, 1905.

1. Concerning the Diagnostic Significance of Certain Skin and Tendon Reflexes, By ROTHMANN.
2. Concerning Local Exsanguination and Local Anæsthesia, By MÜLLER.

2. **Concerning Local Exsanguination and Local Anæsthesia.**—Müller prefers the use of cocaine mixtures for local anæsthesia to eucaïne B, combined with adrenalin, though the latter are believed to be less poisonous. Cocaine does not interfere with the efficiency of adrenalin and suprenalin. Eucaïne B. and tropa cocaine modify the contracting power of suprenalin and adrenalin so that stronger solutions of the latter are required when combined with the former. Cocaine combined with suprenalin has been found very efficient in operations on the female genital organs. Suprenalin when injected into the female genital organs may produce poisonous symptoms. Stovaine is also recommended as a safe and efficient local anæsthetic.

ZENTRALBLATT FUER GYNAEKOLOGIE.

March 11, 1905.

1. A Case of Acute Œdema of the Cervical Lips During Pregnancy Due to Coprostitis, By L. SEITZ.
 2. Prevention of Bladder Disturbances After Gynaecological Operations, By GUTERD.
1. **Acute Œdema of the Cervix.**—Seitz reports the case of a multipara in whom a midwife incised the prolapsed œdematous lips of the cervix,

mistaking them for the membranes. Severe hæmorrhage followed. The woman's rectum was loaded with feces and their removal was promptly followed by a subsidence of the œdema. Recovery followed.

2. The Bladder After Operations.—Gutbrod advises the use of a permanent rubber catheter for five to eight days after hysterectomies, Alexander's operations, and colporrhaphies for the avoidance of cystitis and bladder irritations. The plan has worked well in his hands.

March 18, 1905.

1. Facial and Hypoglossus Paresis Following Spontaneous Births, By A. STEIN.

1. Facial Paresis After Normal Births.—Stein reports a birth in a primipara which lasted nearly twenty-two hours. The child presented a doughy swelling over the left mastoid bone which was regarded as a hæmatoma. Facial and hypoglossus paresis were present, the former disappearing in eight days, the latter a few days later. The author thinks that an intracranial hæmatoma must have existed in addition to the extracranial one to account for the symptoms.

BERLINER KLINISCHE WOCHENSCHRIFT.

March 6, 1905.

1. Relations Between Diabetes and Surgical Operations (*To be concluded*), By KAREWSKI.
2. Influence of Temperature of 55° C., Upon Agglutination in Ficker's and Widal's Reaction, By K. SADLER.
3. Macroscopic Agglutination Test in Typhoid Fever, By P. AASER.
4. Cold in the Treatment of Skin Diseases, By M. JULIUSBERG.
5. Serous Meningoencephalitis of Nasal Origin, By J. HERZFELD.
6. Forensic Tests for Blood, By H. MARX.

2. Influence of Temperature on Widal's Reaction.—Sadler reports his experiments showing the favorable influence of a temperature of 55° C. in using Ficker's test for typhoid fever. The same temperature acts favorably on Widal's reaction both microscopically and macroscopically. Ficker's test is more reliable than Widal's, also at a temperature of 37° C., if carried out under the same precautions. At 55° C. Ficker's reaction is obtained more quickly than the microscopic Widal test at 37° C.

3. Agglutination Test.—Aaser eliminated in his numerous experiments all pseudoagglutinations in order to have absolutely perfect results. He shows that even without a thermostat reliable results can be obtained. He mixed toluol with the reagent so that it was no longer dangerous and can be used in this manner by the practising physician.

4. Cold in the Treatment of Skin Diseases.—Juliusberg has used carbonic acid gas in the treatment of skin diseases, the acid having a powerful freezing action, so that its dosage must be carefully regulated. He uses the gas by allowing it to act upon the skin for from thirty to sixty seconds, repeating it in a week if necessary. He has used the treatment in cases of acne, psoriasis,

syctic processes, ulcers of the leg, ulcerations due to the Röntgen rays, chancroids, lupus, and lupus erythematosides. In psoriasis and lupus the lesions seemed to get worse, but in lupus erythematosides there was a decided improvement, all but one of the nine cases treated being benefited.

5. Meningoencephalitis.—Herzfeld says that abscesses due to serous meningoencephalitis of nasal origin is difficult of diagnosis on account of the absence of focal symptoms. He reports such a case following an empyema of the frontal sinus. Unconsciousness and convulsions of the left half of the body were the principal symptoms. Trephining over the right half of the brain brought about a cure.

6. Forensic Blood Tests.—Marx reviews the methods at present in vogue giving special prominence to the precipitate test for differentiating human from animal blood. This method is based upon the specificity of the proteids of the species.

March 13, 1905.

1. Morphology of Cancer and the Parasitic Theory (*To be concluded*), By J. ORTH.
2. The Complement Contents of the Blood in Different Forms of Tuberculosis, By J. KENTZLER.
3. A Newly Observed Accompaniment of Paresis of the Peroneal Nerve, By H. HIRSCHFELD.
4. The Physiological Action of Sool Baths, By T. GROEDEL.
5. The Modern Treatment of Heart Disease, By E. DE RENZI.
6. The Relations Between Diabetes and Surgical Operations (*Continued*), By KAREWSKI.
7. Sunshine and Epidemics in 1904-5, By J. RUHEMANN.
8. Rapid Dilatation of the Cervical Canal, By STOECKEL.

2. Complements in the Blood.—Kentzler concludes from his experiments that since the complement contents of the blood in all forms of tuberculosis are identical with those contained in normal human blood, it is clear that the blood of tuberculous persons is endowed with a sufficient quantity of protective material. It is, therefore, fair to assume that the amboceptor undergoes such a qualitative change in the course of tuberculosis that despite the presence of a sufficient quantity of protective material, the destructive action of the tuberculous virus is not inhibited.

3. Paresis of the Peroneal Nerve.—Hirschfeld has noticed that if a patient suffering from paresis of the peroneal nerve is required to bend the foot dorsally, the action is much more limited with the knee extended than if the knee is simultaneously flexed. This phenomenon is present only to a slight degree in the early stage of repair, but increases with the restoration of the paralyzed muscles and finally disappears when a cure is established. The practical result of this observation is to institute active movements in cases of peroneus paresis, with the knee flexed, as the paretic muscles are thus capable of a more extensive dorsal flexion.

5. Modern Treatment of Heart Disease.—De Renzi, after referring to many well known facts, urges a systematic salicylic treatment in cases of acute articular rheumatism in the hope of avoid-

ing cardiac complications. Digitalis, he says, is contraindicated in cases with good compensation. The author strongly advises the use of passive movements even in uncompensated cases.

8. Dilatation of the Cervical Canal.—Stoeckel reviews the many opinions which have been given on the virtues and demerits of the Bossi dilator. He says the instrument can be used at any period of pregnancy even in primiparæ, with the cervical canal still intact and with the os entirely closed. The after effects—lacerations of the cervix, immediate hæmorrhage, inflammatory exudates, etc.—have been in no way lessened by care and skill in the use of the instrument. The author does not advise its use by general practitioners.

March 20, 1905.

1. Our Knowledge of the Origin of Malignant Neoplasms (To be concluded), By VON HANSEMAN.
2. The Function of the Sebaceous Glands and Their Relation to Fat Metabolism, By A. BUSCHKE and A. FRAENKEL.
3. The Action of Alcohol Upon the Change in the Pupillary Reaction, By H. VOGT.
4. Rectal Gonorrhœa in Infantile Vulvovaginitis, By K. FLÜGEL.
5. The Morphology of Cancer and the Parasitic Theory (Concluded), By J. ORTH.
6. Relations Between Diabetes and Surgical Operations, By KAREWSKI.
7. Origin and Treatment of Myopia, By HELBRON.

2. Function of Sebaceous Glands.—Buschke and Fraenkel show experimentally that physostigmine produces an excessive secretion from the meibomian glands in guinea pigs, possibly by direct action upon voluntary and involuntary muscle fibre. The histological and chemical examinations make it appear likely that even in animals primarily fat is excreted by the sebaceous glands and that the destruction of the cells of the glands is a secondary matter. Further physiological examination shows that under especially favorable circumstances the fat of the food can be excreted through these glands, although there is no analogy between this fact and similar excretion through the cecygeal gland of birds.

3. Alcohol and the Pupillary Reaction.—Vogt notes that in normal persons, alcoholic intoxication produces no change in the reaction of the pupils, yet in mentally diseased individuals small doses of alcohol cause a delayed reaction to light. In one case the pupils reacted unequally, while arteriosclerotic persons in general showed a change in the pupillary reaction. The other reflexes were affected similarly to those in healthy individuals. Chronic alcoholics showed the same pupillary changes, so that it is evident that alcohol can, in time, bring about such lesions. It follows that the reaction of the pupils to alcohol is a test as to the cause of unconsciousness in those cases in which this condition follows the indulgence in alcoholic liquors.

4. Rectal Gonorrhœa.—Flügel found and proved bacteriologically twenty per cent. out of fifty-six cases of vulvovaginitis to have rectal gonorrhœa. The most common mode of infec-

tion is by the entrance of pus into the rectum from the vaginal discharge. The treatment consists in the administration of suppositories of silver nitrate or the silver albuminates. The rectal secretion is always more quickly freed of gonococci than that of the vagina, since the rectum furnishes a poorer medium for the growth of the bacteria. The author advises careful observation in all cases of vulvovaginitis against rectal infection.

5. Parasitic Theory of Cancer.—Orth concludes a lengthy paper as follows: 1. The essential element of all cancers is the cancer cell, without which there can be no metastasis. 2. Parasites are not essential to the elucidation of metastases as cells, capable of growth, are sufficient to explain them. 3. There is no analogy between metastatic pus infections, tubercle tissue, or other granulomata and cancer, hence there can be analogous conclusion as to the parasitic origin of cancer. 4. The inoculation of a second individual with cancer does not require the parasitic theory in explanation, since it can be explained by a metastasis due to inoculated cells. 5. The present status of the parasitic theory of cancer is not sufficiently crystallized to form a scientific basis for this belief.

6. Diabetes and Surgical Operations.—Karewski says that in diabetics there are no characteristically peculiar symptoms after surgical procedures, although the greater the degree of glycosuria and the greater its resistance to influence by diet, the greater the chances of infection become. The patient's general constitution forms a criterion as to his ability to withstand operations. The author considers in detail the causes of coma after operation. He advises postponing operations on diabetics until the glycosuria has been reduced and the general condition improved.

7. Myopia.—Helbron considers the causes of myopia due to increase of the intraocular pressure in the posterior portion of the bulb, such as sewing by persons with a tendency to myopia, anatomical peculiarities in the eyes of myopics, etc. These conditions are due primarily to diminished resistance of the posterior portion of the myopic eye. The modern method of treatment is to correct fully far and near vision, but in high degrees of myopia and in elderly persons, under correction is necessary.

RIFORMA MEDICA.

March 18, 1905.

1. Further Researches on Serum Therapy in Syphilis, By A. RISSO and A. CIPOLLINA.
2. The Alleged Exaltation of Virulence in the Typhoid Bacillus, By C. P. GOGGIA.
3. The Horizons of Modern Surgery, By DOMENICO MORISANI.

1. Serum Therapy in Syphilis.—In a previous article Risso and Cipollina described the preparation of their serum against syphilis, and the experiments which they performed with this remedy. The serum is obtained from dogs that have been previously immunized by means of injections of the blood of syphilitic patients who were in the full tide of secondary syphilis. To this serum

they also added small amounts of the corpuscles of the same immunized animals, after dissolving these corpuscles by hæmolysis. This was done with the idea that a portion of the immunizing substances of an animal's blood is contained within the cells thereof, while the rest resides in the plasma. In this first article they reported eight cases of syphilis, of which six were cured and two were only slightly improved, inasmuch as treatment had just been begun. In the present articles the authors report that of five syphilitics with secondary manifestations that had been declared cured, three had no signs of the disease whatever since then, and have continued the treatment, while the other two patients, who had interrupted the treatment, had some recurrences. They found that the treatment was efficient in most cases of secondary syphilis, although ten, or more, injections were sometimes needed to cause improvement. In the second series of patients which is reported now, the serums used were more irritating and smaller doses had to be used. The larger doses of the less irritating serums were more efficient in the first series of cases. The results obtained by the authors with tertiary cases are of especial interest. They described two cases cured in the third stage, in the first report. The cases now reported are more severe forms of tertiary lesions. A typical case was one which occurred in a woman with an ulcerating gumma at her ankle. Simple applications of boric acid were made locally, and the serum was used internally. The ulcer rapidly healed. On the other hand, another ulcer on the forehead, which was treated by mercurial ointment, continued to grow worse, and had to be incised. The authors conclude that the serum acts favorably in both secondary and tertiary forms, and possibly in the initial parasymphilitic manifestations. The dosage and the manner in which the remedy is borne by patients vary in each case. Thus there are patients who bear five c.c. of the serum injected daily exceedingly well, while others develop local tenderness and pain, or urticaria, or febrile symptoms after the injections.

2. **The Alleged Increase in Virulence of the Typhoid Bacillus.**—Goggia, of Maragliano's laboratory, reports the results of his experiments on animals, with a view of determining whether the typhoid bacillus is identical with or at least related to the colon bacillus. He injected a culture of a typical Eberth bacillus into the peritonæum of two guinea pigs. After these animals died the peritonæum was opened, and a culture was made of its contents. This culture was inoculated into a second pair, thence into a third, etc., until a sixth pair was reached. The bacillus recovered by culture from the sixth inoculation was a typical bacillus coli communis. The guinea pigs in each succeeding pair died more and more rapidly after the injection of the same amount of culture. The bacillus recovered from the sixth pair had all the biological characters of a colon bacillus, and did not become agglutinated by typhoid serum except in a very slight degree. This bacillus was not the original typhoid bacillus injected into the first pair, but a colon bacillus, which had entered the

intestines of the first pair and penetrated into the peritonæum, as this bacillus can do, according to the author's experiments detailed in this article. The value of such experiments as that described, namely, of the transmission of a culture through several animals by peritoneal injections is very doubtful, and they do not decide the question as to the possibility of the typhoid bacillus being enhanced in virulence or identical with the bacillus coli. To show how fallacious experiments of transplantation are, the author injected into the peritonæum of three guinea pigs three different cultures. Into the first animal he injected a classical typhoid culture; into the second, one obtained from the peritonæum of the first; and into the third, a culture from the peritonæum of the second. The bacillus obtained from each of these three animals had all the characters of the bacillus coli, and, besides, did not become agglutinated with a typhoid serum, which agglutinated the typhoid bacillus in the proportion of 1:100. The experiments quoted, therefore, cannot be accepted in support of the alleged increase in virulence of the typhoid bacillus when transmitted through several animals.

ROUSSKY VRATCH.

March 5, 1905.

1. Enormous Pendulous Lipoma of the Right Labium Majus, By V. V. MAKSIMOFF.
2. Attempts at Inoculating Gonococci in Small Laboratory Animals and Experiments with Serum Therapy, By M. N. MOSKALEFF.
3. On the Secretive Function of the Parotid Gland in Man (Concluded), By E. A. ZHERBOVSKI.
4. Syphilis of the Lungs, By S. B. BERMEL and N. B. SOLOVIOFF.

1. **Large Lipoma of the Vulva.**—Maksimoff reports the case of a woman aged 19 years, unmarried, who had a lipoma of enormous size on the right labium majus. The tumor was pendulous and swung between her legs, reaching down to the knees. Removal was indicated, especially because the tumor had begun to ulcerate under the influence of external causes, such as friction, wetting with urine, etc. The growth had taken a number of years to reach this size. When removed it weighed about eight pounds, and was found to be a true lipoma.

2. **Inoculation and Serum Therapy of Gonococcus.**—Moskaleff reports the results of a series of researches on animals with inoculation of the gonococcus, and with the making of a protective serum against this germ. The best media for the growth of the gonococcus are those of Wassermann, Wertheim, and Kiefer, the last being most conveniently prepared. The Kiefer medium contains pleuritic exudate mixed with agar-agar, and glycerin. Gonococci proved pathogenic in rabbits on being injected either subcutaneously or into the peritonæum. These germs were also pathogenic in white mice, producing fatal infections when injected into the peritonæum. White mice are probably the most convenient animals for experimenting on the pathogenic action of the germ. The action of the gonococcus on the various tissues of the body depends upon the activ-

ity of the gonococccotoxine. The latter acts chemiotactically, and produces a sterile suppuration in some tissues, while in others it acts on the vessels, and cytolytically on the cells, and produces transparent exudates. (This is the case in the peritoneum.) Serum of rabbits rendered immune by the inoculation of gonococci proved to a certain extent a curative and preventive agent, but further experiments are needed to give more definite results.

2. **Parotid Gland.**—The function of the parotid gland is the subject of a scientific research by Zherbovski. He found that the secretion of the gland varies in amount and quality according to the stimulus given by contact with various substances in the mouth. The amount of secretion of the parotid varies as the square root of the amount of stimulant applied to the mouth. Chewing has much to do with the rapidity of the secretion from the parotid, and the saliva is not only more abundant, but more viscid when mastication is vigorous and prolonged. When food is chewed on one side the corresponding parotid gland works more than the opposite gland, while when chewing goes on both sides both glands work equally. The alkalinity of the saliva is in porportion to the amount of ash therein. As the amount of ash increases, and as the rapidity of the secretion is enhanced, the alkalinity grows more marked. The digestive power of the saliva is proportionate to the amount of organic matter therein. The digestion of starch by the parotid secretion, after it reaches the stomach, is possible in proportion to the alkalinity of the saliva. The action of ptyalin in the stomach is only possible during the beginning, and the final stages of digestion. At the acme of gastric digestion, when the free hydrochloric acid is abundant, the action of the saliva is only possible when there are large amounts of highly alkaline saliva in the stomach. The influence of saliva in the digestion of proteids reduces itself to a dilution of the hydrochloric acid of the gastric juice, and in disease makes hypoacidity worse, while it tends to make hyperacidity less severe.

3. **Syphilis of the Lungs.**—Bermel and Solovioff present two cases of pulmonary syphilis, both in adults of middle age. The clinical picture of pulmonary syphilis is very variable, and depends entirely upon the degree of anatomical lesions, which are present in the lungs. In both the cases reported, the disease began with abscesses in the lungs. There was no possibility of a mistake for tuberculosis, as often happens in such cases. These abscesses were gummas that had suppurated under the influence of secondary infections with streptococci. The authors think that the occurrence of secondary infections in syphilitic pneumonias is the chief cause of the variable clinical symptom of these affections. The fever is one of the signs of such a secondary infection. The slow development of the disease, without any characteristic changes locally in the lungs, denotes its syphilitic character, as does, of course, the history of syphilis, or the presence of syphilitic lesions elsewhere in the body. No char-

acteristic location can be given to the syphilitic lesions occurring in the lungs, but the presence of a focus in the middle right lobe is quite suggestive. Cough and expectoration, with or without blood, are not necessarily accompaniments of pulmonary syphilis, but may aid in the diagnosis when present. The loss of flesh and strength and the sweats are rather effects of the complications, than of the disease itself. The prognosis is quite favorable, thanks to the possibility of applying specific treatment.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 20, 1905.

1. A Method of Producing Ether Narcosis by Rectum, with the Report of Forty-one Cases,
By JOHN H. CUNNINGHAM, JR., and F. H. LAHEY.
2. Serum Treatment in Multiple Infectious Arthritis,
By E. G. BRACKETT.
3. The Communicability of Cerebrospinal Meningitis,
By E. M. BUCKINGHAM.

1. **Ether Per Rectum.**—Cunningham and Lahey report in detail each one of the forty-one cases in which ether narcosis was produced by the administration of ether vapor per rectum. A special apparatus is necessary in order that irritation of the bowel may be avoided. It can easily be made with a little glass and rubber tubing and a rubber bulb for producing air pressure. Pirogoff, in 1847, was probably the first who attempted to administer ether in this fashion. The present experiments are the first which have given promising results. The authors believe that this method of producing narcosis has a distinct place in practical medicine.

2. **Infectious Arthritis.**—Brackett reports four cases of multiple infectious arthritis treated by injections of antistreptococcus serum. The joint manifestations, in the class of cases suited to this form of treatment, are due, probably, to the action of toxins rather than to the actual invasion of the joints by the offending microorganisms. The author concludes that the use of the serum when effectual is apparently only to cut short the acute stage. It has no effect on the deformity or the stiffness of the joints, except to diminish that which is caused by the sensitiveness. The remaining deformity and limitation of motion are the results of the adhesions and contractions, and must be treated by the usual means employed to relieve this condition when existing from any cause after the inflammatory process has subsided.

3. **Meningitis.**—Buckingham asserts that living in the same room and breathing the same air with patients ill with cerebrospinal meningitis is not in itself dangerous. However else the disease is spread, it is not spread by what is commonly understood as contagion. These conclusions are based on the fact that during eight years there have been treated 110 cases of meningitis in the Children's Hospital, Boston, and that during that time not a single case has originated there. The meningitis cases are not isolated, but are treated in the general wards, and are not the subjects of special precautions.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 22, 1905.

1. Laboratory Diagnosis of Variola. By R. L. THOMPSON.
2. Large Carcinomatous Tumor of the Liver. Removal Seventeen Months After Nephrectomy for Carcinoma of the Left Kidney. Temporary Recovery,
By THOMAS S. CULLEN.
3. Reclination of the Lens: Under Certain Conditions a Justifiable Operation, By F. T. ROGERS.
4. Eye Strain, By LEWIS S. DIXON.
5. Some Fallacies in the Agglutination Tests; a Plea for the Employment of a More Uniform Technic,
By OSKAR KLOTZ.
6. The Scintillating Scotoma or Transient Functional Hemipia, By CHARLES J. KIPP.
7. Intestinal Perforation Complicating Typhoid Fever,
By GEORGE L. HAYS.
8. The Extraction of the Intracellular Toxine of the Colon Bacillus, with a Preliminary Statement Concerning Its Physical and Chemical Properties,
By SYBIL MAY WHEELER.
9. Local Anæsthesia in Major and Minor Operations on the Ear, as Observed in Professor Politzer's Clinic in Vienna,
By GEORGE PAUL MARQUIS and OSCAR H. KRAFT.
10. Pus Tubes in the Male and Their Surgical Treatment,
By W. T. BELFIELD.
11. Immunity. Chapter XIII.

1. **Variola.**—Thompson describes a method of making a laboratory diagnosis of variola from a small skin snipping in an average time of three hours. The specimens to be examined must be fixed in acetone and imbedded in paraffin. Hæmatoxylineosin staining gives the best results, though other stains will at times answer. The diagnosis is based on a specific histological picture and on the presence of cytoplasmic and intranuclear bodies.

2. **Carcinoma of the Liver.**—Cullen reports his own case in minute detail. He reviews the various methods that have been employed and suggested for performing amputations of portions of the liver, and gives a table of seventeen cases of liver resection reported since 1899. The statistics up to this time have been collected by Keen. It is not feasible to profitably condense the paper which deals chiefly with operative techniques.

3. **Reclination of the Lens.**—Rogers concludes that the operation of reclination may be justifiable: (1) On the aged and infirm or those suffering from exhaustive diseases. (2) When there is non-curable infection of the conjunctiva or lacrimal sac. (3) When one eye has been lost by suppuration or hæmorrhage following operation and a similar result is feared. (4) In obstinate bronchitis. (5) In fluid vitreous with tremulous iris. (6) In the insane or unmanageable patient. (7) In the very deaf where the assistance of the patient cannot be secured.

7. **Intestinal Perforation.**—Hays reports twelve cases of intestinal perforation occurring during typhoid fever, and which came to operation. These, added to seven cases already reported, give a recovery percentage of 42.10. The author lays much stress on the following details of operation: (1) The bowel at the site of the per-

foration should be anchored to the peritonæum at the upper angle of the wound through the belly wall. (2) The peritoneal cavity should be thoroughly flushed with salt solution. (3) Drainage to the bottom of the pelvis. (4) The Fowler position.

10. **Pus Tubes in the Male.**—Belfield holds that an epididymitis following prostatic pus infection, whether gonorrhœal or other, is usually suppurative; pus tubes are quite as common in the male as in the female; hence the rational treatment of such acute epididymitis should frequently be surgical, i. e., it should include the evacuation of pus by incision.

MEDICAL RECORD.

April 22, 1905.

1. Visual Function the Cause of Slanted Handwriting; Its Relation to School Hygiene, School Desks, Malposture, Spinal Curvature, and Myopia,
By GEORGE M. GOULD.
2. Simple Ulcer of the Stomach and Its Surgical Treatment,
By JOHN J. McGRATH.
3. Erysipelas with an Excessive Production of Fibrin,
By ROLFE FLOYD.
4. An Unusual Case of Bradycardia,
By JULIUS H. COMROE.
5. Acute Posterior Periurethral Abscess,
By FERDINAND C. WALSH.
6. Report of an Interesting Case, By E. B. VAN ARSDEL.

1. **Visual Function.**—Gould devotes his paper to a very methodical condemnation of slant writing, school desks, and "recommended" malpostures for writing and reading. He explains how an untold list of evils follows in the wake of our wretched habits. Vertical writing, a desk whose top slants at an angle of about thirty degrees and a special penholder, will free the race from a number of ills. "It has been found that from 50 per cent. to 64 per cent. of school children are sickly or below a desirable form of health. I do not think it is an exaggeration to say that the ills of 50 per cent. of these hygienically subnormal children and students are due to the morbid postures compelled by the present false methods of writing and reading. Of the remaining 50 per cent., a full half are directly caused by the eyestrain of ametropic eyes. Headache, 'weak eyes,' migraine, anorexia, dyspepsia, and many types of denutrition, spinal curvature, insomnia, 'nervousness,' many cases of chorea and epilepsy, despondency and frequent psychic disorders, truancy, immorality, etc., almost any form or kind of functional disease—all these, and the denutrition that follows the ground for the incoming of infectious and terminal diseases—all of these are, or may be, the clear consequences of eyestrain. Only proper and scientific spectacles can extinguish these evils. But without glasses they are tremendously increased and intensified by the morbidities of posture engendered by the present school desks and methods of writing and reading. A revolution is demanded by an enlightened hygiene in school furniture and methods of writing and study. It is the most profound and crying reform of the day, a matter of national and evolutionary importance almost overtopping all others."

2. **Ulcer of the Stomach.**—McGrath writes a very complete text book article on ulcer of the stomach from the surgeon's point of view. The indications for surgical intervention are clearly given and the best adapted operations for specific conditions are reviewed.

5. **Periurethral Abscess.**—Walsh gives the following description of what he considers the best way of treating acute posterior periurethral abscesses of gonorrhœal origin: The patient being prepared as for an ordinary external urethrotomy, an incision is made in the perineal raphe down to the urethra, evacuating in this way any pus met with en route. The urethra is then freely opened and an exploration is made with the index finger which readily detects the presence of pus cavities and easily cures them. After exploring as far back as the bladder, and evacuating all cavities, this viscus should be thoroughly flushed with hot boric acid solution, and a full sized fenestrated rubber catheter inserted and secured in position through the urethral opening. Subsequent treatment should consist in washing the bladder twice daily through the catheter, which should first be removed, cleansed, and then reinserted.

MEDICAL NEWS.

April 22, 1905.

1. Alcohol as Food, By RUSSELL H. CHITTENDEN.
2. Alcohol in Disease, By GEORGE L. PEABODY.
3. The Health of the Nation, By WALTER WYMAN.
4. The Health of the Port of New York, By ALVAH H. DOTY.
5. What the State of New York is Doing for the Insane, By FREDERICK PETERSON.
6. Abdominal Nephrectomy, with Illustrative Cases, By NATHAN JACOBSON.

1. **Alcohol.**—Chittenden asserts that it is undoubtedly true that alcohol in moderate quantities may serve as a food, i. e., it can be oxidized with the liberation of heat and work. It may, to some extent, take the place of fat and carbohydrates, but is not a perfect substitute for them, and for this reason: Alcohol has a pharmacological action that cannot be ignored. It reduces liver oxidation. It therefore presents a dangerous side wholly wanting in carbohydrates and fats. The latter are simply burned up to carbonic acid and water, or are transformed into glycogen and fat, but alcohol, though more easily oxidizable, is at all times liable to obstruct, in some measure at least, the oxidative processes of the liver, and probably of other tissues also, thereby throwing into the circulation bodies, such as uric acid, which are inimical to health: a fact which at once tends to draw a distinct line of demarcation between alcohol and the two non-nitrogenous foods, fat, and carbohydrate. Another matter must be emphasized, and it is that the form in which alcohol is taken is of importance. Port wine, for instance, has more influence on the amount of uric acid secreted than an equivalent amount of alcohol in some other form. To conclude: As an adjunct to the ordinary daily diet of the healthy man alcohol cannot be considered as playing the part of a true non-nitrogenous food.

2. **Alcohol.**—Peabody reviews briefly the different use, both local and general, to which alcohol has been put in medicine. Its chief and most important use is internally. Unbiased clinical experience seems to justify the belief that in alcohol we have still the best means of stimulating the heart and thus increasing a low blood pressure in many pathological states. Necessity for its use in this way may arise both in conditions of primary weakness or syncope, and in enfeeblement due to acute febrile disease. In general it is not unusual to see numerous obvious beneficial effects follow its judicious administration. The tongue becomes less dry, the pulse becomes slower and fuller, the skin more moist, the wakefulness and delirium less marked, the powers of digestion and assimilation improved.

4. **Health of the Nation.**—Wyman lets statistics alone and confines himself to the general consideration of the various means, national, State, and local, by which the health of the nation is kept what it is and on which its future must depend.

4. **The Port of New York.**—Doty recounts the methods employed at the New York Quarantine Station to guard the city against the importation of such diseases as yellow fever, bubonic plague, cholera, typhus fever, and smallpox. In general it may be said that if the actual sufferers from a disease can be isolated the danger of a disease spreading is reduced to zero. The transmission of disease by means of the clothing of non-diseased attendants upon the sick is an almost unheard of occurrence.

6. **Abdominal Nephrectomy.**—Jacobson reports four personal cases of abdominal nephrectomy. He asserts that the abdominal route is not employed as often as it should be, and its mortality is not as high as has been taught. In general, the author advises that the abdominal route should be selected when the tumor is large, and when firm adhesions are to be expected.

AMERICAN MEDICINE.

April 22, 1905.

1. Some Remarks on Physical Diagnosis: 1. Transmanual Auscultation. 2. Ulnar Palpation, By DAVID RIESMAN.
2. Remarks on the Destructive Skin Diseases, Epithelioma, Lupus Vulgaris, and Syphilis, By HENRY W. STELWAGON.
3. Cholecystitis, By HOWARD LILIENTHAL.
4. A Study of Homogenized Cultures of Tubercle Bacilli, By RANDLE C. ROSENBERGER.
5. Typhoid Fever in Relation to the Urban and Rural Population of the United States, By SENECA EGBERT.
6. A Cure by Operation of an Intractable Pronated Foot, in Which the Head of the Astragalus Had Been Abducted and Fixed in This Position by Bone Union at the Astragalofibular Articulation, By MICHAEL HOKE.
7. Spontaneous Combustion, By JOHN KNOTT.

1. **Physical Diagnosis.**—Riesman asserts: (1) When it is difficult to time a heart murmur it will facilitate matters if some fingers or the hand are interposed between the bell of the stethoscope

and the patient's chest. The Bowles stethoscope gives the best results in this method of auscultation. (2) Palpation of the intercostal spaces is best accomplished by using the ulnar aspect of the hand.

2. Destructive Skin Lesions.—Stelwagon's remarks concern epithelioma and syphilis chiefly. The diagnosis and medicinal treatment of epithelioma is quite minutely covered. For epithelioma the author recommends, when surgery is refused, cauterization with caustic potash or a two or three days' application of pyrogallol salve, 33 per cent., or arsenical paste 33 to 50 per cent. Lupus is rare, much rarer than is generally supposed. Many of the cases diagnosed and reported in the journals as cases of lupus are in reality cases of syphilis. Therefore, if you are not a dermatologist, when you have a case which you are sure is lupus play mercury and the iodide of potassium and you will probably make a reputation.

3. Cholecystitis.—Lilienthal advises removal of the gall bladder in all cases of cholecystitis which come to operation. The reason for this advice is that it is impossible always to tell how much of the gall bladder is necrosed and probably not a few of the deaths following cholecystostomy are due to perforation of the gall bladder. The general advice regarding treatment follows: "The pain in the beginning of cholecystitis is usually so severe that opiates must be administered. Poulting and calomel should be the next steps. No food should be administered by the mouth, but small quantities of hot water or weak tea without milk may be given. If the patient's general condition is worse at the end of the first twenty-four hours, he should be seen by a surgeon, and I would here remind you that cholecystectomy is apt to be easier in the acute stage when the parts are softened by œdema than in chronic cases with tough, cicatricial adhesions. Judging by my own work, I should pronounce the operation of cholecystectomy more difficult, but safer than that for appendicitis of an equally severe type, and I believe that there is far less to be gained by waiting for the interval."

BRITISH MEDICAL JOURNAL.

April 8, 1905.

1. The Surgical Treatment of Ulcer of the Stomach and of Its Complications, By B. G. A. MOYNIHAN.
2. Cases Illustrating Alternative Operations for Intestinal Obstruction, By A. E. BARKER.
3. Removal of Gall Bladder from a Woman Aged Seventy-five Years, By A. W. ADDINSELL.
4. New Methods of Studying Affections of the Heart, By J. MACKENZIE.
5. Obliterative Arteritis, Leading to Gangrene of Extremities in Otherwise Apparently Healthy Men in the Prime of Life, By E. MICHELS and F. P. WEBER.
6. The Incidence and Effect of Some Diseases on Others, By J. R. CHARLES.
7. The National Importance of the Thorough and Systematic Removal of Adenoids in Childhood, By G. C. WILKIN.
8. A Fatal Case of Acute Mercurial Poisoning, By E. S. SUGDEN.

9. A Case of Acute Strychnine Poisoning in a Child: Recovery, By J. R. POOLER.
10. The Correct Anatomical Form of Bicycle Pedals, By R. A. LUNDIE.

1. Ulcer of the Stomach.—Moynihan considers the various conditions which may arise in the following order: 1. The perforation of gastric or duodenal ulcer. 2. The occurrence of hæmorrhage in gastric or duodenal ulcer. 3. Chronic ulcer. 4. Hourglass stomach. In acute perforation the ulcer gives way suddenly and completely, and the stomach contents escape into the general peritoneal cavity. In subacute perforation the ulcer gives way almost as suddenly, but owing to the small size of the hole, to the emptiness of the stomach, to the plugging of the opening by an omental flap, or to the speedy formation of lymph which acts as a plug. In chronic perforation the ulcer has slowly eaten its way through the stomach coats and a protective peritonitis has had time to develop at its base. It occurs more frequently on the posterior surface of the stomach and the resulting perigastric abscess is recognized as "subphrenic." Recovery from all these forms of perforation is possible under medical treatment alone, but the acute form is almost invariably fatal. But even in the recovered cases surgical treatment is called for in a later stage, perhaps because of perigastric adhesions which hamper the action of the stomach, perhaps because an hourglass stomach is formed from constrictions. This is an argument in favor of instant operative treatment. The author has operated in twenty-two cases of perforating gastric or duodenal ulcer. There were fourteen recoveries—63.6 per cent. The ages of the patients varied from 17 to 44 years; 15 of the patients were women, but of the 7 duodenal cases, 4 were in men. In every case the patient had suffered from symptoms referable to the ulcer for varying periods, and in the majority of cases there had been no increase in the severity of the symptoms during the few days preceding perforation. In subacute cases it is most necessary to cleanse as thoroughly as possible, as the amount of lymph greatly exceeds that seen in acute cases. The cause of death in six cases was shock—in one empyema, and in one subphrenic abscess. Hæmorrhage from gastric ulcer may be divided into four groups: (a) latent or concealed, and always trivial; (b) intermittent, spontaneous, but in moderate quantity—the patient's life is never in danger, though anæmia is persistent; (c) occurring after a warning exacerbation of chronic symptoms—rapidly repeated, abundant, and persistent—if not unchecked it is often the cause of the patient's death; and (d) instant, overwhelming, and lethal. The only character that the hæmorrhage should possess to warrant the performance of an operation is recurrence; recurrence, too, at intervals which, becoming gradually curtailed, do not allow the patient to make up in the interval the ground which he loses in the attack. Of 22 patients operated on for the arrest of hæmorrhage, 19 recovered. Excision of the ulcer alone was done in one case, excision of the ulcer followed by gastroenterostomy in three cases, and in eighteen gastroenterostomy alone. In no

case was there hæmorrhage after the operation. For chronic ulcer of the stomach the author has operated 153 times, with 2 deaths. Gastroenterostomy was done in all. Twenty cases of hour-glass stomach were operated in with three deaths; gastroplasty was done in seven cases and gastroenterostomy in five.

5. **Obliterative Arteritis.**—Michels and Weber report a case of obliterative arteritis occurring in a Jew aged 39 years. The right leg had been amputated for gangrene some years previously, and when seen there was gangrene of the left big toe. This was removed, but the wound did not heal, so the leg was amputated below the knee, and recovery was uneventful. The lumen of the popliteal artery was found to be completely obliterated at the site of amputation. The authors have previously reported two similar cases, both occurring in Jews. The disease occurs almost exclusively in the male sex and the lower extremities are chiefly affected. It is possible that both poor or unwholesome food (ergotism is, of course, unknown in England) and racial factors may play a part in the ætiology.

6. **Coincidence of Diseases.**—Charles deals with the incidence of secondary infections in chronic disease. The most frequent infective organisms are the pyogenic cocci, the pneumococcus, and the tubercle bacillus. Of 152 fatal cases of chronic nephritis, 52, or exactly one third, succumbed to the results of secondary infections, including lobar pneumonia, inflammations of the serous membranes, and tuberculosis. Uræmia was the cause of death in sixty-six per cent. of the cases. To cirrhosis of the liver must be assigned the worst place as acting as a predisposing factor for the entrance of pathogenic organisms. Of 45 cases over 44 per cent. died of secondary infections. The reaction of the body in the presence of these chronic diseases is often extremely defective, both against the organisms and their toxins. Nineteen per cent. of the cases classed as primary arteriosclerosis died from pneumonia. Over 15 per cent. of the deaths which occurred among 109 subjects of chronic valvular disease were due to secondary infection. Pneumococcal infections were 14 times more common than tuberculous infection—thus bearing out the old idea that valvular heart disease and tuberculosis are antagonistic. The marked incidence and virulence of pulmonary tuberculosis in diabetes is well known. Many diseases modify the manifestations of epilepsy—among them may be mentioned measles, malaria, anthrax, pneumonia, and erysipelas. Well marked antagonism exists between pulmonary tuberculosis and leucæmia—but the reverse obtains with respect to chlorosis and phthisis. Cancer favors the invasion of the body by tubercle bacilli, but is inimical to the spread of the disease. As regards infectious diseases the chemical products of organisms, and also the bacteria themselves, may modify very profoundly the effects of others. Scarlet fever favors the onset of diphtheria, the converse obtaining also. Scarlet fever and enteric rarely occur together; scarlet fever also abolishes the characteristic whoop of whoop-

ing cough. The relationship of chorea and rheumatism is now well recognized—they can hardly be spoken of as two diseases.

LANCET.

April 8, 1905.

1. Some Considerations on the Nature of Diabetes Mellitus (*Goulstonian Lectures, I*),
By W. C. BOSANQUET.
2. On the Dissemination of Mammary Carcinoma (*Hunterian Lectures, I*),
By W. S. HANDLEY.
3. The Mental Disorders of Decay (*Lectures, III*),
By G. H. SAVAGE.
4. An Investigation Into the Causation of Puerperal Infections,
By A. G. R. FOULERTON and V. BONNEY.
5. A Case of Multiple Neurofibromatosis,
By H. LITTLEWOOD and W. H. M. TELLING.
6. The Treatment of Tuberculosis of the Lungs by Means of Tuberculin and Other Bacterial Derivatives,
By H. B. SHAW.
7. A Case of Œsophageal Pouch Successfully Treated by Excision,
By A. B. BARROW and J. CUNNING.
8. A Sanatorium on Wheels for the Treatment of Tuberculosis,
By W. H. HAW.

1. **Diabetes.**—Bosanquet, in the first of his Goulstonian lectures on diabetes, begins with a short historical sketch of the disease, and then goes on to its definition. An important division in the subject in this regard, is the recognition of two forms or stages of diabetes mellitus: 1. The *alimentary* form, in which the sugar which emerges in the urine is apparently derived entirely from the carbohydrate materials contained in the food. 2. The *composite* form, in which some of the sugar is formed by breaking down of the tissues of the patient. In the first stage of diabetes the glycosuria is often only alimentary—an apparent inability to assimilate much carbohydrate food, and it is only in the later stages that the tissues actually break down into sugar. Sugar is not a poison, but in small quantities is a normal constituent of the blood. The internal formation of sugar must be looked upon as the essential characteristic of the disease. Glycosuria presupposes glycohæmia. An important cause which may determine the onset of diabetes is alcoholism; in this connection importance has also been attributed to tobacco. The influence of heredity is now more fully recognized than formerly; with it must be classed the racial incidence of diabetes, the disease being most common among the Jews and Oriental peoples. There is little evidence pointing to an infective cause of diabetes—i. e., that it is the direct effect of a toxine formed by a pathogenic bacterium. The action of syphilis in causing diabetes is probably due to the production of a pancreatitis. Overwork and exhaustion may apparently produce the disease—also sudden shock and excitement. Injuries to the head are more often followed by temporary glycosuria than by lasting diabetes, and experimentally many varieties of injury to the nervous system may produce glycosuria. Glycosuria is also common among the insane. As regards the morbid anatomy of diabetes, too much attention has been paid to the phenomena of glycogenesis and to the theory that

the liver is normally a distributor of sugar to the rest of the body. At present this is an unverified hypothesis. Post mortem two main changes are found in the liver. In most cases the organ is slightly enlarged, firm in consistence, and hyperæmic. In some it is distinctly fatty. As regards the kidneys it seems established that they merely eliminate from the blood the sugar which is poured into it from elsewhere. There is little or nothing to connect diabetes with gastric disorders, or with diseases of the skin, although psoriasis and xanthoma are said to be specially related to it.

2. **The Spread of Cancer.**—Handley in his first Hunterian lecture discusses the dissemination of mammary carcinoma. The subject at present is in a hazy condition. Invasion of the axillary glands is universally admitted to be an embolic process. As regards "regional" dissemination there are two views: 1. That invasion of the pectoral lymphatic plexus occurs by direct cancerous growth along the vessels. 2. That cancer cells are swept by the lymph stream through the vessels of the pectoral plexus and that metastases arise from their casual arrest at isolated points. As regards metastases in the internal viscera or at distant points in the parietes (*e. g.*, in the femur), there is only one definite theory of causation—that known as the embolic theory. The author is opposed to the view that the dissemination is an embolic phenomenon, and in this lecture reviews the evidence against that hypothesis.

3. **Mental Disorders of Decay.**—Savage, in the third of the Lettsomian lectures, first takes up the condition known as postponed idiocy, insanity of adolescence, or dementia præcox. There seems to be a definite class of individuals with a capacity to attain a certain stage; their nutritive powers are all right, but when with puberty, altruism, love, and allied emotional states come on, there is no power of resistance and these individuals break down. There seems to be a febrile condition that not infrequently ends in disturbance of the mind. The author then touches on disorders of malnutrition, toxic states, such as brain syphilis and general paralysis of the insane, and lastly true cases of senile dementia. Senility is not normal; it is not necessary that all persons living to be ninety should become senile. In many cases the senile dementia is but an exaggeration of the habits and ways of the man. The mental symptoms which are to be looked for as chiefly associated with mental decay in senility are loss of control, loss of faculty, and loss of flexibility. Loss of memory is most characteristic; this is also true of emotion, and there is a greater tendency to impulse. Sexual desire increases, due to defective control.

6. **Tuberculin.**—Shaw reviews the treatment of pulmonary tuberculosis by means of the tuberculin and antistreptococcus serum, and concludes that their use materially improves the results of treatment, and that the ordinary treatment by sanatorium methods should be supplemented with this specific one. Tuberculin treatment is of little use alone. "Old" tuberculin is practically a

glycerin extract of tubercle bacilli, and designed at first as a remedial agent, it has now become a most valuable diagnostic aid. The new tuberculin (*tuberculin K.*) is produced by triturating dried, highly virulent tubercle bacilli, mixing with water, centrifugating, and finally passing the resultant fluid through a Chamberland filter. It is not sterilized by heat, but glycerin is added for preservative purposes. The dose is expressed by weight of the dried substance contained in the fluid. It produces no local reaction at the seat of injection and appears to bring about immunity. Koch also produced other tuberculins (A and O), but these resemble "old" tuberculin and are but little used. Beranek's tuberculin, containing basi- and acidotoxines; Denys's, Hirschfelder's, and Hunter's—all resemble Koch's tuberculin. Klebs's tuberculoicin and antiphthisin come under the same head. Various antituberculous sera have been produced in the same way as antiphtheritic serum. Marmorek's is the latest to attract attention. Vaccination with attenuated or non-virulent tubercle bacilli has also been suggested. Antistreptococcal sera have been used in the hope of overcoming the serious secondary infections, and much is hoped for from the, so called polyvalent serum. In conclusion, the author gives the rules for the use of tuberculin in treatment, and some statistics based on the results obtained by various observers.

EDINBURGH MEDICAL JOURNAL.

April, 1905.

1. Note on Decapsulation of the Kidneys,
By BOYD and BEATTIE.
2. Late Rickets,
By MARSDEN.
3. The Relief of Respiratory Embarrassment in Malignant
Goitre,
By THOMSON.
4. The Limitations of Local Anæsthesia,
By MILES.
5. Doyen on the Ætiology and Treatment of Cancer,
By THOMSON.
6. Sir Thomas Browne,
By COUPLAND.

1. **Note on Decapsulation of the Kidney.**—Boyd and Beattie credit Harrison with suggesting incision of the kidney to relieve tension in nephritis in 1896. Edebohls subsequently suggested decapsulation on the ground that this operation is followed by the formation of new vascular connections between the kidney and its fatty capsule. The result of this increased blood supply and improved circulation is improvement and restoration to health of the diseased kidney. Experimental work which has been done with a view of testing the assertions of Edebohls shows that while a new capsule may be formed there is little anastomosis between the renal and circumrenal vessels. Ferrarini, however, found evidence that such a relation did exist. Upon the human subject a case is reported by Gibson in which a dense new capsule had vessels which anastomosed with the superficial vessels of the renal cortex. There was also prolongation of new fibrous tissue into the cortex accentuating the interstitial changes which were present before operation. Diminution of albumin, increase of urea, and increased diuresis have been observed after the operation. The diuresis may be due to relief of tension and im-

proved mechanical conditions in the circulation, or to the stimulation of the sympathetic centres which is caused by the operation. In either case the authors think incision of the capsule would be preferable. On pathological grounds the ultimate effects of decapsulation are thought to be of doubtful benefit.

2. **Late Rickets.**—Marsden summarizes his views by quoting Rassowitz, who states that a general withdrawal of nutrition, as well as the cutting off of the nutritive supply to a portion of the growing organism, can in a short time give rise to a well marked inflammatory state at the growing parts of the bone. Hence the causal connection between conditions which will produce rickets and the inflammatory changes referred to is made clear. A long continued defect in nutrition will ultimately produce the effect produced in a few days by general or local withdrawal of nutrition. Constant use of improper food, and faulty digestion and metabolism during the time of active growth, will result in abnormal condition of the newly formed tissues, appearance of general illness, insufficient increase in weight, and abnormal vulnerability of the tissues and organs. At the ends of the bones where energetic growth is taking place and where the faulty tissue is produced in greater extent than elsewhere, the vulnerability of tissue, and especially the imperfect structure of the walls of the young blood vessels, will be likely to lead to those inflammatory conditions which result in rickets.

4. **The Limitations of Local Anæsthesia.**—Miles thinks there is danger that local anæsthesia may be pushed beyond its natural and legitimate bounds, operations being frequently performed which would be carried out with greater efficiency and equal safety under the influence of a general anæsthetic. From operations which were recently reported are cited by him in which the shortest time was five hours and a quarter and the longest six hours and ten minutes. Although the time consumed in these operations was considerable, it is stated that aside from the fatigue the general condition of the patient was the same as before the operation. The experience was not painless in any of these cases, and the author believes that the unconscious condition, and the complete muscular relaxation under general anæsthesia would have enabled the surgeon to do better work than is possible under so called local anæsthesia. There is danger that in local anæsthesia discredit may arise by asking more from it than it can reasonably be expected to give.

5. **Doyen on the Ætiology and Treatment of Cancer.**—Thomson states that Doyen believes in the bacterial origin of tumors, and that vaccination against cancer is quite as feasible as vaccination against smallpox. Doyen made his first observations on the bacillus of cancer in 1885. In 1901 he called it *Micrococcus neoformans*. It is not stained with ordinary reagents, but is stained with a special fluid. It is easily cultivated, appearing after eighteen hours or more, the virulence of the culture being increased by passing it through rabbits, guinea pigs, white rats, or white mice,

and attenuated by adding quinine hydrochloride or exposing it to a high temperature. The micrococci are best seen in fresh nodules of secondary cancer, especially of the omentum. The more malignant the tumor the greater the number of cultures to be obtained from it. The cocci are best found in outlying lymphatic glands, and secondary growths; they have been found in the secretion of the mammary gland when cancer had not yet developed. Doyen believes the micrococcus causes the malignant tumors of the lower animals. Positive results from inoculation were obtained in five different species of animals. The toxins require two and a half or three years for their preparation. There is (1) an active toxine, and (2) an attenuated toxine. In preparing vaccines modified cultures two and a half or three years old are inoculated in tubes of bouillon and kept in the incubator ten or twelve months. They may be feeble or strong. The cultures are injected into the horse for ten months, after which the serum is available for treating cancer. The serum is injected into the buttock and is followed by a reaction like that from tuberculin in tuberculous subjects. Inoperable tumors after this treatment have become operable, and in some cases have ceased developing or have disappeared entirely. The knife should be used if it can go beyond the limit of the diseased tissue. Doyen considers five groups of cancer, clinically: 1. Superficial cancer of the skin without glandular infection, to be treated by incision, escharotics, x ray, or serum; 2. early cancer of mucous surfaces, and internal organs; which are limited, mobile, and without lymphatic involvement. These should be operated upon early, the serum being administered for one or two weeks before the operation; 3. progressive, extensive inoperable cancers. These should receive serum treatment, and after a few weeks may become operable. They should then be operated upon; 4. inoperable cancers of the skin *en cuirasse*. They should not be operated upon and the serum should be administered for several years; 5. cancers with glandular and visceral dissemination; with cachexia and debility. These are hopeless cases for serum or any other mode of treatment. Of 126 patients in Doyen's first series 79 received no benefit at all, the others were more or less relieved, 27 being considered cured. Of the second series operated upon since January, 1904, 20 seem to be cured, 7 are still under observation in good condition 24 are improved, 10 have not reported, 6 are too recent, and 49 are hopeless, 16 of them having already died. Out of a total of 242 patients 42 have been cured. These results have not been attained by any other mode of treatment. The ultimate aim is to vaccinate those who are in health and immunize them to cancer.

MONTREAL MEDICAL JOURNAL.

April, 1905.

1. Regeneration of the Axones of Spinal Neurones in Man,
By SHIRRES.
2. Cæsarean Section,
By REDDY.
3. Combined Empyema of the Left Frontal and Ethmoidal
Cavities,
By CRAIG.

4. Injuries to the Head and Face from Forceps, with Report of Cases from the Clinic of the Montreal Foundling and Sick Baby Hospital, By MACKENZIE.
5. Hydrosalpinx; Case Report, By LOCKHART.
6. John Hunter, By CHIPMAN.

x. Regeneration of the Axones of Spinal Neurones in Man.—Shirres observes that doubt is widely expressed as to the possibility of such regeneration. Gowers considers it possible and notes a case in which there had been considerable destruction of the cord, with the corresponding symptoms, in which after many months there was return of sensation and motion. Years afterward when the patient died the cord was found to possess regenerated axones, very minute in size, where large nerve fibres are usually found. The absence of the neurolemma sheath is supposed to explain the failure of the spinal neurones to regenerate. If sudden pressure is exerted on the spinal cord for only a moment molecular changes occur in the axones of the spinal neurones, causing inhibition of function. If the pressure is prolonged, there will also be local anæmia and eventually necrosis. Nourishment and stimulation must be supplied, in such cases, to the cell bodies of the neurones, and electricity and massage must be used continuously to the tissues which are controlled by them. A case is described in which there was complete transverse division of the cord between the ninth and tenth dorsal vertebræ. There was no injury to the lower segment, and faradaic and galvanic stimulation of the muscles for six months, together with all other suitable attentions, kept the patient in good condition, but there was apparently permanent flaccid paralysis, sensory loss, and abolition of the reflexes. At the end of eleven months the wound was reopened and an interval of an inch and a half found between the segments. The muscles still responded slightly to mild faradaic stimulation of the anterior and posterior roots of the lower segment of the cord. A section of a dog's cord, freshly removed, three inches in length, was then laid beside the upper and lower segments of the patient's cord and the pia arachnoid of the one was united to that of the other by a few fine stitches. The operation was followed by recovery. Two months later there was sensation from the feet to the knees, also when a catheter was passed and when the bowels moved. A month later the subject died after a few days' illness. Autopsy revealed a large abscess of the right kidney. After the cord had been properly prepared a diffuent mass was found between the two severed ends. The upper segment showed ascending degeneration in the fields of Goll and Burdach in the direct cerebellar and in Gower's tracts. The lower segment showed degeneration in the crossed and pyramidal tracts. The dura with its adherent substances showed a mass of minute myelin sheaths of nerve fibres. Adherent to the dura and uniting above and below with the segments of the cord, showing that regeneration of the axones of the spinal neurones had taken place to a limited extent. The lower segment of the cord was in a fairly healthy condition, sections through the

cauda equina showing that 90 per cent. of its nerve fibres were normal.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, March 2, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

The Indications for the Slow Induction of Premature Labor.—Dr. W. R. NICHOLSON, in this paper, mentioned the various rarer indications, such as insanity, nervous diseases, blood diseases, etc., but limited himself to the five most common indications, namely, contracted pelvis, placenta prævia, heart disease, tuberculosis, and toxæmia. While admitting that the rapid methods of delivery might very rarely be indicated in the treatment of some of these conditions, he expressed the belief that such indications were most unusual. Thus, in placenta prævia he acknowledged that there might be an indication found for the Cæsarean section if a primipara presented a condition of alarming hæmorrhage together with a rigid cervix, but in the vast majority of the cases of this abnormality no such indications existed, and the Cæsarean operation had no place.

In particular, should all rapid methods of cervical dilatation by means of the dilators of Bossi and Seigweaux be avoided unless the attendant was experienced in the use of such instruments. He was even more strongly opposed to the rapid methods of delivery in the presence of eclampsia. It was his opinion that Cæsarean section had absolutely no place here. He believed in the great value of the premature termination of pregnancy in the presence of certain grades of pelvic deformity, but was doubtful as to its utility in the presence of tuberculosis of the lung or cardiac disease, unless in the case of the latter the cause of the alarming symptoms was the mechanical pressure of the uterus.

The Indications for Accouchement Forcé.—Dr. GEORGE M. BOYD said that a difference of opinion existed among obstetricians in regard to the indications and methods of performing forced delivery, and assumed that this was due to the fact that as yet the problems were not completely solved. Accouchement forcé had at one time been accompanied with a large mortality, probably due to infection, and not to the fact that our forefathers were less skillful. There were two varieties of forced delivery: (a) The rapid method, which Zincke had stated represented the class of cases in which the condition of the mother, and sometimes that of the child, demanded a prompt and rapid termination of the pregnancy; and (b) the slow method, which represented those cases in which delivery might be effected slowly, because of the absence of immediate danger to the mother and the existence of a justifiable disregard of the life of the fœtus.

He described two steps in the operation: 1. Dilatation of the lower uterine segment and cer-

vix by stretching, tearing, or cutting. 2. Removal of the uterine contents manually or by resorting to instrumental interference.

Every method of operation had some objections. Manual dilatation had proved the most satisfactory in his hands, especially in treating eclampsia. The hand could best stretch the cervix. When the limitations of stretching were reached, it was better to make superficial or deep incisions.

In two cases of eclampsia recently seen in consultation, accouchement forcé had been successfully accomplished by this method. In both cases there was no evidence of the onset of labor after from four to six convulsions. The gestation was at the eighth month in one case and the seventh month in the other. The cervix was rigid in both cases, and the patient's general condition grave.

A Relatively Rapid Method for Terminating Pregnancy.—Dr. RICHARD C. NORRIS said that Nature's mechanism of dilatation of the cervix should be initiated by any method of artificial dilatation. The longitudinal fibres of the uterus exerted a direct pull upward of the lower uterine segment and, assisted by the downward push of the hydrostatic pressure of the bag of waters and later of the presenting part of the fœtus, the lower segment was dilated, and the internal os was opened and drawn upward, the cervix thus being attenuated and effaced. Mechanical stretching and thinning were not physiological dilatation, and that explained the lacerations so frequent after rapid and complete mechanical dilatation. During two years he had used a method combining the use of the bougie, partial mechanical dilatation to an extent not endangering the cervix (5 to 7 cm.), followed by the introduction of a very large bag of the Voorhees type (capacity, 600 c.c.), which, when incompletely distended with 480 c.c. of water, supplied an artificial bag of waters which, like the natural sac, was tense only during uterine contraction. Continuous or intermittent traction upon the bag might be employed when dilatation was inordinately slow. In thirty five cases of induced labor for the lesser degrees of pelvic contraction, terminated either spontaneously or by the forceps or version, the older method of a bougie followed by a bag had required an average of 27½ hours. In fifty-two cases managed by the same method, the indications being toxæmia, grave kidney, cardiac, or pulmonary disease, chorea, pernicious nausea, etc., the average duration, there being a larger number of spontaneous deliveries, had been thirty-four hours. In eighteen cases in which the use of the bag and bougie was preceded by partial instrumental dilatation, the average duration of labor was 8½ hours for cases terminated by the forceps or version, and 16½ hours for spontaneous deliveries, an average duration of 12½ hours for spontaneous deliveries and of 5½ hours for labors terminated by version or forceps.

Discussing eclampsia and placenta prævia in relation to accouchement forcé, he stated his conviction that in the former very rarely would a case present itself in which delivery in less than twelve hours was required. He discussed Bossi's

dilator and Dührssen's vaginal hysterectomy. He would reserve rapid delivery for a case showing no improvement after eliminative treatment was well under way, in which the toxæmia had not produced the gravest structural changes in the kidneys, but had overwhelmed the nerve centres. The character of the cervix more than its degree of dilatation and the state of the patient determined the choice between Bossi's instrument and Dührssen's hysterectomy. Bossi's instrument was dangerous when the cervix was tough, elongated, uneffaced, or scarred with dense cicatrices. Lacerations suddenly occurred in such cases without warning, and added shock and hæmorrhage to the gravity of the patient's condition.

Dührssen's vaginal hysterectomy, in the hands of a competent vaginal operator with efficient assistants, was less dangerous. The usefulness of either method for placenta prævia was even more restricted than for eclampsia. Central implantation in a primigravida, with a rigid cervix, profuse hæmorrhage, and a mature and living infant, furnished the only indication for accouchement forcé. He thought such a combination of conditions very rare. He had never encountered such a case. An infant often premature and usually apneic did not justify grave operation; a mother exsanguinated would not stand aggressive surgery. When the condition of both infant and mother warranted it, Dührssen's vaginal section in a well equipped hospital, with a skilled vaginal operator, was the latest and most promising contribution to the surgery of these rare cases.

The Methods of Inducing Labor.—Dr. BARTON COOKE HIRST said that since De Ribes advocated the use of his bag for inducing labor it had been a disputed point whether the old plan by bougies or the newer one by the inelastic bag in the lower uterine segment was preferable. He had given both methods an extensive trial, with the result that he found the bougie method the easier for the patient and operator and, if properly used, about as efficient as the bag.

(To be continued.)

Book Notices.

Normal Histology and Microscopical Anatomy. By JEREMIAH S. FERGUSON, M. Sc., M. D., Instructor in Normal Histology, Cornell University Medical College, New York city. With 462 Illustrations in the Text, many in Colors. New York and London: D. Appleton & Co., 1905. Pp. xix-738.

This somewhat massive volume has been written to furnish the student of medicine and the practitioner with a complete treatise on histology of the encyclopædic type with which we have been long familiar from the German laboratories. In the opinion of the reviewer it is perhaps the most satisfactory of such textbooks. To take up in detail all the special points which are of interest would lead too far afield, but we may say that the general get up of the volume is excellent, the type and paper are satisfactory, and the binding is sufficient, though the book does not open so well as a laboratory textbook should. The illustrations are in general exceedingly

good, if we except the colored plates, in which the color does not add much to the clearness from an educational point of view. The plates representing stained blood smears, while moderately satisfactory, would have been better had they been reproduced by lithographic procedures rather than by half tone. It still seems to be a difficult matter to obtain an accurate register in half tone color printing, at least in textbook work, and several of the cuts show the bad effects of these mechanical defects.

Of Dr. Ferguson's drawings of tissues, we can only say that they are most excellent and clear; in fact, we wish that he had redrawn some of the cuts taken from other authors. Half tone reproductions of photomicrographs have been introduced in considerable numbers, there being some one hundred and twenty-two in the book. Of these, many are strikingly good. Special attention may be drawn to those illustrating the arrangement of the tissues in the vessel walls, those showing structures in the lymphoid tissues, the sections of skin and nails, and, perhaps most remarkable of all, the photographs of the Graafian follicles of the ovary in various stages of development. Such photographs cannot but be of the greatest assistance, not only to the student, but to the practitioner of medicine who desires to freshen the memory of his laboratory studies in histology. The illustrations for the nervous system are also excellent, and the writer has done well to reproduce Marburg's plates showing the nerve tracts in the brain and cord.

The text of the volume is exceedingly clear and practical, those organs which are of interest to the worker in the field of surgery, gynecology, and neurology being dwelt upon in special detail. The ophthalmologist will find much to interest him in the description of the anatomy of the eye and the details of the innervation of the retina. The otologist will find a very complete description of the internal ear and its accessory structures, which may be of value, not only in a pathological sense, but as a guide in operative procedures. An excellent but concise chapter on technics follows the general text, and a very complete and accurate bibliography closes a volume which is a credit both to the writer and to the publishers. Only a moderate number of errors in the proof mar the text. These will be corrected, no doubt, in the next edition, which will surely be needed.

Gallstones and Their Surgical Treatment. By G. A. MOYNAHAN, M. S. (Lond.), F. R. C. S. Leeds. Fully Illustrated. Philadelphia: W. B. Saunders & Co., 1905. Pp. 386. (Price, \$4.)

The first chapter, on the anatomy of the gall bladder and ducts, is followed by others on the classification and formation of gallstones, on the general pathology of gallstone disease, and on its symptoms and signs. There are chapters that give an excellent description of perforation of the gall bladder and of intestinal obstruction due to gallstones. There is an admirable description of the details of preparation for operations upon patients suffering from gallstones and of the methods of operating upon the gall bladder and bile ducts. The author's descriptions are very clear and explicit, and the work is admirably illustrated.

Miscellany.

The Wisconsin State Board of Medical Examiners has licensed the following physicians to practise in that State:

Dr. C. H. Searle, of Palmyra; Dr. W. H. Johnson, of Mattoon; Dr. Henry W. Langheim, of Philippine Islands; Dr. S. E. Wright, of Chicago; Dr. L. E. Mason, of Chicago; Dr. James R. Robb, of Chicago; Dr. S. R. Perkins, of Waukesha; Dr. D. W. Wheelwright, of Belleville; Dr. Joseph Deane, Dr. A. Dalton, of Madison.

The Association of American Physicians.—The twentieth annual meeting of this association will be held in Washington, D. C., on May 16 and 17, 1905. Programme:

The President's Address, by Dr. E. L. Trudeau, of Saranac Lake; General Business; A Study of the Fear of Cats and the Power to Recognize Their Presence Unseen and Unheard, by Dr. S. Weir Mitchell, of Philadelphia; Intracapsular Lipoma, by Dr. R. H. Fitz, of Boston; Chylous and Chyliform Effusions Into the Serous Sacs, with a Case, by Dr. J. C. Wilson, of Philadelphia; Rhythmic Lateral Displacement of the Heart as a Sign of Unilateral Pleuritic Exudate, by Dr. Charles L. Greene, of St. Paul; Gonorrhoeal Septicemia and Endocarditis, by Dr. W. S. Thayer, of Baltimore; Fever in Chronic Endocarditis, by Dr. J. S. Thacher, of New York; Sphygmograms from Two Cases of Bradycardia, by Dr. George Dock, of Ann Arbor; Clinical Notes on Opium in Myocarditis, by Dr. J. H. Musser, of Philadelphia; Some Phases of the Neurotic Heart, by Dr. Beverley Robinson, of New York; The Frequency and Aetiology of Acute Non-Tuberculous Pneumonia in a General Hospital, by Dr. William T. Howard, Jr., of Cleveland; Report of a Case of Pneumococcus Sepsis, by Dr. J. S. Thacher, of New York; A Report of Six Cases of Perforation in Typhoid Fever in Children, by Dr. J. P. Crozer Griffith, of Philadelphia; Umbilical Hernia as a Little Recognized Source of Abdominal Pain, by Dr. D. D. Stewart, of Philadelphia; Stone in the Kidney and Certain Conditions Simulating It, by Dr. D. D. Stewart, of Philadelphia; A Study of Abdominal Tumors, by Dr. R. C. Cabot, of Boston; Hematemesis from Gastric Ulcer; Notes on 200 Cases, by Dr. W. G. Thompson, of New York; The Relations of Certain Stomach Disorders to Diabetes Mellitus, by Dr. John S. Sawyer, of Cleveland; Clinical Notes on the Use of Nux Vomica, Especially in Certain Forms of Hyperchlorhydria, by Dr. J. H. Musser, of Philadelphia; Election of Members; Considerations on Proteid Diet with Especial Reference to the Distribution of Amide-Nitrogen, Diamino-Nitrogen, and Monamino-Nitrogen Therein, by Dr. L. F. Barker and Dr. B. A. Cohoe, of Chicago; The Chloride Exchanges in Three Cases of Chronic Nephritis with Reference to the Dechloridation Treatment, by Dr. A. O. J. Kelly and Dr. Charles A. Fife, of Philadelphia; Chloride Retention in Nephritis, by Dr. Joseph L. Miller, of Chicago; On the Toxicity of Bile, by Dr. S. J. Meltzer and Dr. W. Salant, of New York; On the Nature and Origin of Cholemia and Uremia, by Dr. S. J. Meltzer, of New York; Xanthelasma and Chronic Icterus, by Dr. T. B. Fletcher, of Baltimore; A Report of a Case of Lymphatic Leucemia in a Child of Three Years of Age, by Dr. John Lovett and Dr. Harry C. Low, of Boston; Observations on Metabolism in a Case of Acute Leucemia and a Case of Purpura Hemorrhagica, by Dr. D. L. Edsall, of Philadelphia; The Influence of the X Ray on Metabolism in Leucemia, by Dr. J. H. Musser and Dr. D. L. Edsall, of Philadelphia; Chronic Acetanilid Poisoning, by Dr. D. D. Stewart, of Philadelphia; Report of a Case of Acromegaly, by Dr. Charles L. Greene, of St. Paul; Further Observation on the Relation of Lesions of the Gasserian and Posterior Root Ganglia to Herpes Occurring in Pneumonia and Cerebrospinal Meningitis, by Dr. William T. Howard, Jr., of Cleveland; A Brief Report on Recent Researches in Immunity, by Dr. V. C. Vaughan, of Ann Arbor; The Nature of Cirrhosis of the Liver, by Dr. A. O. J. Kelly, of Philadelphia; A Note with a Demonstration Upon Experimental Pancreatitis, by Dr. Simon Flexner, of New York; Experimental Arteriosclerosis with Demonstration of Specimens, by Dr. Richard M. Pearce and Dr. E. Stanton, of Albany; Phlebosclerosis, by

Dr. C. F. Martin, of Montreal; A Lantern Slide Demonstration on the Stages of Calcareous Degeneration, by Dr. J. George Adami and Dr. Oskar Klotz, of Montreal.

The Psychology of Dreams.—Jewell, in the *American Journal of Psychology*, for January, 1905, summarizes his study as follows:

1. Dreams may be prevented by suggestion, and probably disappear in proportion as the suggestion is complete.

2. Neither the season, day of the week, nor month has any noticeable effect on dreams, except for local setting, such as winter scenery being more common during the winter months.

3. There seems to be an age of dreams, about the time of puberty and dawning adolescence.

4. Motor activity during sleep is distinctively a childish characteristic, though it often persists into adolescence and sometimes well into adult life.

5. Dreams differ markedly with respect to age and locality, and probably with respect to nationality.

6. Children dream of the events which cause their great emotions very soon after their occurrence; after earlier adolescence such dreams do not occur for some time. During later adolescence and adult life, the more importance an event assumes to the individual, as a general rule, the greater the length of time between its occurrence and its appearance in dreams.

7. A number of returns suggest strongly that dreams of falling and flying differ only in apperception.

8. Many rational explanations of dreams usually classed as premonitory may be offered, leaving but a small residue unexplained.

9. While the judgment does not usually work logically during sleep, it may do so.

10. One may, while sound asleep, know that he is dreaming.

11. The emotions during dreaming are largely determined by the organic sensations at the time.

12. Since morbid fears are so easily engendered in small children by their dreams, care should be taken to prevent the suggestion of dreams which might have such an effect.

13. The confusion of dreams with real life is almost universal with children, and quite common among adolescents and adults.

14. The influence of dreams upon real life is vastly greater than is usually thought, as has been seen in many ways.

15. There may be subconsciously injected into one's dreams an element of truth which the dreamer does not recognize as subjective, hence they may take on a supernatural cast.

16. There is no mode of functioning of the mind in the waking state that may not take place during sleep.

The writer admits that these conclusions, to be positive, should be based upon a large number of returns from adults in middle life and in old age, and he has found it impossible to collect any considerable quantity of such returns thus far.

The Alcohol Question.—Thomas Dutton, M. D., in a recent number of the *Archives of the Röntgen Ray*, says that although the subject has

recently attracted some attention, still, in the interests of public health, it is imperative that the whole matter be carefully investigated and impartially discussed by medical men, particularly by those who can bring to its study the requisite knowledge, both scientific and practical, untainted by the blemishes of personal prejudice and faddish preconception.

Rabid teetotalism, even in writing for the medical press, has not always stopped short at the truth. With a puerile disregard for the mental capacity of the reader, the advocates of these self dubbed "temperance" principles have fondly imagined that dogmatic assertion, when backed by the cumulative force of assiduous reiteration, is tantamount to proof. By these means have they striven to bias judgment and convince all that alcohol produces a decline in the economic value of the organism by actual change in cell constitution—a statement which is quite untrue where the alcohol taken is pure and consumed only in moderate quantities.

I will venture to assert that fully 80 per cent. of the profession at large do both themselves partake of alcoholic stimulants in some form or the other and order it for their patients. Can it, then, with any show of reason, be maintained that this overwhelming majority have no knowledge of the true effects of alcohol? Can it for an instant be supposed that these members of a profession renowned throughout the world for its respect for the traditions and its scrupulous adhesion to the dictates of honor, are so morally degraded as to recommend a dangerous agent? The very thought is an insult to the dignified profession to which they belong.

As a counterblast to these concatenations of pseudoscientific balderdash, it may be observed that the American commission of experts, which has recently investigated the whole question, has unanimously come to the conclusion that "alcohol taken in moderate quantities is truly food." The *Lancet* has not hesitated in a leading article (January 21st) to state that alcohol must indeed be regarded as a food.

All admit that an excess of alcohol does harm; so likewise does an excess of meat, sugar, or even water. The danger here lies in the *abuse* and not in the proper *use* of the articles in question, and it is irrational to claim that their use must on this account be abandoned.

The best way for medical men to test the value of alcohol is by personal experiments on themselves. If the results of a thousand such experimental observations were forthcoming, we should have a collection of the valuable facts at our disposal, and upon these our deductions could be based. I once for three months drank daily a regular amount of wine and spirits. I found in two months that I had gouty pains, diminished appetite, and less inclination for work. I then left off everything for three months. I soon became very depressed; appetite and sleep failed, and still less inclination for work. I changed this the next three months to drinking wine, beer, and spirits whenever I felt inclined for some stronger drink than water. My appetite at once improved. I slept better and was ready for work at all times,

and the bowels acted regularly. I have since followed this plan, which I believe to be the best. I adopt the same plan with regard to meat. If I am obliged to remain indoors all day without any exercise, I eat only fish.

Experience leads me to believe that beer is the best drink for persons under the age of forty years, wine after forty, and that spirit should only be taken when required or ordered. I have great faith in sound, pure beer as a beverage for growing boys and girls, as well as for workmen; it seems to stimulate appetite, regulate the bowels, and promote healthy growth. If living in a wine country, I should order some variety of light wine instead. I have not found that children who are allowed beer take an excess of it when they attain to adult years; on the contrary, most of the drunkards I have been called upon to treat have been brought up on strict abstinence lines.

It is not unusual for writers who entirely forswear the use of alcohol to allege that all crime is produced through drink. I need only give one example to prove to the unbiased reader the untruthfulness of this statement. Our city fathers have, from time immemorial, drunk wine well, perhaps, but not always wisely; still, there is no record of their murdering or beating their wives on their return home, or of their committing any serious crime. The workingman, who perhaps only imbibes half the quantity of alcohol at a public house, may commit these outrages. To what, therefore, is the difference in conduct to be attributed? It is evidently not due to pure alcohol, but to a poisonous concoction, doctored with silent spirit, which is sold instead of the genuine article. Excess of pure drink merely causes a genial temperament, high spirits, an unsteady gait, and thick speech. The man or woman who overindulges is seldom vicious or quarrelsome. The spirits distilled from potatoes, maize, wood, etc., are responsible for the frenzy and dangerous symptoms that teetotalers associate with the use of alcohol. It should not be allowed to be sold under the most severe penalties. No doubt excess of any pure drink does undermine the constitution, and I must confess that many persons, both males and females, take too much; but this does not for a moment change my opinion as to the moderate use of alcohol.

I was much struck by a chance remark made by a very old (85 years) patient of mine. She said: "It is strange that when I was young all my friends partook of wine for dinner, and one seldom heard anything about indigestion, stomach complaints, or appendicitis; now my friends are all water drinkers, and they all suffer from these complaints. It is my opinion, doctor, that wine is an antiseptic and germ killer, hence the freedom from the complaints I have mentioned of those who take wine." I believe my patient is quite correct in her surmises, and that wine—more especially the red wines—have a germicidal action upon pathogenic microorganisms.

In concluding, allow me to appeal to the anti-alcohol writers to stay their hands and give their pens a rest. Let them, if they will, join forces with us in the endeavor to get a pure drink Bill passed through Parliament.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending April 22, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Florida—Jacksonville	Apr. 8-15	5	2
Florida—West Tampa	Apr. 8-15	1	0
Illinois—Chicago	Apr. 8-15	1	0
Kansas—Topeka	Apr. 1-8	2	2
Kansas—In 46 counties	Mar. 1-31	1,123	5
Kentucky—Louisville	Apr. 6-13	3	0
Louisiana—New Orleans	Apr. 1-15	39	0
Maine—Portland	Apr. 1-8	1	0
Michigan—Ann Arbor	Apr. 1-8	1	Imported
Michigan—Detroit	Apr. 8-15	1	0
Michigan—Grand Rapids	Apr. 8-15	2	0
Michigan—At 42 localities	Mar. 25-Apr. 1	Present.	1
Missouri—St. Louis	Apr. 8-15	24	1
New York—New York	Apr. 8-15	2	1
Ohio—Cincinnati	Apr. 7-14	1	0
South Carolina—Charleston	Apr. 8-15	2	0
South Carolina—Greenville	Apr. 1-8	3	0
Tennessee—Nashville	Apr. 8-15	1	0
Washington—Mason County	Apr. 8-15	1	0
Washington—Snobomish County	Mar. 1-31	2	0
Wisconsin—Milwaukee	Apr. 15	8	0
Smallpox—Insular.			
Philippine Islands—Manila	Feb. 18-25	2	1
Smallpox—Foreign.			
Argentina—Buenos Ayres	Jan. 1-31	28	5
Brazil—Rio de Janeiro	Mar. 19-26	4	5
Brazil—Bahia	Mar. 11-25	16	2
Great Britain—Birmingham	Mar. 18-25	2	1
Great Britain—Cardiff	Mar. 18-25	2	1
Great Britain—Liverpool	Mar. 25-Apr. 1	1	1
Great Britain—London	Mar. 18-25	3	0
Great Britain—Southampton	Mar. 25-Apr. 1	9 contacts	0
India—Bombay	Mar. 14-21	143	9
India—Calcutta	Mar. 11-18	9	0
India—Karachi	Mar. 12-19	15	6
India—Madras	Mar. 11-17	1	0
Mexico—City of Mexico	Apr. 1-8	4	3
Russia—Moscow	Mar. 18-25	4	4
Straits Settlements—Singapore	Feb. 25-Mar. 4	74	648
Uruguay—Montevideo	Feb. 6-24	66	8
Yellow Fever.			
Brazil—Rio de Janeiro	Mar. 19-26	14	3
Ecuador—Guayaquil	Mar. 21-28	4	4
Panama—Colon	Jan. 23-Apr. 2	6	3
Panama—Panama	Jan. 1-Mar. 28	44	18
Cholera.			
India—Calcutta	Mar. 11-18	30	0
Plague—Insular.			
Philippine Islands—Manila	Feb. 18-25	1	2
Plague—Foreign.			
Africa—Cape Colony	Mar. 4-11	4	3
Arabia—Aden	Mar. 17-24	45	34
Argentina—San Nicolas	Mar. 18-30	Present.	0
Brazil—Rio de Janeiro	Mar. 19-26	1	1
Chile—Atacama	Mar. 16	Present.	0
Chile—Copiapo	Mar. 16	Present.	0
Chile—Port Montt	Mar. 16	Present.	0
Chile—Valparaiso	Mar. 16	Present.	0
India—General	Mar. 4-11	52,504	45,541
India—Bombay	Mar. 12-19	23	10
India—Calcutta	Mar. 11-18	405	91
India—Karachi	Mar. 12-19	102	91
India—Rangoon	Mar. 18	Increasing.	0
Peru—Chilayo	Mar. 12-19	23	10
Peru—Guadalupe	Mar. 12-19	1	1
Peru—Lambayeque	Mar. 12-19	1	1
Peru—San Pablo	Mar. 12-19	2	4
Peru—Mollendo	Mar. 12-19	11	4
Peru—Lima	Mar. 12-19	2	2

Army Intelligences:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending April 22, 1905:

BILLINGSLEE, C. C., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

CARTER, EDWARD C., Major and Surgeon. Granted two months' leave of absence, with permission to return to the United States from the Philippines, via the Suez Canal and Europe.

CRAIG, CHARLES F., First Lieutenant and Assistant Surgeon. Order relieving him from duty at the United States

Army General Hospital, Presidio of San Francisco, Cal., and assigning him to duty on the transport *Sherman* for duty in the Philippines Division, revoked.

EWING, CHARLES B., Major and Surgeon. Relieved from duty at the Columbus Barracks, Ohio, and ordered to Manila, P. I., for duty in the Philippines Division, on or about July 31, 1905.

HARRIS, H. S. T., Major and Surgeon. Relieved from duty at Fort Slocum, N. Y., and ordered to Manila, P. I., for duty in the Philippines Division.

KIERSTED, HENDRY S., First Lieutenant and Assistant Surgeon. Ordered to proceed from the Presidio of Monterey, Cal., with the Fourth Cavalry, to Sequoia National Park, Cal.

LA GARDE, LOUIS A., Major and Surgeon. Left Ancon, Canal Zone, on six weeks' leave of absence.

POWELL, JUNIUS L., Major and Surgeon. Relieved from duty at Fort Hamilton, N. Y., and ordered to Manila, P. I., for duty in the Philippines Division, about June 30, 1905.

RAYMOND, H. I., Major and Surgeon. Granted ten days' leave of absence.

REYNOLDS, F. P., Major and Surgeon. Ordered to proceed from the Presidio of San Francisco, Cal., to the Presidio of Monterey, Cal., with the Fourth Cavalry, for duty at the Yosemite National Park, Cal.

STILES, HENRY R., Captain and Assistant Surgeon. Left Washington Barracks, S. C., on ten days' leave of absence.

WILLCOX, CHARLES, Major and Surgeon. Ordered from Fort Totten, N. Y., to Fort Wadsworth, N. Y., for duty with the Fifty-sixth and Fifty-seventh Companies Coast Artillery to Artillery District of Baltimore, and then report for duty during Army and Navy maneuvers.

WINN, ROBERT N., Captain and Assistant Surgeon. Advanced to the rank of captain and assistant surgeon.

The following named assistant surgeons have been ordered to the Artillery District of the Chesapeake, Fort Monroe, Va., for duty during the Army and Navy maneuvers: First Lieutenants WALTER COX, GEORGE W. JEAN, PERCY L. JONES, WILLIAM W. RENO, C. P. ROBBINS, WILLIAM ROBERTS, R. M. THORNBURG, WILLARD F. TRUBY.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 22, 1905:

BERRYHILL, T. A., Surgeon. Detached from the *Oregon* and ordered home to await orders.

CLIFFORD, A. B., Assistant Surgeon. Detached from the Navy Yard, New York N. Y., and ordered to the Naval Hospital, Canacao, P. I., via the *Lawton*.

CHAPMAN, R. B., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, Cal., and ordered to the Asiatic Station, via the *Lawton*.

DEAN, F. W. S., Surgeon. Detached from the Naval Station, Olongapo, P. I., and ordered to the *Frolic*.

DENNIS, J. B., Surgeon. Detached from the *Detroit* and ordered to Philadelphia, Pa., for special duty, and thence to Washington, D. C., to report to the Surgeon General.

GEIGER, A. J., Assistant Surgeon. Detached from the Naval Station, Port Royal, S. C., and ordered to the *Chesapeake*.

LEDBETTER, R. E., Passed Assistant Surgeon. Detached from the *Dixie* and ordered to the *Detroit*.

MCLEAN, N. T., Assistant Surgeon. Detached from the Naval Hospital, Boston, Mass., and ordered to the Naval Station, Guam, L. I., via the *Solace*.

MINK, O. J., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the Asiatic Station, via the *Lawton*.

MUNSON, F. M., Assistant Surgeon. Detached from the Naval Station, Guam, L. I., and ordered home to await orders.

NASH, F. S., Surgeon. Ordered to the *Oregon*, via the *Lawton*.

NELSON, J. L., Assistant Surgeon. Detached from the Naval Station, Guam, L. I., and ordered home to await orders.

OMAN, C. M., Assistant Surgeon. Detached from the *Frolic* and ordered home.

OWENS, W. D., Assistant Surgeon. Detached from the Naval Hospital, Mare Island, Cal., and ordered to the Asiatic Station, via the *Lawton*.

PORTER, F. E., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the *Dixie*, sailing from New York, N. Y., about April 26th.

SMITH, H. W., Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the Naval Hospital, Canacao, P. I., via the *Lawton*.

STOOPS, R. E., Assistant Surgeon. Detached from the *Pensacola*, and ordered to the Asiatic Station, via the *Lawton*.

STRITE, C. E., Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the Asiatic Station, via the *Lawton*.

STURT, A., Passed Assistant Surgeon. Ordered to the Naval Station, Chelsea, Mass.

TOLFREE, H. M., Assistant Surgeon. Ordered to report to the Surgeon General for a course of instruction at the Naval Museum of Hygiene and Medical School, Washington, D. C.

WICKES, G. L., Assistant Surgeon. Detached from the *Lancaster*, and ordered to the Asiatic Station, via the *Solace*.

Births, Marriages, and Deaths.

Married.

OSBORNE—DOWNEY.—In New York, on Wednesday, February 22nd, Dr. Charles Cushman Osborne and Miss Julia Madeline Downey.

PIERCE—WAITE.—In Allston, Massachusetts, on Wednesday, April 12th, Dr. Charles W. Pierce and Miss Annie E. Waite.

Died.

ADAMS.—In Washington, D. C., on Sunday, April 16th, Dr. J. Lee Adams, in the sixty-fourth year of his age.

BASS.—In Cazenovia, N. Y., on Saturday, April 15th, Dr. Edgar C. Bass, in the seventy-fourth year of his age.

BEACH.—In Long Beach, N. Y., on Thursday, April 20th, Dr. William B. Beach, in the fifty-fifth year of his age.

BRICKER.—In Fostoria, Ohio, on Thursday, April 13th, Dr. J. W. Bricker, in the seventy-ninth year of his age.

CHENOWETH.—In St. Matthews, Kentucky, on Saturday, April 15th, Dr. Henry Chenoweth, in the eighty-first year of his age.

DWYER.—In Cincinnati, Ohio, on Friday, April 14th, Dr. Harriet Dwyer, in the eighty-sixth year of her age.

EATON.—In Brooklyn, N. Y., on Wednesday, April 12th, Dr. J. Albro Eaton.

GOWLING.—In Memphis, Tennessee, on Saturday, April 8th, Dr. Rachel Gowling, in the sixty-ninth year of her age.

HENDERSON.—In Cleveland, Ohio, on Friday, April 14th, Dr. F. A. Henderson.

HOFFMAN.—In Chicago, Illinois, on Thursday, April 13th, Dr. Adolph Hoffman, in the forty-fourth year of his age.

KENNEDY.—In Brookline, Massachusetts, on Thursday, April 13th, Dr. Alonzo Lewis Kennedy, in the sixty-first year of his age.

LUDWIG.—In St. Louis, Missouri, on Friday, April 14th, Dr. Charles V. F. Ludwig, in the seventy-first year of his age.

LUMMIS.—In Appleton, Wisconsin, on Thursday, April 13th, Dr. Henry Lummis, in the eightieth year of his age.

REANEY.—In Detroit, Michigan, on Monday, April 17th, Dr. Patrick H. Reaney.

STOKES.—In Morristown, New Jersey, on Wednesday, April 19th, Dr. N. Newlin Stokes, in the seventy-third year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

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SATURDAY, MAY 6, 1905

WHOLE No. 1379.

Original Communications.

POLITICOSOCIOLOGICAL ASPECTS OF TUBERCULOSIS PROBLEMS.

By JONATHAN WRIGHT, M. D.,

NEW YORK.

When there came that great leap forward in the development of the physical sciences during the first half of the last century, the results were soon thereafter seen in medicine in the perfection of the various mechanical means for the diagnosis and treatment of disease. This called forth and raised to eminence an order of talent which had but little adaptability and still less inclination for the cultivation of the arts and sciences and none at all for the humanities. The broader field of general medicine was neglected for the narrower domains of specialization. The mechanical side of medicine grew enormously. The era of the hod carrier in science was in full swing. The domain of ideas of intellectual processes was a neglected province; but this was not entirely or directly due to the intrusion of mechanics into science. To grasp the mere facts revealed by the microscope and the test tube, by the laryngoscope, and the thermometer required an intensity of application which precluded any broadness in the utilization of these facts for comparison and co-ordination. Twenty years ago all branches of medicine and the busy workers in them, the laryngologist, the neurologist, and the bacteriologist were characterized by a narrowness of conception and a feebleness of ratiocination which was a disgrace to the nobility of the human intellect, but the time has come and on every hand we see the indication of it when medicine is again to become a learned profession and a calling of enlightenment. While it is said that the recent Congress of Arts and Sciences, at St. Louis, was in some respects a lamentable failure, there may be seen running through the addresses of those men who have achieved prominence in even the most limited fields a conviction, as one of them expressed it, "that the most fruitful work in any science is to be done in the border line between it and

some other science." There has long been observed the expansion of biology and medicine until the line between them has been all but obliterated. With the broadening of our conceptions of ætiology in medicine we are coming into constantly closer contact with other phases of the enlightenment of modern civilization.

The enormous energy with which modern science is attacking the problems presented by cancer and consumption has brought this conviction home to us with more force than any other of the multitudinous activities which surround us in medicine. We have thus far obtained but little light as to the ætiological mysteries of the former, but as to tuberculosis we plainly perceive how largely its ætiology is bound up with sociological questions. Since the matter will concern us at another point let us instance a recent observation which has been dwelt on by several essayists. With the increase in the stringency of sanitary building laws in the large cities there has inevitably followed the higher price of living in them. Light and air have been commonly supposed to be about all that man has not appropriated from a beneficent Creator for the purpose of trade with his fellowman. Even these have not escaped. In urban life air and light are costly luxuries, and the inevitable tendency has been for the poor to seek them where they are cheapest. With the great increase in the means of transit this has become a possibility to the poor. Sanitary science but for this intervention of steam and electricity would be all but powerless to let in on the tubercle bacillus light and air, about the only efficient agents we have, either for the cure or the prevention of tuberculosis. The pressure on the poor is, still further even than by their own migration, relieved by the impulse of these in easier circumstances toward rural environments.¹ This is one of the world currents, remotely but directly ensuing on politicoeconomic changes, which will surely fortify the resisting power of

¹ This movement is apparent enough here in New York even to the casual observer, but those interested in the extent of it as revealed by statistics will find them in an interesting article in the *Nineteenth Century*, December, 1904, where the phenomenon as observed in London and England generally has been studied.

the average human cell, which even in this generation, but still more in succeeding generations, is to fight the noxious power of the tubercle bacillus.

The lack of differentiation between the effects upon the animal cell of different species of pathogenic bacteria, which characterized the earlier years of bacteriological science, resulted in placing in the same category the sprillum of cholera, and the densely hulled bacillus of Koch. We were led to look upon tuberculosis as analogous to the plague. Just at present the half alive intelligence of the public is being tickled by the glib and romantic phrase, The Great White Plague. This is an adumbration of a pernicious misconception once prevalent in more learned circles. It is an illustration of the awkwardness of educating the public. You no sooner have them educated up to one standpoint than you have to begin all over again. Lack of differentiation may be again observed in the influence which the signal triumph of serotherapy in diphtheria has exerted in attempting to find an antitoxine for tuberculosis. The treatment of tuberculosis has thus far yielded but paltry results. Such results as have been recorded we may to a large extent trace to improvement in the methods of the early diagnosis of the disease. In other words, we had forgotten in spite of innumerable warnings, and it was chiefly owing to the narrowness I have cited in my preamble that we did forget that ætiology is a complex problem, and that we have to consider the intrinsic factor fully as much as the extrinsic.

When we turn to preventive measures, as we shall see later, based upon such knowledge as the simple discovery of the tubercle bacillus afforded, they produced no effect upon statistics. The decrease in tuberculosis mortality did not begin in the early eighties. It began after the forties, when democracy had become triumphant. The prelude of the real fight with tuberculosis began when the desperate rabble of Paris, gaunt, hungry, with hundreds of years of misery as an inheritance, their body cells indeed a proper prey for the tubercle bacillus, "a million of tatterdemalions" stormed the Bastille and "girt the tall castle of Louis." The real fight with tuberculosis began not when Villemain proved its contagiousness in 1868, it began when his forbears died on the street barricades in 1848. Man wins his salvation only by shedding his very heart's blood; but unfortunately it is usually not by the heroics which swell so large in history. Here, however, the indications are clear enough. Some recent contributions, those, for instance, of Bul-

strode,² Newsholme,³ Ascher,⁴ contain collations of figures which afford ample evidence of the phenomena from which we may be permitted to draw the conclusions I have ventured to assert. In 1882 Robert Koch put the whole onus of tuberculosis on the bacillus, but historically it rests upon the despotism which prolongs the labor, takes the fat out of the food, and darkens the habitations of mankind. While it is prowling amidst the hovels of poverty it will occasionally knock at the door of a palace. In this country we are witnessing the ludicrous game known as robbing Peter to pay Paul, but as long as Paul only recovers a miserable pittance of that of which Peter has been despoiled, and that largely in the form of libraries and hospitals, the sport is not entirely devoid of themes for serious consideration.

The real fight against tuberculosis is not carried on by, nor do the base of its operations rest upon the activities of our health boards; it is carried on by that struggle of industrialism with militarism which is resulting in shorter hours for labor, better food for the workmen, and more of God's sunshine and fresh air for His children. It may be thought that I am stepping outside of my province as a physician in dwelling on these aspects of tuberculosis. They are not likely to be presented by the stipendiaries and the trustees of endowed libraries and laboratories, but they are none the less problems of tuberculosis, and how much more easy it would be to explain this part of the tuberculosis subject to the public than the mysteries of bacteriolysis, and those mystic symbols, the haptophore and the complement. They would understand at once. If we do not follow to their ultimate conclusions the results which our scientific toil has revealed to us, how can we plume ourselves on our growing catholicity of spirit? Shall we leave such things to the demagogues and harpies who more than once have played riot with such ideas? Better stir the porridge than allow it to cake over on the surface. We cannot be in the world without being of it, and the political evils of the day are as much a concern of medical science as is the search for an antitoxine.

So completely to banish the bacillus tuberculosis from the environment of man as to produce any appreciable effect on the sum total of deaths from tuberculous disease in the face of facts now available is a proposition to which common sense can no longer lend a courteous ear. So far at least

² *Lancet*, July 11, 1903.

³ *Lancet*, November 12, 1904.

⁴ *Brit. Med. Week.*, No. 44, 1904.

as concerns tuberculosis we know that strengthening the cells of the human body is the most efficient means of combating the scourge.

As I have said, laying aside here all purely biological themes, the statistics to support the trend of this article have been widely published. They have had their effect on current thought. Duckworth, Beavor, Bulstrode have in the last few years coordinated the results of statistical investigation, and in the address of more than one layman⁵ are conclusions which even the casual observer must find. Dr. Newsholm, in a very admirable article (*l. c.*), has dealt with this question of social evolution and the public health in England, and indeed it is probable that it will be fully discussed in all countries where thought is untrammelled by open tyranny or by covert repression. Newsholme points out that the general death rate in England and Wales has fallen from 22.5 per mille in 1854 to 16.02 per mille in 1902. As will later appear, this is not all to be credited to the diminution in the mortality from phthisis. This, however, has fallen much more steadily and markedly than the mortality from any other cause, and being a very large factor in the whole, about 1 to 7, it is very significant. When we turn to the study of the statistics from different countries so far as they go, they show that the decrease of mortality from phthisis has been proportional in each country to their advance in the equality of justice to all men, and of enlightenment in all classes. It has been proportional to the relief of the poor from unequal taxation. It has been proportional to the material prosperity of the whole people in each country. It has been more marked in the cities, perhaps not materially of late years because of the reason I have already cited; at any rate, it has been more marked in the cities than in the country, because better sanitation was not only more needed, but more practicable of attainment in the larger towns than in the country districts. This is particularly illustrated in Hamburg, where from 1840 to 1860 there were very great sanitary reforms—better drainage, better water. During that period, long before the modern conception of the communicability of phthisis arose, the mortality from it diminished. Dr. Reincke, from whom Dr. Bulstrode derives his statistics, informs him that no official steps had been taken up to 1896 to prevent the dissemination of the bacillus. Yet the second curve downward of the tuberculous mortality began in 1891, and hence Dr. Reincke attributes it to the improvement in general sanitation. Since 1896 the rate of decrease has been less.

⁵ See among others the paper by Professor Edwin Oakes Jordan, in *Science*, November 18, 1904.

So far, then, as the figures can show, there has been less improvement in the mortality statistics in the years since special measures against the bacillus have been in force, than in the corresponding preceding period, but of course we cannot assume that any immediate effect has been produced either for the better or worse in such a relatively short time. When we look at the statistics of France, where we know that material prosperity has not been so great as in triumphant Germany in the quarter century which followed the war between the two countries, we find a less favorable statistical summary, but owing to deplorable defects entire reliance cannot be placed in it. Nevertheless, it seems clear that France has lost more men by the indirect results of the Franco-Prussian war than by the fearful mortality of its battlefields. Notwithstanding that the improvement in the statistics has not been very marked in France, still some advance is observed. The Netherlands and Danish cities exhibit figures which, while not so striking as those of Hamburg, are of the same general character, and the same may be said of Vienna and Buda-Pesth, the capitals of the Austro-Hungarian Empire, and also of Switzerland.

A comparison of the figures of the health board of New York with those of Prussia and with other statistics is not encouraging for those who believe in the efficacy of specific sanitation for combating the bacillus tuberculosis. So far as figures can show, though of course the period of time is not sufficient, the rate of phthisis decrease inaugurated in the præbacillary days of the consumption theories has been checked rather than accelerated. The rate of decrease has been very moderate indeed in Italy where little improvement in economic conditions has been obtained in the last half century, while in Norway and Iceland there has been a marked increase.

It would not be profitable for me who am no statistician to attempt to point out the bearing of all the figures which have been collected. Neither dare I criticise what seem to me possible sources of grave error. Even with all the care skilled statisticians have devoted to the proper grouping of figures, there is none of them bold enough to deny considerable truth in Talleyrand's contemptuous reference to statistics as *le mensonge en chiffres* (the lie in figures). Nevertheless, we can see sufficient support in them for the attitude which modern science is taking toward the tuberculosis question.

Average modern man is a timid creature in the realm of ideas. His rich clientèle, he knows, will drop from him, donations will cease pouring in to

the coffers of his university, if he places his finger with requisite rudeness on the festering sore of the body politic,—which is indeed the true tuberculous ulcer. Most men are ashamed to lie to their fellows, but here and there is a man who is ashamed to lie to himself. Dr. Newsholme (*l. c.*) after asserting that “a large proportion of our population are still insufficiently fed and badly housed and suffer from conditions which must cause ill health and shorten life,” goes on to say what is not so apparent; “the public conscience no longer allows one set of men to support and enrich themselves by procuring the degradation and suffering of others.” The public conscience is a sleepy thing and needs vigorous perennial kicking, but if the eager health authorities want to educate their public, here is the chance. Just think for a moment of the health commissioner putting his finger on the tariff, or the trust laws, or the labor laws; *C'est à rire!*

Before us lies not only the correction of politico-social iniquities, but before us lies that entangling network of restrictions and petty regulations which the rules of the health and building boards and scores of others are weaving around man to protect him from the noxious influences of his environment. It is apparent that if modern civilization is to continue to advance we must give up many of our ideas of liberty. We must remember, if our altruism can be made to stretch so far, Holmes's suggestion, quoted by Bulstrode, that the proper season for bringing the influence of preventive medicine to bear on an individual is a hundred years before the child is born. The sires of future generations must make themselves the bondmen of rules which curb their desires and curtail their personal liberties.

If it really is the fate of our civilization that we are to drift into that state of intolerable supervision and minute regulation of daily life which distinguished that of the ancient Egyptians and Peruvians, it seems likely that the first step has been taken in the name of the public health. If a condition of practical slavery is the only one possible under which modern civilization can further advance, let us be sure we are selling ourselves at the highest market price. Let us not permit the infliction of regulations of-so called sanitation which are based on half baked theories, and the unwarranted deductions drawn from inept animal experimentation and inaccurate clinical observation, but let us see that blows are struck in the body politic in behalf of the animal cell, which has to fight the ubiquitous microphytes of disease which it is impossible to banish from contact.

44 WEST FORTY-NINTH STREET.

DIETETIC EXERCISES IN INFANT FEEDING.

By E. KIRKLAND SHELMERDINE, M. D.,

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Infants who require artificial feeding can be divided into three groups: 1. Easy cases. 2. Difficult cases. 3. Very difficult cases.

EASY CASES.

Some children have digestive systems capable of assimilating almost any combination of milk; these children apparently thrive on milk and water mixtures, provided that the food is not too concentrated in the beginning. It is true, however, that even in these cases a too great liberty in the question of diet will often result disastrously; but if ordinary precautions are observed, they pass through infancy without any gross disturbances of digestion. The tranquillity of their progress is not as serene as it would have been had they been scientifically fed; but the minor attacks of colic and digestive disturbances have only been of sufficient moment to inflict loss of patience and sleep on the part of the caretakers, without seriously affecting the general health of the infants themselves. The peevishness and disagreeableness in general of an infant are not always attributed, by either the mother or the attending physician, to the fact that the harmonious normal chemical changes of the food in its passage from the bottle to the diaper, is perverted by errors of metabolism, resulting from the improper proportions of the fundamental constituents of milk. It can be put down as a maxim that well fed babies have universally a bright sunny disposition; by well fed I do not mean overfed, but scientifically fed in respect to the quantitative and qualitative chemical proportions of the food. When an infant is properly fed its resistance to disease is greater, owing to its more perfect constitution than if its tissues were strained, as it were, from errors of diet. Admitting the fact that some infants apparently get along very well on most “any old diet,” yet it is true, nevertheless, that these same infants, if properly cared for in respect to time and composition of food, would be hardier and more amiable.

It is as easy and sometimes easier for a physician to start an infant in the right direction as it enters upon its bottle career, than it is to send it along the wrong and uncertain pathway of unknown milk combinations. With modified milk mixtures, it is only a question of finding out which of the milk constituents is at fault and remedying the errors by increasing or decreasing the percentages, according to the indications. Too much

emphasis cannot be laid upon the desirability of feeding all babies, who require to be artificially fed, with modified milk mixtures. To-day, this is possible by the home modification of milk;¹ the cost is only a trifle, if any, more than that of ordinary milk. Many physicians when modified milk is mentioned at once think of laboratory feeding and what is, to many families, the prohibitive cost of the same.

While it is impossible to make a table which will cover all cases, yet for the average healthy child who for any reason is deprived of mother's milk, the following series will answer for the majority:

TABLE NO. I.

	Percentage			
	Fat	Sugar.	Proteids.	Alkalinity.
First week.....	2.0	5.0	0.75	5.0
Second week.....	2.5	6.0	1.0	5.0
Third week.....	3.0	6.0	1.0	5.0
Four to six weeks.....	3.5	6.5	1.0	5.0
Six to eight weeks.....	3.5	6.5	1.5	5.0
Two to four months.....	4.0	7.0	1.5	5.0
Four to eight months.....	4.0	7.0	2.0	5.0
Eight to nine months.....	4.0	7.0	2.5	5.0
Nine to ten months.....	4.0	7.0	3.0	5.0
Ten to twelve months.....	4.0	5.0	3.5	5.0

At the beginning of the second year plain milk is given.

The casein of cow's milk is much more difficult of digestion than human milk; the organs of the child have to be educated to the point where they can digest whole cow's milk. During the course of the first year, this tolerance is brought about by gradually increasing the proteids from a low to a high percentage. The principal mistake is made by giving a too high percentage of proteids at the start. When the mother is unable to nurse the child from the beginning, the foregoing table will give extremely satisfactory results; in fact, these cases are by far the most satisfactory to treat; if properly started, there is very little difficulty; the hard cases are those in which have been given all kinds of mixtures and foods until the digestive system has been almost ruined.

DIFFICULT CASES.

No hard and fast rule can be given for infant feeding any more than a definite course of treatment can be given for each disease which man is heir to; if it was possible to arrange the feeding of infants and the treatment of the sick by rule of thumb, physicians would be relegated to the ash heap, and it would be possible for every household to have an "Every Man His Own Physician" lying handy on the centre table. In the successful administration of modified milks as well as the prescribing of medicine to the sick, the success of the physician depends upon his skillful diagnosis and the proper appreciation of

the idiosyncrasies of the individual patient. In treating a child whose digestive system has been maltreated, it is essential that the attending physician should have the all seeing eye. The history of the case is not sufficient; the general appearance of the child, its size and weight, the muscular tone, the action of the skin: all these important diagnostic points should be carefully observed. Most important of all is the character of the vomitus and feces; it is from these that very important facts are obtained. By close observation of the ejections from both ends of the gastrointestinal canal, we are able to determine if any of the constituents of the milk are at fault.

In the limited scope of this paper it is impossible to go into the minute details of modified milk feeding, yet a general outline of the more important points to be observed in varying milk proportions will, I hope, be of practical use to the busy practitioner who has in the past not used modified milk feeding, owing to its supposed complexity.

Too Much.	FAT.	Too Little.
Vomiting or the regurgitation of sour masses of food.		Constipation.
Diarrhea, loose movements, usually of a yellow or yellowish green color and sour odor; sometimes white, smooth and formed with a peculiarly offensive odor; reaction acid.		Malnutrition.
Free fat may be present in the stools or appear as small yellowish white masses resembling casein, but distinguished by their solubility in alcohol and ether.		Cold extremities, due to non-generation of sufficient body heat.
PROTEIDS.		
Too Much.		Too Little
Colic, either gastric or intestinal.		Malnutrition.
Constipation more often than diarrhea.		Low muscular tone.
Curds in the stools; reaction, alkaline.		Deficiency in height and weight.
Vomiting is often present.		
Stools, pale yellow or white, frequently formed, with an odor of cheese; at other times foul; large masses of casein. Insoluble in alcohol and ether.		
SUGAR.		
Too Much.		Too Little.
Flatulence, gastric and intestinal.		Excessive leanness.
Colic and diarrhea alternating with constipation.		
Stools offensive, thin and sour; frothy from gases liberated by decomposition.		
Vomiting and regurgitation of food sometimes present.		

NOTE.—Too much or too little of more than one of the ingredients of milk may modify the above symptoms. In their order of frequency proteids are the main source of trouble; next comes the fat, and, rarely, the sugar. Excess of proteids is indicated by masses of casein, excess of fat by masses of fat in the stools.

A child who is being improperly fed may or may not have signs of malnutrition. Weight and length are below normal; there is lack of muscular tone; the child sleeps badly, is restless, peevish, and irritable; the digestive and assimilative organs have impaired functions, causing vomiting, diarrhea, or constipation; anæmia is generally present. These children are generally backward in

¹ See Long and Short Methods of Calculating Modified Milks, *New York Medical Journal and Philadelphia Medical Journal*, November 19, 1904.

teething, they sit up later in life than the average baby, it is an effort for them to hold their heads up for any length of time. Emaciation and feebleness are pronounced.

In the majority of cases, where the physician is not sure of the purity of his milk supply, it is well to have the food Pasteurized. In some cases children become scorbutic from Pasteurized milk. These are very few, however, and where signs of beginning scurvy are present, raw milk should be substituted. In using modified milk, the prescription depends upon which of the constituents is at fault. If the child is suffering from an attack of any of the various gastric or intestinal disorders, it depends upon the severity of the symptoms whether a modified milk should be started at once or whether the child should be taken off a milk diet altogether for a time and put on a grain water until the severity of the symptoms subsides. Where there is also a pronounced infection, probably from impure milk or undigested masses in the alimentary canal, it is wise to give the whole tract a thorough cleaning out with calomel. After the subsidence of the graver symptoms, it is well to put the child on milk in which both the fat and proteids are low, then increase proportions as the exigencies of the case demand. It is a good rule in infants up to six months of age, who have been previously ill fed, to start them on 2 per cent. fat; 0.75 per cent. proteids; 5 per cent. sugar; and then gradually or quickly, according to circumstances, run the proportions up to the point where no symptoms are present as a result of a too high percentage of any of the ingredients. In children who have been poorly fed, every case is a law unto itself and the success of the feeding depends upon careful investigation of conditions which point to a too high percentage of one or more of the milk constituents. Holt² gives the following general rule: "If not gaining in weight and without special signs of indigestion, increase the proportions of all the ingredients; if habitual colic, diminish the proteids; for frequent vomiting soon after feeding reduce the quantity; for regurgitation of sour masses of food, reduce the fat, and sometimes also the sugar; for obstinate constipation, increase both fat and proteids."

Improper feeding is the main ætiological factor in malnutrition, marasmus, rickets, scurvy, and the various gastrointestinal disturbances.

DIAGNOSTIC POINTS.

Fæces.—In breast fed babies, the fæces are smooth, yellow, and soft, acid in reaction, and have no disagreeable odor. In infants who are

taking properly modified milk, the fæces are practically the same, generally more solid and firmer; reaction neutral or alkaline. With an excess of proteids, the alkalinity is increased, owing to the presence of undigested casein. When the proteids are excessive they can be detected in the fæces, often in large amounts, the stools becoming pale yellow or even white in color; the odor is often similar to that of cheese, at other times foul from the decomposition of the casein. Excess of fat manifests itself by diarrhoea and fatty masses in the stools. Too much sugar in the food is shown by diarrhoea and thin, sour, irritating stools.

Gastric disturbances are indicated by vomiting, gastric colic, regurgitation of food or water, belching of gas, and a coated tongue.

Intestinal disturbances are indicated by intestinal colic, flatulence, distention of the abdomen, diarrhoea or constipation, curds or mucus in the stools.

Diarrhoea.—In their order of frequency, may be caused by: 1. Too much fat. 2. Too much sugar. 3. Too much or too little proteid.

Constipation.—1. Too low a percentage of both fat and proteid. 2. Too much proteid and too little fat. 3. Too much proteid.

Vomiting.—1. Too large a quantity at one feeding. 2. Too much fat. 3. Too much proteid. 4. Too much sugar.

VERY DIFFICULT CASES.

From previous improper artificial feeding, or poor breast milk, or a poorly developed digestive system, some infants' digestive powers are exceedingly feeble. Poor digestion or chronic indigestion is generally due to previous improper feeding; in the majority of cases, it is not the result of inherited defects. There are infants who are unable to digest even very low milk percentages. Such infants are generally those whose digestive systems have deteriorated from the use of improper food which the body has been trying to assimilate; the digestive organs have almost given up the fight, and it is only a question of time when the infants would succumb to the inevitable. It is a question of starvation in the midst of plenty, more than sufficient food being supplied for the infant's needs, but owing to the superabundance of food constituents in the milk, the small amount of secreted digestive juices is not sufficient to perform the necessary chemical changes in the food mass. In other words, if the milk percentages were proper, the amount of enzymes present would be sufficient to bring about the splitting up of the food molecules into combinations capable of absorption and assimilation.

These cases are the ones which try out the skill of the physician, and it is only by close attention to minute details that he achieves success. The history of the case is that the child has been fed on all sorts of milk mixtures and patent foods, or that the child has been given table food. It is not uncommon to see in the medical journals and advertisements of patent baby foods, that a child had been fed on modified milk with negative results; such a statement contains just as much worth as one to the effect that a physician had given medicine without good results; neither statement is proof positive of the

are reached. By this procedure some children who are apparently hopeless will thrive and in a few months be able to digest a percentage of proteids which would have been fatal without this training.

Whey is prepared by adding a half of a junket tablet to a pint of milk. This is allowed to stand for a short time until coagulation takes place; the curd is then broken up by stirring and the liquid strained through a muslin cloth without any pressure. It is better to have a cloth so large that the ends can be tied together and to hang it up over an open jar.

TABLE NO. II.—WHEY MIXTURES.

	16 per cent.		Boiled		Milk sugar,	Fat.	Sugar	Proteids.			
	Whey.	cream.	water.	Time	Heaping	Per ct.	Per cent.	Milk Lactalbumen	Whey Lactoprotein	Alka-	
	Ounces.	Ounces.	Ounces.	Ounces.	teaspoons.			Per cent.	Per cent.	linity.	Per cent.
Whey made from whole milk..	8	..	7	1	2 $\frac{1}{4}$	= 0.5	4.5	..	0.50	6.25	
	[4	1	10	1	3 $\frac{3}{4}$	= 1.0	4.5	0.25	0.25	6.25	
Whey made from skimmed milk.	8	1	6	1	2 $\frac{1}{4}$	= 1.0	5.0	0.25	0.50	6.25	
	8	1 $\frac{1}{2}$	5 $\frac{1}{4}$	1	3	= 1.5	5.5	0.37	0.50	6.25	
	(8	2	5	1	3 $\frac{1}{2}$	= 2.0	6.0	0.50	0.50	6.25	
Skimmed milk.....	1	2	12	1	4 $\frac{1}{2}$	= 2.0	6.0	0.75	..	6.25	

fact that proper therapeutic measures had been adopted. So in some of the histories of badly fed babies, there is the statement that modified milk mixtures have been tried; this is to be disregarded and proof of the actual inability of the child to take modified milk is to be personally investigated. The sanitary conditions of the milk supply as well as the conditions surrounding the journey of the milk from the cow to the baby's stomach should be thoroughly investigated. Rigid cleanliness both on the part of the child's caretaker in her preparation of the food and in the milk supply itself, are necessary adjuncts to the proper feeding of infants. There is no better procedure in all cases than to begin treatment by cleaning out the child's digestive tract; calomel in divided doses followed by castor oil is a good routine remedy.

In some few cases it will be found that even a low percentage of proteids is not well borne. When such is found to be a fact, one of two procedures is to be tried; either to put the child on a grain water for a time until the digestive organs have had a rest and then begin with a low proteid percentage, or to start it on whey mixtures. The casein of cow's milk is much harder to digest than is the casein of mother's milk; it is mainly on this account that some children suffer from malnutrition. The lactalbumin is more readily digested and the digestive organs can be gradually trained to digest increasing amounts of proteids, by starting on a whey mixture in which casein is absent, and then gradually adding milk proteids until the regular modified milk mixtures

[The above table is calculated on the basis that the average composition of whey, according to Adriaenc, is as follows:

	Whole milk.	Skimmed milk.
	Per cent.	Per cent.
Proteids	0.94	1.17
Fat	0.96	0.04
Sugar	5.49	5.36

In the milk proteid column are the proteids derived from the added cream, which contains casein in proportion to lactalbumen as 6 is to 1; therefore one-sixth of the percentage in this column is really lactalbumen. Whey proteids are composed chiefly of lactalbumen, with a smaller proportion of lactoprotein.]

Where whey mixtures are necessary, the first combination can be given for a short time; then the second, the percentage of proteids being so low that no disturbance is to be feared from this mixture. Every few days the percentages can be increased until the whey is discontinued and the child put on regular modified milk. By this graduated exercise of the digestive functions, as it were, the alimentary tract is trained to digest increasing percentages until the child is finally receiving an adequate amount of nourishment.

ILLUSTRATIVE CASE.

John D., aged 6 months; weighed eight pounds at birth, breast fed for three weeks when mother's milk failed. Put on milk and water mixture, milk one part to three of water; proprietary foods tried; proportions of milk and water frequently changed. Bowels were never proper; curds and green masses in the stools; attacks of vomiting, sometimes food, sometimes sour water; frequent attacks of colic. Had been heavier than he was then. For the past week had been fed one part of milk to two parts of water.

Inspection.—Child's face thin and drawn; body emaciated, abdomen enlarged; weight eleven pounds, length twenty-four inches; stools con-

tained large masses of undigested casein and some fat, very offensive; bowels moved ten to twelve times a day.

The milk supply was from a dealer who had a wagon route, and in all probability was purchased in the open market.

June 8th.—The child was given a tenth of a grain of calomel every half hour until twelve doses were taken; this was followed by a tablespoonful of castor oil. The mother was instructed how to make barley water, and six ounces were ordered to be given every two hours; twenty drops of whiskey were given four times a day. This treatment was continued for two days, when the diarrhoea practically ceased.

June 10th.—The child was put on fat, 2 per cent.; proteids, 0.75 per cent.; sugar, 5 per cent.; which was continued for three days, when the diarrhoea returned with casein in the stools.

June 13th.—Calomel and castor oil were given and the child put on the No. 1 whey mixture, six ounces every two hours. At the end of three days the diarrhoea had subsided.

June 16th.—No. 2 whey mixture was given.

June 18th.—No. 4 whey mixture was given.

June 20th.—No. 5 whey mixture was given.

June 22nd.—No. 6 whey mixture was given.

This was continued for ten days without any return of bad symptoms. At intervals of ten days the percentages were increased according to table No. 1, until the child at 8 months was receiving a percentage which would be applicable to a child 6 weeks old.

August 1st.—During this time the child had increased twenty ounces in weight and an inch in length; his height was about the average, but the weight was still below normal. The muscles were beginning to have more firmness; the eyes were brighter, and the general appearance of the child had improved.

August 15th.—The food was further increased to fat, 3.5 per cent.; sugar, 6.5 per cent.; proteids, 1.5 per cent.

September 1st.—Fat, 4 per cent.; sugar, 7 per cent.; proteids, 2 per cent., were ordered. On this combination the child was kept for three months, as several attempts to increase the proportions resulted in trouble; this combination appeared to be the limit of tolerance.

January 1st.—Fat, 4 per cent.; sugar, 7 per cent.; proteid 2.5 per cent., were ordered and the proportions gradually increased until at 18 months of age the child was able to digest whole milk.

At 8 months of age he suddenly developed grass green stools; a careful investigation of the case brought out the fact that the mother was using unboiled water. She had been told to boil all the water used, and then shown how to Pasteurize the milk after making the mixtures. She thought that the home Pasteurization sterilized the milk. Coincident with this attack of intestinal infection, there was a break in the reservoir supplying this part of Philadelphia and the water was especially foul. By carefully cleaning out the intestinal tract and sterilizing the water, the attack subsided in the course of a few days.

This case was one of the rare ones in which the child was unable to digest high percentages of proteids until long after the age when the average child was taking whole milk. He thrived on low percentages, however, and at 2 years of age was of average length and only slightly under weight. To-day he is able to eat a diet which is appropriate to his age, and is physically a strong, healthy boy, a living example of what graduated exercise will do for the digestive organs. As we can take a weak, delicate boy and by physical culture develop him into a robust being, so can an infant with weakened digestive organs be trained into digestive competence.

6135 GERMANTOWN AVENUE.

INFLAMMATION OF THE GLANDS OF BARTHOLIN.

By CHARLES C. MILLER, M. D.,

CHICAGO.

(Concluded from page 848.)

THE EXTIRPATION OF THE ACUTELY INFLAMED GLAND, WHEN COMPLICATED BY THE STRICTURE OF THE DUCT AND THE RETENTION OF PUS AND SECRETIONS.

We now come to the most certain and radical method of treating that condition, which up to the present day has merely been looked upon as an acute inflammation of the gland.

Where this process is marked by any decided symptoms, this operation will require a general anæsthetic, or an extensive infiltration anæsthesia. I have never tried this latter plan, and cannot recommend it from experience, but when one comes to a consideration of several of the inconveniences which are likely to come from local anæsthesia, I think it will hardly prove desirable in these cases where considerable inflammation exists.

The patient should be carefully prepared by being scrubbed, shaved, and douched. This latter should be thorough in any case, and where the woman is suffering from a rather profuse purulent discharge, as we sometimes see, the vagina should be scrubbed out with green soap and a brush.

The patient is to be given a general anæsthetic and placed in the lithotomy position. The buttocks should extend well over the edge of the table so as to give good access to the parts.

Where there is a large accumulation of pus it is quite impossible to dissect out the tumor and cyst without rupturing the latter, but if the operator is anxious to do this or rather to prevent an infection of his wound so that it may be imme-

diately sutured without drainage, the pus and gland secretions may be carefully aspirated, and the cavity of the abscess filled with melted paraffin as was suggested by Pozzi some years ago in the treatment of cysts of the gland. Then the entire gland, the mass of paraffin within it, and the dilated duct may be removed. Should the paraffin be exposed during the operation, the wound will not at once be inundated with pus as would be the case were the abscess opened. In this technics, where the paraffin is used, should the solid mass be exposed at any time during the operation, a stitch should be taken to close the little rent into the infected sac. Where care is used to see that the sac is empty before the paraffin is injected, the paraffin may be repeatedly exposed and infection prevented by suture and, at the conclusion of the operation, the parts can be closed by immediate suture.

If the paraffin is not to be used and there is a large cyst, an effort may be made to remove tumor and cyst without rupture of the latter, but as a rule the cyst will be ruptured early in the operation. The pus which escapes should be carefully removed from the field of operation.

The skin incision is much preferable to the one made on the inner surface of the labium majus, the reasons for which I have previously mentioned.

The gland usually comes into view as an irregular purplish body, and varies greatly in size; one the size of a hen's egg is not unusual after the pus has escaped.

The dissection is to be made over the anterior surface of the gland at first, and in so doing it is well to dissect free that portion nearest the rectum before attacking the portion near the bulb of the vagina which lies anteriorly. A free oozing commences as soon as the dissection has been well started, and in some cases this portion of the operation may be continued under continuous irrigation to advantage. Any spurting vessels should be caught with hæmostats, and if these are in the way the vessels should be tied or twisted and the hæmostats removed.

As the dissection is continued deeper around the sides of the gland, the bleeding becomes quite inconvenient. The irrigation is useful, so long as the dissection is superficial, but when we get well down to the posterior portion of a large gland it is of little service.

While conducting the dissection, work is much facilitated by traction upon the gland if the cyst has ruptured, but it will be necessary to have broad flat forceps for grasping the gland if we wish to make any degree of traction, as the gland

structure is usually very friable when the organ is badly diseased.

In carrying the dissection down upon the inner side of the gland care should be taken to prevent rupturing the intervening sæptum between the wound and the vagina. Some recommend that all portions of the gland be removed, but by so doing only a sæptum of extreme thinness is left on the vaginal side. I prefer in some instances at least not to do so. If only a sæptum of mucous membrane is left between the wound and the vagina, and free suppuration develops during the subsequent course of the case, I have in several instances seen the sæptum slough, so that a communication develops between the wound and the vagina, and this organ is exposed to the danger of reinfection.

In all instances where the gland has projected well toward the vagina so that only a very thin sæptum would be left if all the gland was removed, I prefer to carry my incision through the gland structure to this inner side, leaving a small portion of the gland to reinforce the inner wall.

In one of my cases following sloughing of the sæptum between the wound and the vagina, where the incision was made at the juncture of the two labia, a fistula developed which was cured only at a second operation.

The vagina should be avoided with particular care in those cases where there is a free purulent flow from this organ, as in such an instance communication will mean certain infection of the cavity of the wound, a condition which can be avoided in not a few cases even where a cyst filled with pus is ruptured during the operation.

The most important feature of the radical operation for the extirpation of the enlarged and inflamed gland is the control of hæmorrhage. It has been the experience of more than one surgeon to find that he cannot simply pack the cavity which is left after the extirpation of this gland, and by this means effectually guard against hæmorrhage. Large amounts of blood have been lost after this operation, where the operator has not completely controlled the bleeding and has trusted to a gauze pack of the wound.

We can to some extent avoid free bleeding by keeping very close to the gland anteriorly toward the pubes and thus avoid the vascular erectile bulb of the vagina, and in making the dissection of the gland behind after it has been separated on all sides, blunt dissection has been recommended to avoid wounding some of the vessels which are situated in this region.

It has been my experience not to have trouble with any large single vessels, but to find after the

gland was removed that there was a free bleeding which could not be localized to one or even to a few points. Hot irrigations during and after the operation and hot compresses packed into the wound do not serve to control this bleeding.

The most efficient means, as I have described before, is by the use of the mattress suture of catgut, which is carried under the bleeding surfaces. I would here repeat that it is not necessary to strangulate the tissues by tying these sutures as one would a ligature.

In order to make it possible to pass the mattress sutures in the depth of the wound, and some of the wounds left after the extirpation of a large gland are deep, it is well to have at hand some very short full curved needles.

Sometimes a wound is deep and conical after the extirpation of the gland and the operator does not care to close it even in part by the mattress sutures, owing to the infected inflamed condition of the tissues and there is a persistent free bleeding; this bleeding can be controlled by packing, but we must exercise one or two precautions to render the packing safe. The wound may be packed with gauze and then the superficial parts drawn over the gauze and sutured, leaving only a small opening posteriorly for the exit of a small rubber drainage tube. At the end of twenty-four hours a greater part of the stitches must be cut and the gauze removed and replaced by clean gauze.

Another method of packing which is safe and in which the superficial parts are not closed over the gauze, is the method of packing the vagina solidly with lint or gauze and then packing the cavity firmly. A compress must then be carefully applied to the external parts to hold the gauze effectively in the wound. The vaginal packing need not be replaced when the gauze is changed at the end of twenty-four hours unless a free bleeding recommences, when the vagina and cavity must be again packed to control the bleeding.

In any case after this operation, unless the bleeding has been perfectly controlled during the operation, a nurse should be instructed to inspect the parts without disturbing the dressings at least every half hour.

NEGLECTED CASES OF BARTHOLINITIS COMPLICATED BY FISTULA.

We sometimes see a patient who has allowed an abscess to form and rupture into the vagina or burrow posteriorly into the rectum. The formation of vaginal fistulæ is much more common than those into the rectum.

Where the fistulæ have formed extending into the vagina or even open on the inner surface of the labium minus, the incision to the gland may be through this area, but for my own part I prefer in these cases to make a skin incision and then if possible to excise the fistulous opening into the vagina and close this point so formed by chromicized gut or other sutures. Drainage will then occur externally, and the least amount of scar tissue will be formed at the former site of the fistula. This plan has the advantage that reinfection of the wound is less likely to occur, and the danger of an ascending infection being lighted up where it has subsided is overcome.

Cases where there is a rectal fistula as the result of the infection of Bartholin's glands are cases which have been neglected for considerable time. In some there will be no communication with the vagina, and these cases are to be operated upon as are all rectal fistulæ.

I do not wish by entering into a lengthy consideration of the operative treatment of diseases of the gland of Bartholin for my readers to lose sight of the points which I attempted to bring out in the earlier part of this article regarding chronic inflammation or infection of the duct and gland without stricture, and the suggestions as to diagnosis and treatment of such conditions.

100 STATE STREET.

Albany Medical College.—The following graduated from this college on May 2nd:

Kenneth Daniel Blackfan, of Cambridge; Homer Andrew Bushnell, of North Adams, Mass.; George Morris Casey, of Schuylerville; Archie Bert Chappelle, of Kingston; Arthur Preston Clark, of Albany; Kenn Romeo Coffin, of Cooperstown; Miles Jacob Cornthwaite, of Troy; John Henry Farnian Coughlin, of Troy; Walter Allen Cowell, A. B., of Albany; John Dixon Crane, of Hawley, Pa.; Orrel Charles Curtis, of South Egremont, Mass.; Theodore David Dockstader, of Sharon Centre; Patrick John Donahoe, of Albany; William Mulvihill Dwyer, of Amsterdam; John Peter Faber, of Albany; Fred Edward Gremore Flanagan, of St. Regis Falls; Thomas Joseph Flynn, of Johnstown; Perlia Elijah Garlock, of Sprakers; William Joseph Garvey, of Troy; Charles William Louis Hacker, of Albany; Walter Ennis Hays, A. B., of Albany; Chester Allan Arthur Hemstreet, of Waterford; Thurman Alson Hull, of Williamstown, Mass.; Lemuel Rankins Hurlbut, of Troy; Frank James Hurley, of Bennington, Vt.; Matthew Joseph Keough, of Cohoes; Oscar Franklin Larson, of Poultney, Vt.; Edward Miltimore, of Catskill; Francis Joseph Noonan, of Troy; George Washington Papen, Jr., of Albany; Herbert Bowen Reece, of Troy; William Garfield Rommell, of Troy; Henry Stanton Rowe, Jr., A. B., of Cohoes; Harry Rulison, of Albany; Frank George Schaible, of Albany; John Ralph Schermerhorn, of Randall; Frederick Foster Schirck, of Saratoga Springs; Arthur Hamilton Schuyler, of Fonda; Francis Joseph Scott, of Cohoes; Benjamin Franklin Seaman, of Matteawan; Hamilton Munn Southworth, of Nassau; Charles William Stratton, of Lee, Mass.; Charles Clark Sweet, of Petersburg; James Harvey Van Buren, of Jefferson; Edward Hellis Vines, of Saratoga Springs; George Walrath, of St. Johnsville; Alfred Le Roy Warner, of Troy; Roscoe Conkling Waterbury, of Nassau; James Watson White, of Wappinger's Falls; Edwin Barnes Wilson, A. B., of Hudson.

IMMEDIATE ABDOMINAL SECTION.*

By DENSLOW LEWIS, M. D.,

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I concur in the opinion, rather freely expressed in certain quarters, that the multiplicity of hospitals in our smaller cities and the superficial familiarity with surgical procedures acquired by the general practitioner who may spend his vacation at one of our postgraduate schools not infrequently result in the performance of an abdominal section by a man who is imperfectly qualified. I deprecate reckless operating by the inexperienced. So many skilled operators are now available in every section of the country that the practitioner is false to the trust reposed in him by his patient if most major operations of election are not performed by the duly qualified alone.

Conceding all this it must also be acknowledged that much of the talk that one hears about "proper surroundings," "a well appointed hospital," "competent assistants," as well as many of the methods in use by some teachers in postgraduate schools foster the idea that there is an attempt at self-advertisement rather than an honest and earnest effort to teach the practitioner-student to operate for himself.

The essentials of asepsis are simple and easily applied everywhere. In an emergency the abdominal wall can be scrubbed with hot soapsuds for a few minutes and wiped dry with a sterile towel. Then there is another washing with alcohol by means of a large piece of gauze, and still another with a bichloride solution. The disinfection of the operator's hands and forearms can be effected in the same manner, the procedure constituting a method in use by some of the most experienced operators of the world, whose results are all that could be asked. The technics of abdominal section is also simple and if properly carried out under aseptic conditions is practically devoid of danger. The incision is preferably in the linea alba, but wherever made bleeding vessels should be caught with forceps and often ligated with fine catgut, so that all hæmorrhage is controlled as the incision is extended. The bleeding vessel in each instance should be seized alone with as little of the adjacent tissue as possible. I have opened and closed the abdomen at least five hundred times without the use of hæmostatic measures of any kind, except forcible compression by gauze sponges and through and through sutures. I do not now favor this procedure. I believe it to be the part of wisdom to save every drop of

blood, for no one can tell how much may be lost accidentally toward the close of the operation, nor can it be denied that every minute blood clot in the abdominal wound is an additional factor of importance as a potential nidus of infection. I also believe it to be advisable to secure accurate coaptation of the several structures of the abdominal wall so that a true *restitutio ad integrum* may really occur. This is only possible by actually bringing together by suture the different tissues so that peritonæum may be apposed to peritonæum, aponeurosis may be reunited to aponeurosis, the continuity of the musculature may be restored, the superficial fascia may be brought together and finally the cut edges of the skin may be accurately apposed without undue tension. For this purpose I favor the use of sterile catgut, which is now obtainable and the separate approximation, preferably by individual suture, of the different tissues which constitute the abdominal wall. I confess I have not always conformed to this theory. Some fifteen years ago I removed a large fibroid in the Presbyterian Hospital of Chicago, and at the autopsy I found pus along the continuous suture which united the peritoneal incision. The very means adopted as a precaution to secure additional safety was a factor in the fatal result. I believe, however, that to-day reliable catgut is obtainable and I prefer its use in all abdominal work. When the operator prepares his own catgut I recommend immersion in a 1 to 1,000 watery solution of mercury bichloride for six to eight hours and subsequent immersion for twenty-four hours in a similar 1 to 2,000 solution. The catgut should then be placed in absolute alcohol to which a little glycerin has been added, and in this solution it should remain at least a month before being used. As catgut is manufactured to-day, it is certainly more convenient to keep on hand the sterilized gut hermetically sealed in its tube, which can be broken at the time of operation.

I now invite your attention to the consideration of those conditions where, it seems, the best interests of the patient are conserved by an immediate abdominal section, even by those of limited experience who make no pretension to a knowledge of surgical procedures. The time has come when no practitioner can with justice remain absolutely in ignorance. Every medical man and woman should know how to use a Murphy button and how to sew up an intestine. The supply of dogs and cats in every community is adequate to any demand and a needle holder and a few intestinal needles are easily obtainable. No one can tell when a human life may depend on the

* Presented to the Surgical Section of the Illinois State Medical Society at its annual meeting in Bloomington, May 17 to 19, 1904.

practitioner's ability to do a little scientific sewing. It is simple to reunite the muscular coat and to close the peritonæum by a Lembert suture, but the value to the practitioner of one preliminary experiment on the dog is well nigh incalculable. The Murphy button is easily adjusted, but it can be done wonderfully better if there has been one trial on an animal.

The proposition may be safely advanced to-day that in every case of gunshot, knife, or other traumatism of the abdominal wall, exact knowledge of the actual condition is imperative. The real extent of the injury inflicted can never be accurately determined without proper examination. There is no longer fear that in the event of a prosecution the defense will assert that death is due to the operation rather than to the injury. There is no longer need of the hydrogen gas test to demonstrate intestinal integrity. Unless the injury is superficial, the wound of entrance should at once be enlarged sufficiently to ascertain if the abdominal cavity has been entered. Where there is no penetration it may suffice to cleanse the flesh wound and allow it to heal by granulation. When penetration has taken place, the abdominal contents must be examined systematically to determine the existence and extent of every traumatism.

In such an examination it is usually advisable to make a median incision long enough to permit complete exploration of all abdominal or pelvic viscera that may be injured (1). Bleeding from the vessels of mesentery or omentum can be controlled by ligature, and intestinal perforations can be closed. For this purpose the muscular coats can conveniently be brought together by interrupted sutures, while the peritoneal surfaces are reunited by a continuous Lembert or other suture, which will approximate a relatively large amount of peritonæum. This is the essential factor in intestinal work. The peritoneal surfaces become agglutinated within a few hours and preserve the continuity of the intestine. If traumatism of the omentum is excessive the injured part may often be cut away with advantage. Here, however, the cut edges must be covered with peritonæum, for it is, in my judgment, of first importance in all abdominal work that no raw surfaces be left to form adhesions which may predispose to ileus. It is most desirable in every case that, when all is done, nothing but peritonæum shall be apposed to peritonæum within the peritoneal cavity. All intestinal perforations must be found and closed, and if any portion of the intestinal tract is the seat of multiple perforation the bowel must be resected. For that purpose the Murphy button

is most admirably adapted, both by reason of the ease of its application as well as by the well known good results that have followed its use.

It must be admitted, as Harris has recently explained (2), that unless the abdominal wound is large enough to permit a view of a visceral perforation or other injury, or to take cognizance of the escape of bile or intestinal contents, the only two symptoms which show a definite injury are hæmaturia, which indicates a traumatism of the urinary tract, and hæmatemesis, which is evidence of a wounding of the stomach. I remember one case of gunshot wound seen in the practice of the late Dr. Hoadley on the Fourth of July some thirteen years ago when at the operation, which was performed too late, there were found fourteen perforations, and the abdominal cavity was full of blood. And yet at the time of operation, which was some fifteen hours after the receipt of the injury, the pulse was full, strong, and regular. It is a mistake to think that no internal hemorrhage is taking place unless there is shock, rapid pulse, cold clammy skin, and other characteristic symptoms. As soon as penetration is recognized there should be an immediate abdominal section without regard to symptoms or the patient's condition.

Only very general directions will be attempted in this connection regarding the treatment of perforating wounds of the abdominal and pelvic viscera. As a rule all wounds should be closed by suture whenever possible and the peritonæum should be sewed over all by a Lembert or other seroserous suture. In this manner the effort will be made in the case of the hollow viscera. When the liver, spleen, or pancreas is injured it may be possible to catch and ligate the bleeding vessels or to control the hæmorrhage by ligatures, which include a variable portion of the tissue of the organ. In other cases we resort to gauze packing.

Drainage should be the rule—almost the invariable rule. The hollow viscera, as Tiffany has pointed out (3), contain more or less gas and any quantity of infecting material. Where there is perforation there is danger of contamination, but there is also danger to the peritonæum by too thorough sponging or douching. The part of wisdom in case of the escape of much fecal matter or stomach contents consists in as complete a removal as possible of all visceral contents, with the minimum amount of irritation to the peritoneal serous surfaces. If the toilet is incomplete, if the perforations are multiple or the traumatism extensive—indeed, it is safe to say in nearly every case of injury to the abdominal or pelvic viscera—statistics show that the use of a

few cigarette or Mikulicz drains for perhaps forty-eight hours is preferable to immediate closure of the abdominal wound. The distance from the perforation or other injury to the surface should be as short as possible. Additional openings should be made, if necessary, through the abdominal wall in a convenient location to avoid a long or tortuous channel.

In the consideration of abdominal injuries where there is no penetration—injuries due to falls, blows, kicks, or to lifting, crushing, jumping, straining, or other forms of violence—direct or indirect—it is to be remarked that the treatment should be determined not alone by the conditions of the injury as they are apparent, but also, and perhaps especially, by the recognition of possible sequelæ or complications of a serious character, which statistical study shows are often to be expected. It is impossible to generalize here, but it must be acknowledged that often the extent of the injury cannot be determined without an abdominal section. I venture the assertion that traumatism sufficient to fracture pelvic bones or to cause extreme shock, acute anæmia, rapid pulse, or other untoward symptoms is likely to have produced some serious internal injury which must be sought for (4). If none is found, it cannot be said that an abdominal section, as performed to-day, will have added materially to the risk.

In reference to obstetric practice, I beg leave to state that it was my privilege some two years ago to present a paper by invitation to the Medical Society of the State of New York, in which I considered the traumatisms of pregnancy (5): In the collection of cases during thirteen years, for the preparation of that paper, it was most interesting to observe how frequently, even after an injury which at the time of infliction appeared trivial, there resulted later severe hæmorrhage, extensive suppuration, or a fatal outcome. I beg leave to refer to my views as expressed on that occasion for the consideration of rupture of the uterus, and other accidents of pregnancy which require immediate operative attention. I must, however, in this connection insist on the performance of Cæsarean section in many instances where the woman is otherwise left to die. The technique is simple—especially Olshausen's—and, as I had the honor to explain at the November meeting of the Bureau County Medical Society last fall (6), there is, in my judgment, no longer an excuse for a persistence in futile attempts at delivery in cases where the birth of a living and viable child is improbable, or where there is danger to the mother. Cæsarean section must be re-

garded by every practitioner as a legitimate operation of emergency, and must be undertaken as readily as any other emergency operation. During the puerperium there may also occur complications requiring abdominal section. My views on this subject are expressed in the address on surgery which I had the honor of delivering at the Cairo meeting of this society (7), and my recommendations in case of criminal abortion have been often repeated (8).

Rupture of an ectopic gestation sac means hæmorrhage, and I think I can say that to-day all agree that rational treatment consists in its control as Bernutz and Goupil pointed out many years ago (9). I do not mean that every case demands immediate operation, but I insist that every case shall be recognized, and that undue loss of blood must be prevented even if abdominal section is performed to permit ligation of the bleeding vessels. I appreciate the necessity of alertness to the possibility of this accident by the recent death of the cook in my own family. The woman, some forty years of age, had been in our employ for years, and was a model servant in every way. While I was at luncheon one day she fell suddenly on the kitchen floor. When I saw her, a few minutes afterwards, she had seated herself in a chair and complained of slight abdominal pain. She drank a little water, and unassisted walked up two flights of stairs to her room. I saw her again within ten minutes. She was lying dressed upon her bed and said she felt better. Her pulse was full, strong and regular, and pressure on the abdomen through her clothes elicited no tenderness. I was told it was not the time of her menstruation. She said she thought she had overworked, so I advised her to stay in bed till I could see her again when I came home to dinner. She complained of no pain now, so I left her. Two hours afterwards when I was holding my usual clinic at the County Hospital word was brought to me that she was dead. The autopsy, conducted the next day by the coroner's physician in the presence of Dr. W. A. Evans and others, showed much blood in the abdominal cavity and a ruptured tubal pregnancy of some six weeks. A single ligature would have saved this woman's life. Had the possibility of pregnancy been taken into account, the true condition would undoubtedly have been recognized, and an immediate abdominal section would have prevented the fatal result.

Aside from the accidents of pregnancy and the injuries to which all are liable there are many diseases and complications and sequelæ of diseased conditions which demand surgical inter-

vention or the patient dies. I have recently seen a case of this character which was particularly sad. The patient was a retired doctor and the father of a doctor. When I saw him the third day of his illness my diagnosis was appendicitis, and my advice was an immediate operation, which was refused. I noticed the distention of the abdomen and above all its rigidity, and after some parley I told the patient frankly that in my opinion he had not thirty-six hours to live unless the operation was performed. His son begged him to submit, but the patient asserted that in his younger days he had treated successfully many cases of this character and he preferred to die rather than undergo an operation. Thirty-four hours afterwards he died, and at the autopsy, conducted the next day by Dr. W. A. Evans, a gangrenous appendix was found, which might easily have been removed.

Now I shall not at this time go into an extended discussion of the treatment of appendicitis. I do not believe that every patient who has pain in the right iliac region needs the knife. I know how much benefit is to be derived from high colonic flushing, thorough evacuation, lavage, and Ochsner's starvation method. At the same time it must be admitted that gangrene is often present when the symptoms are not severe, and that foul pus may accumulate about the intestines when fever subsides and the general condition is apparently good. I see but few cases that I do not operate, and while I admit that I have not always been correct in the diagnosis, I can also say that I have never yet operated without finding some pathological condition that warranted surgical intervention. I will also confess that on several occasions I have found an appendicitis that I did not suspect (10). In attempting to give general advice on this subject, perhaps it is well to emphasize the importance of marked rigidity and any approach to extreme shock. These symptoms in connection with the usual history suggest gangrene, and if they persist unduly and the general condition of the patient does not improve, would in most cases indicate operative interference. In cases where an abscess is recognized there can be no question about the advisability of an operation. Here, however, it is often the part of wisdom to open and provide drainage and to do nothing more at the time. To be sure a hernia may result, but that is of small consequence in comparison with the danger of infecting the general peritoneal cavity by injudicious manipulation.

Abscess elsewhere within the pelvis or abdomen may necessitate operative measures or pus may

be discovered where some other condition—perhaps obstruction of the bowels—induces us to operate. For our comfort it is well to remember that in an old pyosalpinx the pus is often no longer dangerous and rupture is not a serious mishap. Abscesses within the pelvis, when discovered by abdominal section, especially if adhesions are firm and numerous, may often be drained advantageously from the vagina, and sometimes counterdrainage is of value (11). In many instances the safest procedure is to stitch the wall of the abscess cavity to the edges of the abdominal wound and thus provide drainage. Abscesses that form between kinks of intestine in the course of peritonitis will probably be best treated by a Mikulicz drain.

At times irrigation is advisable—even continuous irrigation—perhaps in the Fowler position, which consists in the elevation of the head of the bed twelve to fifteen inches from the horizontal (12). It is impossible to generalize, still I confess to an increasing partiality to provide adequate drainage where there is pus, toxins, or debris to be drained away, and I believe in such cases we will all make use of irrigation more often and more systematically than we have done in the past. I cannot believe with Olshausen (13) that drainage is nearly always injudicious or inadvisable. A hot salt solution can, in my judgment, advantageously replace septic matter in contact with peritoneal surfaces, and its value to control inaccessible hæmorrhage as well as to combat the effects of a dangerous loss of blood can be made available by continuous irrigation in addition, when necessary, to its administration by the rectum or by the intravenous or subcutaneous route (14). When severe diffuse septic peritonitis exists, death is almost certain. I believe in the future it will more and more seem advisable to make a sufficient number of openings in the abdominal wall, so that thorough and continuous irrigation may be instituted. Indeed, even in cases when the abdomen is closed, a pint or more of hot saline solution left in the abdominal cavity has been often attended in my practice with the happiest results.

Obstruction of the bowels is, I am convinced, too often a cause of death. We have much to learn in connection with this complication of many conditions, and it is often possible, I am sure, for a timely operation to prove life saving. I was asked a few months ago to operate on a case of Dr. C. P. Stringfield's. I arranged to do so, but five minutes before I entered the hospital the patient died. At the autopsy, which I conducted the same evening in the presence of Dr. String-

field and Dr. Watson, the small intestine was found kinked and adherent to a right pyosalpinx. There had been an apparently mild peritonitis—non-puerperal—and the first untoward symptom was stercoraceous vomiting, which persisted twenty-four hours before the patient died.

(To be concluded.)

ADENOIDS IN THE ADULT.

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It is the writer's belief that, while the literature of adenoids in children is very full, the subject of adenoids in the adult has been much neglected, in both writing and practice. Some two years ago the writer had his attention called to the subject by a series of cases. Since then he has been at some pains to investigate the condition and to watch for its occurrence. As a result of this work he has collected the accompanying list of 57 cases. In every one of these cases a considerable amount of adenoid tissue was found, and the history was such that the relation of cause and effect could be established between the adenoid and the symptoms. In most cases the presence of the growth could be established by posterior rhinoscopy, but sometimes it was necessary to examine the rhinopharynx by digital palpation. The growth varied in size and distribution, but was always of considerable size, and usually sprang from the angle between the roof and the posterior wall of the pharyngeal vault. It was usually soft, pulpy, and friable; particularly so, strangely enough, in the older subjects.

In the accompanying table the cases have been, for greater convenience of study, arranged by decades. Space limits forbid giving a detailed history of every case, but those of special interest are discussed.

TABULATED RECORD OF ADULT CASES OF PHARYNGEAL ADENOIDS OPERATED ON BY THE WRITER DURING THE PAST TWO YEARS.

I.—Ages 20 to 30 years.

NAME.	AGE.	HISTORY AND INDICATION FOR OPERATION.	RESULT.
Samuel M.	23	Nasopharyngeal catarrh.	Improved.
Emily G.	23	Nasopharyngeal catarrh.	Improved.
Michael S.	23	Nasopharyngeal catarrh.	Improved.
Gertrude H.	25	Inclp. pul. tuberculosis.	Cured.
Minnie F.	21	Nasopharyngeal catarrh.	Improved.
Sidney C.	26	Inclp. pul. tuberculosis.	Unknown.
Bernard P.	25	Otitis media catarrh. chronica.	Improved.
Emma V.	25	Tubotympanic catarrh.	Improved.
Louise S.	22	Otitis med. catarrhalis chronica.	Improved.
Thomas D.	25	Tubotympanic catarrh. nasal obstr.	Improved.
Kate S.	25	Otitis media catarrh. chronica.	Improved.
Hera B.	26	Otitis media purulenta chr. nasal obstruction.	Cured.
Hernina P.	21	Nasal obstruction.	Cured.
Sadie K.	22	Nasal obstruction.	Cured.
Mary M.	23	Nasal obstruction.	Cured.
Susie K.	28	Chronic aural catarrh, nasal obstr.	Improved.
Ernest K.	29	Nasal obstruction.	Cured.
James J. P.	27	Nasal obstruction.	Cured.
Mary R.	29	Acute mastoiditis, com. nasal obstruction.	Cured.
Nellie D.	21	Nasal obstruction.	Cured.
William L. H.	27	Tubotymp. catarrh. nasal obstr.	Cured.
Robert H.	28	Pul. tuberculosis, nasal obstr.	Improved.

Joseph K.	22	Nasal obstruction.	Cured.
James A. L.	24	Nasal obstruction.	Cured.
John E. S.	23	Pul. tbc, otitis med, purulent chro. nasal obstr.	Improved.
William G.	26	Nasal obstruction, otitis ext.	Improved.
C. R. van E.	29	Tuberculosis of pharyngeal tonsil.	Improved.
Margaret J.	24	Nasal obstruction.	Cured.
Alce M.	26	Cervical adenitis.	Cured.
Hortense K.	28	Nasal obstr., recurrent mastoiditis.	Cured.

	Number.	Males.	Females.
Total cases.	30	14	16
Cases with throat symptoms.	22	11	11
Cases with ear symptoms.	12	5	7
Cases with tuberculosis.	5	4	1
Cases with cervical adenitis.	1	0	1

II.—Ages 30 to 40 years.

NAME.	AGE.	HISTORY AND INDICATIONS.	RESULT.
John McG.	30	Nasal obstruction.	Improved.
Catherine B.	30	Otitis media catarrhalis chronica.	Unimp'ed.
Lena F.	34	Otitis media and interna.	Unimp'ed.
Maurice S.	30	Otitis media and interna, nasal obstruction, chr. laryngitis.	Improved.
Gustave W.	34	Otitis media catarrhalis chronica.	Improved.
Adolph D.	32	Otitis media catarrhalis chronica.	Improved.
William H. B.	37	Otitis media catarrhalis chronica.	Improved.
Hannah R.	30	Ethmoiditis.	Improved.
Bertha E.	37	Obstinate irritative cough, following cure of pul. tuberculosis.	Cured.
Eliza B.	39	Cough, following cure of pulmonary tuberculosis.	Cured.
Fannie B.	39	Pulmonary tuberculosis incip.	Improved.
Mrs. W. L. M.	32	Ac. mastoiditis, nasal obstr.	Cured.
Elda B.	33	Nasal obstruction.	Cured.
Jane C.	37	Nasal obstruction.	Cured.
Harriet J.	38	Cough following cure of pulmonary tuberculosis.	Cured.

	Number.	Males.	Females.
Total cases.	15	5	10
Cases with throat symptoms.	8	2	6
Cases with ear symptoms.	7	4	3
Cases with tuberculosis.	4	0	4
Cases with ethmoiditis.	1	0	1

III.—Ages over 40 years.

NAME.	AGE.	HISTORY AND INDICATIONS.	RESULT.
Abijah M.	42	Chronic laryngitis.	Improved.
Mary H.	43	Otitis med. catarrhalis chron.	Unimp'ed.
Ludwig F.	44	Otitis med. catarrhalis chron.	Improved.
Moses S.	47	Otitis med. catarrhalis chron.	Improved.
Louis J.	43	Otitis med. catarrhalis chron.	Improved.
Julius M.	43	Otitis med. catarrhalis chron.	Improved.
Harris L.	44	Chronic laryngitis.	Improved.
Mrs. S. B. F.	40	Otitis med. purulenta chron.	Improved.
M. L.	40	laryngitis, nasal obstr.	Improved.
Mrs. R. W. B.	41	Nasal obstruction.	Cured.
Samuel J. S.	44	Convalescent from pul. tuberc. nasal obstr., obstinate cough.	Cured.
Edward J. G.	41	Nasopharyngeal catarrh.	Improved.
Caroline J.	41	Otitis med. catarrhalis chron.	Improved.

	Number.	Males.	Females.
Total cases.	12	8	4
Cases with throat symptoms.	6	4	2
Cases with ear symptoms.	7	4	3
Cases with tuberculosis.	1	1	0

	Number.	Males.	Females.
Total cases, all ages.	57	27	30
Total cases with throat symptoms.	36	17	19
Total cases with ear symptoms.	25	13	12
Total cases with tuberculosis.	10	5	5
Total cases with cervical adenitis.	1	0	1
Total cases with ethmoiditis.	1	0	1

It will be seen from this table that: (1) The sexes are nearly divided, taking all ages into consideration. Of the different decades, the third and fourth, especially the latter, show a majority of females, whereas the fifth decade shows a two to one male preponderance.

(2) Of all cases, thirty-five, or sixty-one and four tenths per cent., showed throat symptoms of one kind or another. These varied all the way from nasal obstruction to chronic laryngitis. Twenty-three showed nasal obstruction of such degree that they made definite complaint of it. Many of these presented a greater or less degree of hypertrophy of the turbinated bodies, which was, in all but a

few instances, so much relieved by removal of the adenoid that it practically disappeared, and called for no local attention. A very common symptom was the expectoration of thick, ropy mucus, which was detached and expectorated with great difficulty. The writer believes that this particular symptom, so common and obstinate, is due to adenoids more frequently than to any other cause. This belief is based upon the fact that the results obtained in these cases have been most gratifying.

The following histories have been selected by the writer as being typical, and as tending to show the wide variety of symptoms which appear to have been, in his experience, caused by this condition:

(1) Gertrude H.—, 25 years old, native of United States, married, an actress. Always healthy up to the time of her marriage, seven years ago. Shortly after marriage developed syphilis, which was treated for two years and has never troubled her since then. For about two years she has suffered from nasal obstruction. She has had her nose "burned out" three times, with little or no relief. For about three months she has had a cough, with pain in the left chest, mucopurulent expectoration, and loss of considerable strength and about fifteen pounds weight.

Physical examination: Patient pale and badly nourished. Anterior nares show considerable enlargement of inferior turbinals. Tonsils not enlarged. Posterior rhinoscopy shows a fairly large mass of adenoids, hanging in folds from the upper part of the posterior wall. Larynx negative. At the upper part of the left chest anteriorly, dullness, exaggerated breathing, and a few subcrepitant rales. Sputum showed a few bacilli.

Operation, March 4, 1903. Adenoid removed under cocaine; no hemorrhage, and no particular reaction. Patient was instructed to sleep with widely opened windows, to keep her bowels freely opened daily, and to drink two quarts of milk a day, in addition to her regular diet.

This patient was seen again on the 10th of the following July. She had gained ten pounds, her cough and expectoration had disappeared, her throat was normal, her nasal hypertrophy had gone, and her chest was completely clear.

(2) Meta B.—, 26 years of age, native of Germany, single, dressmaker. Had had discharge from right ear for about four years. For about one year had had attacks of dizziness, pain over right mastoid, and headache. Ear was never quite dry, but discharge varied a great deal in quantity from time to time. She also suffered from nasal obstruction to some extent. On examination the right drum membrane found to be almost destroyed; a probe, passed into the attic, revealed the presence of dead bone, and on withdrawal brought with it a bit of cheesy white material with a foul smell.

A radical mastoid operation was advised, and was performed by the writer on October 20, 1903. The postauricular wound healed well, and cicatrization progressed satisfactorily but slowly in the antrum, attic, and tympanum. There remained, however, a small amount of discharge from the ear. This appeared to come from the mouth of the eustachian

tube, which I had not succeeded in closing at the time of the operation. Therefore, on March 17, 1904, I removed a large adenoid from her pharynx. Two weeks later the ear was perfectly dry, and has remained so ever since. She was last seen on October 18, 1904.

(3) James J. P.—, 27 years old, native of United States. This case is interesting only as having had five operations upon the nose, by different surgeons, without relief. A large adenoid was removed from her throat by me on June 7, 1904, which effected a complete cure of his nasal obstruction.

(4) C. R. Van E.—, 29 years old, native of United States. This case has been already reported by me in the *Medical Record*, No. 1770, page 578.

(5) Hortense K.—, aged 28 years, native of France. This patient had had two attacks of double mastoiditis, from both of which she had recovered without operation. Her nasal obstruction was most extreme. I removed on November 11, 1903, a large adenoid which completely filled the pharyngeal vault. This relieved her nasal symptoms completely, and I am waiting with great interest to see if her ears shall trouble her again this winter.

(6) Maurice S.—, 30 years old; native of United States; bookkeeper. This patient came to me November 24, 1903. He complained of deafness and a feeling of oppression in both ears, which he had noticed for four days. I removed large plugs of cerumen from both ears. This failed to relieve his deafness, and a complete functional examination revealed the following condition: Watch, right 1 inch, left 2 inches; Weber left; Rinné, both ears, C—, negative, C, positive. Both drums retracted and slightly thickened. The pharynx showed some adenoids, tonsils not enlarged, larynx showed subacute catarrhal laryngitis. On November 28, 1903, I removed the adenoid mass. It was about 1 by ½ by ¾ inch in size. Treatment was directed to increasing the mobility of the tympanic membranes and improving their condition. After two months the patient heard the watch at 4 inches, with the right ear, while for the left his hearing distance remained the same as before. This is perhaps as good a result as could be expected, in view of the fact that the tests had shown trouble in the auditory nerve. His improved hearing was noticeable and very gratifying to himself, and he also declared his singing voice to be much improved since the operation.

(7) Bertha E.—, 37 years old; native of United States; married. This patient was one of three with tuberculosis referred to me by Dr. John F. Russell. Her history will do for all of them. She had been under his care for more than a year, and her chest was practically clear of physical signs, although her cough and expectoration continued, her sputum, however, being negative. She had large tonsils, as well as a considerable mass of adenoids. Removal of the growths on June 2, 1904, was followed by speedy subsidence of the cough, and she was shortly thereafter discharged from treatment. Dr. Russell tells me that she has remained well ever since.

Of the three similar cases in the table there is little to be said, except that in all of them a considerable mass of adenoid tissue was found, and that they have all recovered, and still remain well.

TECHNIQUE.

The technique is simple. The patient should be instructed, during forty-eight hours beforehand, to spray the throat every four hours with an atomizer containing Dobell's solution, one part, in water, four parts. This is all the preparation that the writer has found necessary. Indeed, many cases have had their entire preparation at the time of operating, and have given no trouble. Previous to the operation the pharynx is swabbed thoroughly with cocaine crystals, caught up on the end of a cotton wrapped applicator, and dipped in sterile water. Cocaine in such strength as this, by its astringent action upon the blood and lymph vessels, prevents its own absorption, and thus all toxic effects are avoided. For this idea the writer acknowledges indebtedness to Dr. Robert C. Myles, of New York. After allowing the cocaine a few minutes to produce its full effect, the patient is instructed to rest his head firmly against a wall. The tongue is then depressed with a depressor held in the left hand, while with the right a Beckman curette of proper size is inserted behind the soft palate. The cutting edge is carried to the roof of the vault, and with a gentle rocking motion is made to engage the growth. The curette is next carried strongly backward and then downward, cutting off the growth at its base. The curette is then rotated to one side, in order to avoid injuring the soft palate, and is withdrawn quickly from the mouth. The patient now holds his head over a convenient vessel, to allow the blood to flow freely from the mouth and nose. The hæmorrhage is always considerable, but soon stops. It is very rarely alarming.

Where the growth is soft and pulpy, it comes away readily, and can be expectorated without trouble. In many cases, however, the mass contains a firm, tough fibrous core, which cannot be separated by the edge of the curette. In such cases it is apt to hang in the fauces by a fibrous stem. This leads to obstinate and persistent gagging and retching, and is apt to be rather terrifying to the patient. The best instrument with which to deal with such a condition is a Myles tonsil punch. With this the stem can be neatly severed at its base, and the growth removed. It is essential to use some sort of cutting instrument, for to drag the mass forcibly away is to strip the mucous membrane from the posterior pharyngeal wall, leaving a denuded area, which increases very materially the subsequent soreness of the throat, and must necessarily strengthen the probability of subsequent infection. If there is any special reason for fearing infection it is the writer's practice to swab out the pharynx with alcohol on a cotton wrapped probe. Alcohol constricts the blood

and lymph vessels, and thus guards against both hæmorrhage and septic absorption.

The after-treatment is very simple. A spray of Dobell's solution, one part, in water, four parts used two or three times each day is all that is necessary. If the operation is thoroughly done there is no place left for germs to lodge, and consequently there can be no infection. In none of the writer's cases has there been any trouble of this sort.

Secondary hæmorrhage occurred in two of the writer's patients. One a man, 26 years old, had three sharp hæmorrhages, occurring on the third, fifth, and sixth days after the operation. In one of these he bled to syncope. He recovered completely without trouble. There was an obscure family history of hæmophilia. The other case, a woman, 30 years of age, had two quite profuse hæmorrhages within twenty-four hours after the operation. Her condition was at no time alarming, and the bleeding called for no local treatment. She has a slight chronic diffuse nephritis, which has lasted since her childhood, and which gives no symptoms and no sign of its existence except the constant presence of a trace of albumin in her urine. This may or may not have had to do with her hæmorrhage.

CONCLUSIONS.

Adenoid growths in the adult are much more common than is generally supposed.

The condition is a frequent cause of nasopharyngeal catarrh, with dropping back of mucus and frequent clearing of the throat. It is also a frequent cause of nasal obstruction, and is the causative lesion in some cases of apparent hypertrophic rhinitis. The cases tabulated above show that a thorough examination of the nasopharynx should be made in all cases of (1) ear disease and (2) pulmonary tuberculosis.

The treatment is not difficult, and the results are occasionally brilliant and rarely unsatisfactory.

527 MADISON AVENUE.

Ensworth Medical College, St. Joseph, Mo.—
The following graduated from this institution on April 20th:

Albert Andrews, of Grant City, Mo.; Harry M. Butler, of Lyons, Kan.; Joseph H. Buckles, of St. Joseph; George W. Carpenter, of Clarksdale, Mo.; Charles W. Caldwell, of St. Joseph; Richard E. Ferguson, of Maryville, Mo.; Minor H. Gordon, of Easton, Mo.; Orvel G. Hanna, of St. Joseph; James A. Hill, of St. Joseph; Allen R. Holmes, of St. Joseph; Wayne T. King, of Blockton, Iowa; George A. King, of St. Joseph; Carl R. McFarland, of Barnard, Mo.; Clarence L. Miller, of Prairie City, Ill.; Roy R. Miller and Edgar E. Miller, of Mound City, Mo.; Virgil R. Morrison, of Rushville, Mo.; William P. Murray, of Salt Lake City, Utah; Clarence D. Pickett, of Trenton, Mo.; Clemens Rucker, of Falls City, Neb.; Chris M. Sampson, of St. Joseph; A. S. J. Smith, of St. Joseph.

AN OPERATION FOR THE CURE OF CHRONIC BURSITIS, ESPECIALLY ADAPTED TO HOUSEMAID'S KNEE.*

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More than six years ago¹ I called attention to a simple operation for the cure of chronic serous bursitis, an operation especially adapted to the treatment of the condition known as housemaid's knee, an enlargement of the prepatellar bursa (Figs. 1



FIG. 1.—Housemaid's knee, bilateral: two years' standing

and 3.) Before this publication, the operation had been tested in a number of cases during a period of three years. In view of the fact that most writers still advocate the severe operations of excision and curettage, it may not be amiss, after a ripe experience, again to bring before the profession the simple operation that has been almost uniformly successful in my hands.

The operation consists of puncturing the bursa, thoroughly scarifying its walls, expressing its fluid contents, bringing its walls in contact, and holding them so by means of a compress until their raw surfaces have grown together and have thus obliterated the cavity.

An ordinary tenotome, having a long shank, or

* Presented to the American Orthopaedic Association, June, 1904.

¹ *St. Louis Medical Review*, January 1, 1898.



FIG. 2.—Same case as Fig. 1: four months after operation.

the especially devised instrument illustrated in Fig. 5, is passed into the distended bursa at its base. With the sharp edge its entire inner surface is marked with many fine cuts, after which the instrument is withdrawn and the bursa evacuated of its fluid contents through the small skin incision. A thick, wide pad of gauze is placed over the bursa and firmly bound down with strips of adhesive plaster, overlapping one another and completely encircling the limb from an inch or two above the



FIG. 3.—Housemaid's knee: eighteen months' standing.

upper margin to the same distance below the lower margin of the bursa. Over this a muslin and a crinoline bandage are applied. A pad of cotton

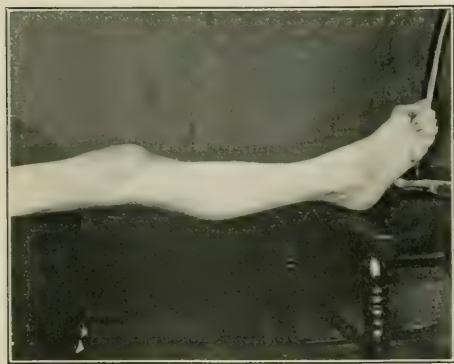


FIG. 4.—Same case as Fig. 3: thirteen months after operation.

should be placed within the popliteal space, beneath the plaster, to protect the prominent hamstring tendons and overlying skin from undue pressure. The raw bursal surfaces should be kept in contact until firm union has occurred. Two weeks are sufficient. The adhesive plaster strips should be renewed or reinforced whenever they appear loose; as a rule, every two or three days.

No anæsthetic need be given, as the operation is

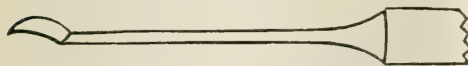


FIG. 5.—The special scarifier.

practically free from pain, except that produced by puncturing the skin. The bursal lining is not very sensitive and the scarifying gives little distress unless the shank of the instrument is rubbed too hard against the wound margin at the point of its entrance through the skin. Patients have frequently expressed surprise at the lack of discomfort during operation. The patient need not be confined to bed or even use crutches during the after treatment, but may attend to almost any tasks, except such as require kneeling, immediately after operation.

To illustrate: One of my first operations was performed upon a newspaper carrier, who had a chronic enlargement of the prepatellar bursa. He entered the clinic carrying his bundle of papers; the limb was immediately scrubbed with soap and washed with an antiseptic solution, the operation performed,

the dressing applied, and, in less than an hour and a half after entering the operating room, the patient was distributing his papers, free from pain, and with only such slight lameness as was caused by the tight bandage restricting motion at the knee. So, too, during my service at St. John's Hospital, I operated successfully upon two young women employed there for heavy housework. Neither lost a day's time, but both attended to all their usual duties, except such as required kneeling, and suffered little inconvenience. These histories are typical and not selected as exceptional.

I have frequently employed this operation in the treatment of distended popliteal and other bursæ, but not with the uniform good results experienced in the treatment of housemaid's knee.

Ideal compression can be made over the anterior knee bursa, which overlies the patella. Not so, however, over popliteal bursæ, which are deeply situated and do not rest upon a smooth, hard surface, such as presented by the patella. Nevertheless, in a number of cases of chronic popliteal bursitis, which would

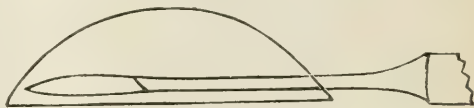


FIG. 6.—The ordinary tenotome within the bursa.

otherwise have been subjected to excision, a cure has been effected by this method.

In the past nine years I have operated upon 104 cases of housemaid's knee. In two the operation had to be performed twice and in four three times, while in ninety-eight it was primarily successful.

Though having often successfully used an ordinary tenotome, I have devised the special instrument illustrated in Fig. 5, which has at least, some theoretical advantages. As the blade is strongly curved and raised from the shank, its cutting edge can more easily reach all parts of the cavity without interference from the shank. Figs. 6 and 7, which show both an ordinary tenotome and the special scarifier within the bursa, illustrate how the cutting edge of the scarifier fits the surface better than that of the tenotome.

The principle of scarification and pressure has been advocated for the treatment of so called

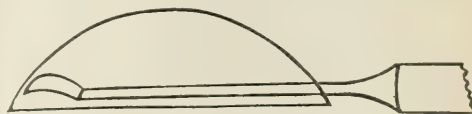


FIG. 7.—The special scarifier within the bursa.

ganglion at the wrist, but it has never, to my knowledge, been employed in the treatment of chronic inflammation of large bursæ before the operations referred to in my first paper.

Perhaps it will be well to state in closing that the scarification must be thorough, withdrawal of synovial fluid complete, and the compression quite firm to insure success.

3337 WASHINGTON AVENUE.

REMARKS ON THE PROBLEMS CONNECTED WITH THE STUDY OF PULMONARY TUBERCULOSIS; AND SUGGESTIONS OF A NEW PLAN FOR IMPROVING STATISTICS RELATING TO THE DISEASE.

By E. L. SHURLY, M. D.,

DETROIT.

The positive self-assurance with which some medical writers promulgate the ætiology, early diagnosis, curability, and early extinction of pulmonary phthisis, or pulmonary tuberculosis, is enough to strike the mass of self-contained devotees of medical art with terror. True, such enthusiasm is an inspiring spectacle, if properly corralled—like a group of beautiful performing lions in a stout steel cage; but when turned loose by frequent reiteration, it is apt to engender the apprehension expressed in one of Sophocles's apothegms,

Then does men's life become one vast disease,
When once they seek their ills by ills to cure.

It seems, however, that there are yet many unsolved problems connected with the origin and spread of the conditions popularly termed tuberculosis, which, according to the ignorance of the writer, are beyond the present limits of the present state of scientific knowledge. It is undoubtedly a fact that the artificial inoculation of an animal with tuberculous sputum will usually induce tuberculosis in that animal. It is a fact that the artificial inhalation of the dried tuberculous sputum will sometimes in some animals produce the disease, if persistence and special adjunct circumstances are favorable. But such a result is not easy of accomplishment, for even under rather unfavorable circumstances such results may not be obtained—as demonstrated by the escape of so many guinea pigs in laboratories which are thus exposed to sputum laden air.

Is it a fact that the disease is communicable from one individual to another under the ordinary circumstances of life? Undoubtedly there are

cases which have originated in that way. But how many? Probably comparatively few will be found when an analysis is made of all the particulars belonging to the early or antecedent history of the case. Therefore, can pulmonary tuberculosis be properly classed with the communicable diseases, such as smallpox, whooping cough, scarlet fever, etc.?

Is it not a fact that the history of general hospitals and even special hospitals, such as the Brompton, give little or no evidence of pulmonary tuberculosis having spread or contaminated other patients or the attendants?

Is it not a fact that personal and family predisposition are predominating ætiological factors? If not so, why does primary tuberculosis follow so closely the members of families possessing such characteristics and history?

Is it a fact that "tendency" can be accounted for by the acquirement and latent existence in the economy of tubercle bacilli during childhood or youth? Probably not? Only a theory? Why, a theory when innumerable post mortem examinations on children, and also adults, show chalky deposits or fibroid cicatrices in lymphatic glands or lung tissue? Because other diseases—such as measles, scarlet fever, bronchopneumonia, traumatism, etc.—will leave lesions of these tissues which may show just such vestiges.

Is it a fact that the disease is largely spread by the inhalation of disseminated, dried sputum in the streets, public halls, churches, houses, apartments, or by various appurtenances passing from hand to hand or mouth to mouth? Probably not? At least we have no positive evidence as yet in support of this theory. In other words, are there any cases on record which have been unmistakably traced to such specific origin?

It is true that Cornet, Flick, a British commission, and a German commission conducted experiments by the inoculation of guinea pigs with infusions of dust taken from rooms which were or had been occupied by tuberculous patients, with the effect of producing tuberculosis in the animals inoculated. (The result, however, of the work of the British commission was less positive than the others.) These experiments, however, have not been sufficiently confirmed by repetition to mark the demonstration as conclusive. Dr. P. M. Hickey and myself following the same line of experimentation have met with negative results. Besides, it must be remembered, an inoculation test is not fairly comparable with an exposure in a natural way for obvious reasons, since the operation of the natural defenses of the animal are necessarily prevented.

What about the tuberculosis houses cited by Flick, Biggs, and others? Such districts and such houses as they describe are simply filth depots, and consequently breeders of any disease, and certainly of malnutrition. The wonder is that all of the inhabitants thereabout are not afflicted. Indeed if tuberculosis depended entirely upon the tubercle bacillus for its cause, and was a highly communicable or contagious disease, it should, following the usual epidemiological laws, have almost annihilated the population living in such squalor and density.

Are there houses which have harbored one or more tuberculous persons, that have been the means of afflicting subsequently other previously healthy persons? A few such instances are recorded; but whether or not eliminating elements of evidence have been considered has not always been recorded; for instance, in one such event where the *prima facie* evidence seemed conclusive, I subsequently discovered that Case No. 2 and Case No. 3 had each previously suffered more or less with cough; while one case was syphilitic, and the other an alcohol debauchee.

In this connection might be mentioned "cancer houses" where two or more inmates have consecutively been afflicted with cancer. Is this evidence conclusive enough to warrant the assumption that cancer is a communicable or contagious disease? Are all cases of chronic pulmonary disease, exclusive of the cardiopulmonary affections, due to tuberculosis, or the implantation of the tubercle bacillus? Certainly not, according to the clinical history of that large class known as chronic bronchopneumonia, chronic interstitial pneumonia, chronic fibroid pleuropneumonia, etc.

Is it a fact that the tubercle bacillus may be capable of existing under so many different degrees or phases of activity or latency as to account for the various manifestations observed in connection with chronic pulmonary and laryngeal disease? Or, are there, as has been reported, several different families or varieties of the microorganisms, some of which are purely local or almost innocuous in their action, while others are virulent? Or, again, must this organism be associated with either one or more other microorganisms, or special forms of necrotic tissue in order to fulfil its growth or development?

Is pulmonary, intestinal, or laryngeal tuberculosis induced to any great extent, or at all, by the ingestion of milk or beef? What amount of direct evidence have we in support of such a proposition?

Is pulmonary tuberculosis ever or often intro-

duced through the palatal or pharyngeal tonsils? If so, why are cases of primary tuberculosis of the tonsils so very rare?

What is the relation of the pathogenesis of peritoneal, articular, ovarian, and meningeal tuberculosis to pulmonary tuberculosis?

Granting the theory of communicability, how will State sanatoria, which admit incipient cases only, stamp out the disease if the advanced cases are left scattered through the community?

Many more questions could be raised, of course, because, as we know, fools can ask questions which wise men cannot answer. But the writer's object is merely to draw attention to a few points which will seem to invalidate some of the conclusive dogmas which from time to time recently have been expounded. Of course time is a great leveler and will probably place all facts and theories in proper position.

Time evermore looks on,
And sees these things, now overturning some,
And now, within a day, exalting them.

Unquestionably, the greatest barrier to more rapid progress toward the solution of the practical problems besetting this subject is the lack of accurate statistics. In this State and probably in other States of our nation, the statistics regarding the disease popularly known as consumption are very unreliable; necessarily so, because of the difficulty of making an early diagnosis, and more especially on account of the difficulty of gathering the data relating to such cases. There is good reason for regarding the system of "notification to the health boards" under present circumstances, as not only unjust to the patient by virtue of the necessary publicity thereof, but also by leading to more or less prevarication, duplication, and dodging on the part of practitioners in the interest of their patients. For example, bodies of tuberculosis patients, which are to be shipped out of the State, are frequently falsely reported, in order to avoid the State regulations. That some feasible plan for securing reliable statistics relating to pulmonary tuberculosis is an absolute necessity for the solution of the scientific problems at hand, no practitioner will deny. But how to get such information in conformity with the rights of the patient, the public at large, and the practitioner, under our form of civil government, is a serious question. To this end the writer would suggest the following outline of a plan for consideration:

First, let the registered medical profession of the State nominate (by epistolary vote, sent to the secretary of State) nine of their number, from whom the Governor shall appoint three to be-

come a board of review (or a body otherwise named).

Second, this board shall be created by statute (of the legislature) with power to demand and receive reports from all practitioners, containing such practicable data as the board may dictate.

Third, this board's proceedings, books, papers, and files, in so far as the persons reported to them are concerned, shall be wholly in its custody, considered as confidential, and absolutely inaccessible to the public, the press, or the courts.

Fourth, each month this board shall make an abstract of the communications received in schedule or detail form, and transmit such abstract without names to the State board of health, which shall publish the same quarterly for the edification and instruction of the medical profession.

It would seem as though such a plan would meet the insuperable objection of making public any patient's name, family, or clinical history, and give us data devoid of duplication, error of diagnosis, or other common error. Besides, no thoughtful, reasonable physician would object to making reports to such a constituted board.

The writer feels confident that if the vexed questions of the extent of the communicability of pulmonary tuberculosis, and how it really originates—whether always by the dissemination of tubercle bacilli in the dried sputum or otherwise—could be settled, no member of the medical profession would lag in his efforts to cooperate with the health authorities in carrying out restrictive measures.

32 ADAMS AVENUE WEST.

The Kansas State Medical Board has issued licenses to the following physicians:

H. M. Mayer, A. H. Tribble, A. N. Minear, L. C. Cook, A. T. Coffman, O. J. Casto, L. R. Carson, T. H. Craig, Jr., J. H. Buckles, J. B. Blades, O. P. Faires, A. Florian, J. H. Donovan, T. N. Greenwood, E. O. Baker, R. B. Baker, R. B. Brewster, W. L. Hopper, T. R. Hyatt, W. I. Huddle, E. P. Harrison, A. R. Holmes, L. M. Hinshaw, J. F. Heath, J. F. Hughes, F. E. Harvey, C. H. Helman, W. S. Hadinborg, R. W. Hull, T. R. Heath, Z. G. Jones, B. L. Jones, W. W. Johnston, C. F. Kyser, C. C. Keer, C. E. Phillips, J. L. Mahoney, C. M. Miller, F. J. Moennighoff, C. M. McConkey, G. D. M. Lambdin, J. L. Lonszenhiser, H. M. Lint, E. A. Lewis, H. A. Leaming, H. H. Johnston, N. E. Lake, James Mahoney, H. L. Stelle, N. A. Smith, T. J. Smith, C. N. Smith, R. H. Smith, T. E. Schwarz, J. C. Sherrard, W. L. Shelton, Winfred V. Stephenson, R. B. Stewart, A. S. Risser, C. L. Russell, L. W. Roller, F. H. Redmond, J. W. Ridsen, E. Reeves, C. Rucker, F. H. Rhoades, C. A. Neighbors, F. W. Noble, H. A. Nare, B. E. Miller, A. A. Meyer, R. B. Mays, W. B. Munford, H. E. Markhan, F. M. Morrow, C. F. McNair, C. S. Marsh, John W. McGuire, J. A. Newman, Alva Naylor, H. C. Brown, F. H. Bell, C. Jarams, F. W. Allin, R. P. Young, J. O. Williams, H. M. Walker, P. W. Wooley, G. E. White, F. H. White, Mary L. Withrow, T. E. Tipton, C. A. Thomas, F. W. Tretbar.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXVIII.—How would you prevent disease of the vermiform appendix? (Answers due not later than May 15, 1905.)

XXXIX.—How do you treat erysipelas of the face? (Answers due not later than June 15, 1905.)

XL.—What are your views on the obstetrical binder? (Answers due not later than July 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but not required) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL and PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXVII has been awarded to Dr. T. Haven Ross, of Cato, N. Y., whose article appears below.

PRIZE QUESTION NO. XXXVII.

THE MANAGEMENT OF THE ALCOHOL HABIT.

By T. HAVEN ROSS, M. D.,

CATO, N. Y.

Each case of alcoholic habituation is a rule unto itself in the projection of a campaign against the alcohol toxemia, the rule depending largely on the personal equation. I can, at best, only take the average case of the man who desires to be cured and who will cooperate with the physician voluntarily. The very first procedure is to regulate the diet and hours of rest, approaching as nearly as may be an ideal hygiene. After these matters are reduced to system and the confidence of the patient is to some extent gained, have a frank, manly talk and impress upon him the *vital* importance of avoiding drinking places and companions of convivial tendency. Explain a little—not too much—of the pathological effect of the abuse of alcohol. Show an interest in his daily life—its joys and sorrows—in his business and aspirations. These preliminaries will, of course, be modified by, and changed to suit, his intelligence, sphere of life, stage of disease, and environment. The patient's family or companions, in-

terested in his rehabilitation, must be instructed in their duties toward and care of the afflicted one. The foregoing steps require the exercise of infinite tact and good judgment on the physician's part. Next let us consider the drug portion of the treatment. The mental therapeutics is as important as that of drugs—in fact, the different elements of the proper care of these cases are interdependent; united in proper proportions in varying cases, they are efficacious in the majority. The more mentality the patient can show the easier the rôle of the physician.

First and foremost, clear out the gastrointestinal tract. My preference is for calomel in small ($\frac{1}{10}$ of a grain) doses hourly until free watery stools are secured, then a saline if there is any indication of nephritic trouble. The condition of the liver is most important, and after the preliminary flushing out it *must* be kept active. This is best accomplished with the following combination:

B	Enonymin (brown).....	$\frac{1}{2}$ grain;
	Podophyllum resin.....	$\frac{1}{20}$ grain;
	Ipecac.....	$\frac{1}{8}$ grain;
	Calomel.....	$\frac{1}{8}$ grain;
	Aloin.....	$\frac{1}{12}$ grain.

M.

In each powder, pill, or tablet these quantities are contained, so that the amount given, best at bedtime, may be graduated accurately to the needs of the individual. Give enough to secure one free, natural movement of the bowels daily, some persons requiring much more than others. I often give only half the amount, but give it in all cases *daily*.

For the care and repair of the crippled vital mechanism my two sheet anchors are nitrate of strychnine and ergot, assisted by a safe hypnotic and a good tonic mixture.

The nitrate acts better in these cases than any other form of strychnine. Usually I give one thirtieth of a grain every four hours. This dose may be increased or diminished as required by the circulation or other circumstance. In the dose mentioned it stimulates digestion and tends to reduce the excitability of the brain and spinal cord. It stimulates respiration, the heart, and the vasomotor centres, replaces alcohol as a nerve stimulant, and in some manner acts as a direct "mental" antidote to alcohol—a power for good in competent hands. It is well to remember that this drug is partially eliminated in the saliva, and therefore may accumulate in the system to a harmful extent if carelessly used. Some prefer nux vomica, but in my hands the nitrate of strychnine has been far more satisfactory. As to ergot, any physiologically active preparation will an-

swer. It may be given by the mouth or with the hypodermic needle, as also may the strychnine, in cases of extreme gastric irritability.

I give ergot as often as it may be required to control the circulation. It acts most happily in equalizing the circulation of the blood throughout the body, especially in the brain, and prevents those symptoms that follow the reduction or withdrawal of alcohol. Since using ergot I have not had a case of so called "wet brain." While the action of ergot on the brain and spinal cord is a great desideratum, its effect on the other great organs is most happy by means of the regulation of blood pressure throughout the body. A safe hypnotic is essential, and I use chloretone. It is often needed in from six to twelve grain doses, once or twice in the twenty-four hours during the first two or three days. It is especially adapted to these cases because, aside from its hypnotic power, it is a gastric sedative. A good bitter stomach tonic, containing some iron, completes the drug treatment.

There is much difference of opinion as to whether the alcohol should be withdrawn at once or gradually. Here, again, the personal equation and physical and mental condition should decide. In most cases it is best to stop all alcohol at once. The treatment outlined, properly adjusted, will supply the place of the poison.

A few complications require notice. The irritable stomach is often troublesome. I find that chloretone acts well added to the ordinary gastric sedatives. Delirium is controlled by the ergot and chloretone, and it is seldom that an opiate is required. If opium is needed at any time, never let the patient know what it is. If he is curious, tell him anything but the truth. Where there is kidney weakness or disease I depend much on saw palmetto, hydrangea, and alkalines. In the primary eliminative measures I often give, for a few days, a mixture containing these agents, with or without digitalis, as indicated. As mentioned above, the ergot prevents "wet brain."

After the cure of the addiction has been accomplished, continue the hepatic and general tonics for some time.

Dr. William Lee Howard, of Baltimore, writes:

My experience has taught me that the alcohol habit, either in the form of inebriety or dipsomania, is a symptom of neuronic disorganization. There is always an instability of psychic control. This causes a constant unphysiological condition—faulty metabolism—which further aggravates the condition of the inhibitory forces. There is a constant state of unrest, morbid fear of self, and loss of control over impulses.

In the treatment of the alcohol habit it is the *individual* that must be very carefully studied and treated. In some of these neurotics there is a psychic epileptic equivalent which is expressed by attacks of dipsomania; in the neurasthenic the fearsome feeling of unrest, the "nervousness," is submerged by alcohol, the subject not having lost the sense of the ego, as is the case in the dipsomaniac.

History and heredity enter more largely into the consideration of the treatment of the alcohol habit than into that of any other form of nervous disease. These must be carefully studied. While this is being done all toxic material must be eliminated. In this preliminary treatment much judgment must be used. Neurasthenics do not well stand cathartics, and the physically unfit do not react from the Turkish or Russian baths, yet one or all of these methods must be used in getting the poison out of the nerve cells. With a proper understanding of the individual the alcohol can be withdrawn as rapidly as the toxine is eliminated. Bromides, chloral, morphine, etc., are not needed; in fact, are injurious. In the cases where great restlessness is prominent, the hot pack is of value. With the exception of nitrate of strychnine, use no drugs. I give the strychnine in $\frac{1}{20}$ of a grain doses every three or four hours. All such tonics as coca, etc., are tabooed. It seems scarcely necessary to say that all possible and easily taken and digested food must be given. The feeding is done five or six times a day, and at night. They should be placed on a diet that contains little proteid matter, for it must be remembered that an exclusive proteid diet causes the formation of excessively large quantities of soluble peptones and albumoses, which have an exciting action on the nervous system and constitute a favorable basis for the development of multiple neuroses.

All these patients should be thoroughly impressed with the fact that they are neurasthenics, that they must recognize this state throughout the active periods of their lives, and that alcohol, instead of relieving their nervousness, aggravates it to a point that is dangerous. Don't tell your patient to "use will power" until he has recovered it. Let him understand that you know his nervous condition compelled him to take a drink or two, and that this was like a match to a keg of powder; an explosion took place and you are going to repair the damages. When he realizes that you will work for him instead of praying for him he will have confidence and hope. Use hypnotic suggestion daily for two weeks after you have put him through the process of elimination.

In many cases the use of tobacco will have to be prohibited. The strychnine, $\frac{1}{20}$ of a grain, should be used for three months. A mild purgative water must be taken twice a week, with cold baths every morning, and strict instructions given to avoid all "nerve tonics." Finally, remember, every case is a law unto itself and must be treated accordingly.

Dr. Edwin W. Moore, of Franklin, Pa., writes:

The alcoholic habit presents a twofold method of causation—the one in the habitual and regular drinker and the other in the periodical drinker. The results are the same, though the time required is longer in the first than in the second. The regular drinker who eats and sleeps with his daily potations may withstand the inroads of stomach, liver, bowel, and kidney complications an indefinite time, but so soon as the stimulant has the victory over the food introduction the equilibrium is broken and there is a gastrohepaticointestinal rebellion, with exhaustion of nerve power, from the want of the dynamic force the food elements afford. This condition is quickly brought about in the periodical drinker for the reason that foods are refused and the false nutrition of alcohol reduces the drinker to extreme exhaustion. In each of the resulting conditions the mind is to a greater or less degree involved.

These conditions existing—gastrohepaticointestinal derangement, nervous exhaustion, and mental excitement—suggest a rational treatment. The subject presents the classical evidences of a debauch, such as furred tongue, sordes on the teeth, nausea, vomiting, constipation or diarrhoea, nervous excitement, and abhorrence of foods and usually of alcoholic beverages. With all these evidences your patient has your duty to him mapped out, and the first cry is: Oh, doctor, give me something to make me sleep! By way of suggestion I say: It has taken some time for you to get into this condition, and it will take time to reinstate Nature and give you sleep, but it will come. If possible, I put my patient in bed and apply mustard over the stomach and hot bottles to the extremities, so as to establish a surface circulation and reflexly to relieve nausea and to encourage sweating and the elimination of poisons. I direct small doses of calomel, ipecac, and bicarbonate of sodium to arouse the excretions and to carry off the toxines and to render the stomach and bowels as fairly aseptic as possible. After a sufficient effect is had from these remedies I direct a full dose of sulphate of magnesium to flush out the *primæ viæ*. At the very beginning of the treatment the patient is given beef tea with plenty of red pepper and buttermilk every hour

alternately. If emitted, repeat, as some will be retained. If the heart's action is weak, give $\frac{1}{60}$ to $\frac{1}{40}$ of a grain of strychnine sulphate every six hours.

This comprehends the routine for the first twenty-four hours. The second day finds the patient better, and though he may not have had any restful sleep, he is more quiet and comfortable. On the second day it is usually safe to add sweet milk, a raw egg in milk, with a less quantity of beef tea and buttermilk, and toward the end of the second twenty-four hours, if the stomach will retain it, some milk toast. If necessary, continue the strychnine. The second night the patient generally sleeps fairly well, and on the morning of the third day will relish some mackerel. The cure now goes on by increasing the food allowance and keeping the bowels open.

It is wise to avoid all narcotics, anodynes, and alcoholic stimulants, for the reason the system is starved and demands foods and the elimination of the toxins which have led to the condition. Further, to get the desired effect from any of the above mentioned means requires doses in excess of safety and adds nothing to the cure.

The question is asked, Is there any known way of overcoming the alcoholic habit? Yes, to conquer the habit implies three things: First, decision and the use of the will; second, a change of association and the seeking of a higher moral atmosphere; and, third, the use of a food element, such as beef tea with red pepper, when the awful passion is on. Christianity adds another—a changed purpose in life. This implies a power behind the will and begets a desire for a purer and cleaner environment, loftier ideals, and a nobler ambition.

It is necessary to avoid the first and fatal drink. When the system demands an alcoholic stimulant, if in its stead the subject takes a full draught of hot beef tea well flavored with red pepper, the systematic demand is answered, and this makes it easier to overcome the longing of a perverted appetite for alcohol.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 856.)

Cadinein is the name applied by Haensel to an essential oil obtained by the steam distillation of cade oil.

Caseinalbumose Soap is a composition of mutton tallow and olive oil saponified with caustic soda and caustic potash. After being salted out with potassium chloride, casein is incorporated and the soap superfatted to 7 per cent. The soap

is recommended as an improvement over casein ointment.

Codesol is a syrup of guaiacol with codeine. Ten grammes of the syrup contain guaiacol, 0.2 gramme and codeine 0.02 gramme. The dose for adults is a teaspoonful three or four times daily.

Colchicine, a pure alkaloid of colchicum, has been recently introduced into medicine.

Epinephrin is the name adopted for the active pressor principle of the suprarenal gland, prepared in accordance with the method of the discoverer, Professor J. J. Abel.

Euprotan is the name given to an albuminous nutrient and roborant obtained by heating blood or blood corpuscles with sulphurous acid, adding concentrated ammonia, and then hydrogen dioxide. Two forms of it have been introduced which are designated *alpha* and *beta*, respectively.

Eutannin is a substance of a composition unknown to us which is recommended as an intestinal astringent. It is said to be taken readily by infants and to be useful in acute and chronic diarrhoeas.

Kamakosin is the name of a remedy for round worms, the active constituents of which are said to be kamala and coussin.

Keramin Soap is a soda-potash soap, containing balsam of Peru, clove, and cinnamon oils, which is said to be of particular use in the treatment of eczema, being recommended by Unna for this purpose.

Lecithan is the new name adopted for a special lecithin made by a Swiss firm.

Lecithin Granules are prepared by dissolving lecithin, 5 grammes, and vanillin, 0.25 gramme in alcohol, 40 grammes, and moistening with the solution so formed 440 grammes of sugar granules. After allowing for a thorough moistening the granules are dried at a moderate temperature.

Lecithinogen, which has been recommended in the treatment of a variety of diseases, is said to consist of a 10 per cent. solution of cane sugar in a liquid called "liquor calcii æthyl. hypophosphor."

Lecitogen is a lecithin prepared with cocoa.

Letalbin (lecithalbumen) is described as a yellow, dry, stable powder with the characteristic taste of egg yolk. It contains about 20 per cent. of pure lecithin, 3.62 per cent. total phosphoric acid, and about 75 per cent. albumen. It is adapted as an addition to infant foods, cocoa, etc.

Leukrol is the name given to a substance which has made its appearance in Germany, in the form of a fluid extract and tablets, which it is asserted contains the active principles of certain unknown East Asiatic ranunculaceæ. It is reputed to be useful in the treatment of fluor albus caused by chlorosis.

Lithium Citroquinat has been introduced as a substitute for lithium quinate (urosin) by Dr. Voswinkel, Berlin.

Liverpool Virus is a rat and mouse exterminator made by the incorporated Liverpool Institute of Comparative Pathology, Runcorn, near Liverpool, England.

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NEW YORK, SATURDAY, MAY 6, 1905.

THE PHILADELPHIA "SYMPOSIUM" ON PNEUMONIA.

In this issue we present the report of a meeting of the Philadelphia County Medical Society at which there was a notable discussion on pneumonia. It was opened by a New York physician, Health Commissioner Darlington, who gave an outline of the sort of work that he expected of his Pneumonia Commission. Dr. Wilson then read his able paper on The Symptomatology and Diagnosis of Atypical Forms of Pneumonia, which we published in our issue for April 22nd.

Dr. Hare, in his contribution entitled The Medical Treatment of Pneumonia, laid proper stress upon the fallaciousness of deductions based upon the mortality statistics, owing to failure to distinguish the various types of the disease. In a paper with the title of Some Recent Developments in the Ætiology and Pathology of Pneumonia, Dr. Longcope tersely summarized a number of important new features of our knowledge of the subject. The Surgical Complications of Pneumonia was the title of a paper in which Dr. Gibbon dealt in a very practical way with such occurrences as empyema and pulmonary abscess.

The *viva voce* discussion was opened by Dr. Musser, who gave very graphically the salient points of distinction between pneumonia on the one hand and simulating abdominal and intra-

cranial conditions on the other. The discussion was continued by Dr. Roberts, who pointedly set forth the advantage sometimes to be gained by depletion and by saving the patient the strain of resection of a rib in many instances.

Dr. Tyson, Dr. Daland, Dr. Woodbury, Dr. Githens, and the president of the society (Dr. Anders) followed with notable contributions to our practical knowledge of the disease and its management. We commend the full report to our readers, and we may express the hope that diseases of such continual occurrence as pneumonia may often be made the subject of systematic discussion by our medical societies.

THE SCHILLER CENTENARY.

In addition to the heartiness with which all men honor the memory of a great poet, there is for physicians the special interest in that of Schiller by reason of his brief medical career. The hundredth anniversary of his birth was fittingly celebrated in Germany in 1859, but the people of Europe have a way of celebrating the anniversary of a great man's death as well as that of his birth, and accordingly a Schiller centennial is to be observed next week, and not in Europe alone, but in this country as well. The date falls on Tuesday, and that day is to witness the major ceremonies, but we learn that on certain other days there will be commemorative exercises by various organizations; for example, the Vereinigung alter deutscher Studenten in Amerika will hold a "Schillercommers" on May 6th.

Johann Christoph Friedrich von Schiller was born in Marbach, on the Neckar, on November 10, 1759. In 1776, having previously studied law, he began the study of medicine, and in 1781 he was appointed surgeon to a Würtemberg regiment. He does not seem to have had a great liking for medicine; in fact, he appears to have taken it up under pressure exerted by a local potentate. At all events he soon gave it up, to enter upon that grand literary career by which the world knows him. His first important work, *Die Räuber*, had been brought out on the stage and had met with an enthusiastic reception. That fact seems to have encouraged him to risk everything for literature. The outcome justified his determina-

tion, for, though his subsequent life was an almost incessant struggle with financial embarrassment, he gave to the world dramatic and poetic creations that have caused his name to be enshrined with those of the greatest. He died, at the comparatively early age of forty-six years, on May 9, 1805. If his laurels were not those of a great physician, they were at least those of a man who had been tempered by medical study; we repeat, therefore, that medical men will honor his memory with peculiar enthusiasm.

THE ALCOHOL HABIT.

It will be seen that in the papers submitted in answer to our Subscribers' Discussion question No. XXXVII, How do you Manage the Alcohol Habit? little attention has been paid to the after-treatment of the patients. There is hardly a doubt that the chronic alcoholic is deficient mentally or physically, very frequently the latter. We imagine that much could be learned from a systematic physical examination of a patient after active treatment had restored him to a more or less normal condition. As deficient oxygenation may be a powerful factor in leading to the use of narcotic drugs, examination of the respiratory passages seems to be appropriate, and the requisite surgical treatment should be instituted if obstruction is found. Eye strain from astigmatism, hypermetropia, heterophoria, or all of them combined, is well known to be a slight but, from its incessant action, a dangerous drag on the nervous system, but a proper combination of spherical and cylindrical lenses and prisms will quickly relieve it. Slight deafness is an annoyance that should be remedied if possible. The state of the digestion should be carefully inquired into, and the teeth should certainly be put in as good order as possible. Obvious as these measures seem, we understand that even sanatoria devoted to the care of persons addicted to the use of narcotic drugs do not as a rule pay much attention to them.

Since the nature of such addiction seems to depend largely upon the drug within reach, being alcoholic when only alcohol is available, and quickly becoming addiction to morphine or cocaine when the more powerful agents are at hand,

does it not seem probable that alcohol is sought out by the born or educated drug user for its really anæsthetic effects rather than for its stimulating action? Were genuine stimulation sought for, we should have an army of persons addicted to strychnine and digitalis, with the consequent crusades, restrictive legislation, and heavy taxation. Rather, we believe, it is oblivion that is sought by the tortured neurasthenic, who will literally sell his soul for the blessed feeling of anæsthesia which his whiskey brings him. In all ages this desire for forgetfulness has prevailed. We have beautiful and inspired apostrophes to sleep and even in the ancient world what appealed most to the tired man approaching death was the idea that, once across the threshold, he would first take a deep draught of the placid waters of Lethe.

THE EFFICIENCY OF THE MEDICAL CORPS OF THE JAPANESE ARMY AS COMPARED WITH THE AMERICAN MILITARY MEDICAL SERVICE.

While no direct attacks have been made upon the medical officers of the United States army, more especially those engaged in the recent Spanish-American war, in connection with the recent fulsome laudation of the Japanese medical service, inferences uncomplimentary to American surgeons have been drawn in certain quarters. While the record of the Japanese medical service as compared with that of the American army during the recent year has been phenomenal, many of the comments that have been made have been extremely illogical and very unfair to the American army surgeons. It would be remarkable indeed if Japan could be shown to have evolved within a few years men of greater medical and surgical capacity than those produced by this country.

In seeking an explanation for the comparative efficiency of the medical service of the Japanese army, many factors must be taken into consideration, if one would be fair and reasonable. These factors are mainly entirely dissociated from the personnel of the medical corps. It is primarily admitted that political machinations enter so largely into the organization of the military service of the United States in time of war that the

appointment of a certain number of incompetents to positions in the medical corps is inevitable. But, granting that every man who was appointed to the medical service during the Spanish-American war was the best that could possibly be obtained in this country, essentially the same defects in the management of the sick would have been observed. The responsibility for the efficiency of an army medical corps necessarily rests primarily with the government. How our government did its duty in this regard recent history shows only too plainly. There had been practically no preparation for war on the part of the government, and the most neglected department of all was the medical. The importance of proper medical supplies was seemingly minimized by everybody who had an authoritative hand in the conduct of the war. The fountain head of medical authority in Washington was not only tainted by politics, but characterized by a noticeable lack of executive ability and determination.

I will take for illustration the organization of the hospital corps of various regiments. If my own experience was any criterion, the department head at Washington had not the remotest idea of a definite plan of organization. If conflicting orders are admissible as evidence, the obvious deduction is that somebody at headquarters was enacting the rôle of "the bull in the china shop." My own hospital corps was very carefully selected, and comprised only senior students of medicine, physicians, and pharmacists. The twenty-six men comprising the corps were selected from over three hundred applicants, and selected because of their fitness and for no other reason. This corps was broken up by orders from Washington, and another formed, only to be broken up in its turn in similar manner. A third corps was finally formed, which contained very few of the original members selected by me, and was composed mainly of men of no education or adaptability to the service required. The medical department was so involved in red tape that a requisition for medical supplies which was honored within a month after it started on its weary way through "military channels" was a rarity. Had it not been for supplies purchased on State account at Springfield before my regiment left

that city, no medical supplies or hospital tents would have been available for the regiment for nearly a month. Our only hospital tent was a mess tent, which was the private property of the regiment. All this, notwithstanding the fact that the Seventh Army Corps, to which my regiment was assigned, was encamped in one of our large Southern cities.

It will be remembered that the medical department at Washington was opposed to female nurses at the beginning of the war, and quite as strenuously opposed to regimental hospital organizations, despite the protest of medical men who were on the ground, and therefore in a position to know the exigencies of the situation. It will further be remembered that the government finally was compelled to adopt not only female nurses, but also the regimental plan of hospital organization.

As illustrative of the imbecility of whoever happened to be in supreme authority at that time, the establishment of an army camp at Miami, Florida, is pertinent. Miami in the summer time is so insalubrious that, as one of my friends remarked, "a white man cannot live there, and a negro will not." Protests were made by various surgeons, but to no avail. A certain railway and steamship line had influence at Washington, and with the usual result—the camp was established where the traffic would be of most benefit to the aforesaid line. When a large proportion of the command at Miami was down with typhoid fever, the government awoke, not because of any conscientious regard for the welfare of the soldier, but because it is dangerous to get typhoid germs from an army camp mixed up with the popular vote. The resulting combination is sometimes dangerous to the party in power. The camp was finally abolished.

The racial differences between the Japanese and Americans must be given due consideration. The habits of the Japanese in civil life are simple, temperate, and abstemious as compared with those of the average American youth. It is by no means so great a strain upon the Japanese volunteer as upon the American, when called upon for active service, to adopt the routine of camp life or active operations in the field. He is under better dis-

cipline and control than the American volunteer, patient under restraint, uncomplaining, and obedient. There is no method of control which is effective in the case of the American volunteer, and be it remembered that, while my remarks bear upon the American volunteer rather than upon the regular, it is the volunteer and not the regular upon whom we depend in times of serious trouble.

For the edification of those who are all but deifying the Japanese surgeons, I will give an idea of the daily routine of the American volunteer soldier in camp, as I saw him. It must be remembered that this occurred in midsummer, in Florida, where the temperature was sufficiently high to make physical exertion something of a burden. The soldier was given severe daily drills, protracted parades, and long marches, for the purpose of toughening him and preparing him for the Cuban campaign. This was a reflex of the fallacious idea entertained at headquarters in Washington that the proper way to prepare a volunteer from a temperate clime for service in a tropical one was to kill him in a semitropical clime. Attention has not, so far as I am aware, been hitherto called to this point. Various halts would be made on the weary, dusty march in the hot sun, during which the soldier was permitted to drink anything "wet" which might chance to come his way, with a total disregard of the pathological results of the beverage. Having returned to camp, the first thing he did was to hie him to the various booths that had been established about the camp and partake of the numerous concoctions therein sold. It was nothing unusual for a soldier to drink in succession milk shakes, lemonade, and pop, topping these off with a glass of beer from the regimental canteen and a piece of pie from the nearest huckster's stand. Having thus prepared himself for his evening meal, the soldier sat down and partook of beans that were imperfectly cooked and other "strenuous" articles of diet that under proper circumstances would have been very appropriate and nutritious. At least one outbreak of so called ptomaine poisoning from poisoned beef that occurred in the Seventh Army Corps was due to the ingestion of

half cooked and indigestible beans by an entire company.

The most salient feature in the management of the division hospitals was the entanglement of the surgeons in mile after mile of red tape. The chief interest of the executive head of the medical department seemed to centre around the efforts of the United States government to protect itself against future pension claims. The surgeon who gave the most satisfaction to "the powers that be" was the man who kept the official records of the sick and injured most accurately. So far as I was able to judge, the government would have been quite as well satisfied with the services of industrious and accurate clerks as with those of competent medical men, were it not for the influence that neglect of the sick might have had upon the before mentioned popular vote.

The crying need of the medical service of the United States army in time of war is greater authority on the part of the surgeons. When I complained to the colonel of my regiment that the sick list had increased seventy-five per cent. within three or four days after the opening of the regimental canteen, he replied: "The canteen is all right in the regular army, and why not here? Besides, the regiment needs the money." When I remonstrated with officers for digging trenches about their quarters and for other acts which I considered detrimental to the sanitation of the camp, which camp, by the way, was located on the site of an old cypress swamp which had been filled in and devoted to park purposes, my efforts met with the same success as did my opposition to the regimental canteen. Although realizing keenly the evils of the hucksters' stands about the camp, I was not invested with sufficient authority to abolish them.

It must be remembered, in comparing the records of the Japanese medical service with ours, that the climates of Manchuria and Japan are not greatly unlike. There is a vast difference between taking men from civil life and precipitating them into a tropical or semitropical environment and placing them in a climate similar to that of their native habitat. I have already alluded to the fallacious idea on the part of the United States

government that the proper way to prepare a man for service in a tropical climate was to kill him in a climate as nearly similar to the one in which he was to serve as it was possible to obtain. Ordinary intelligence should have suggested to the government that men sent directly from the Northern States to Cuba would tolerate hard work in a hot climate better than men who had been kept for many weeks in army camps in Florida.

If the United States government is desirous of having an army medical department which shall compare with that of Japan, it would be well to begin at the fountain head. Thorough preparation, and especially the concentration of abundant, up to date medical supplies—in the purchase of which boodle should have no part—in centres which present suitable transportation facilities is a *sine qua non*. Surgeons should be given more authority and a freer hand, and should be appointed for their capacity and not for their political pull. Several thousand miles, more or less, of red tape should be eliminated from the medical department and thrown into the ash heap, where it properly belongs.

Last, but not least, the duty of keeping hospital records should not devolve upon the men who are expected to positively care for the sick and wounded. It is admitted that the pension list should be carefully guarded. If it is not, some deserving soldier may get his just deserts, and a political favorite be crowded out. I do not believe, however, that it is necessary to employ the highest medical and surgical skill for the clerical work incidental to the United States government's system of self-defense.

G. FRANK LYDSTON.

THE OSLER DINNER.

The dinner that was given in honor of Dr. William Osler on Tuesday evening was a noteworthy event. As was to be expected, it was largely attended and the company was representative of the medical profession of North America. The spirit that animated both the guest of honor and those who had gathered to wish him *bon voyage* was of the heartiest. It was not mere courtliness that was shown in the remarks of the various speakers; they thoroughly meant the kind words that they spoke, and it was evident that Dr. Osler himself was deeply moved. The presentation of a

copy of *De Senectute* testified as hardly anything else could have done to the mutual esteem of Dr. Osler and his professional brethren of the United States and Canada. We all hope that Dr. Osler will meet in England with the congenial surroundings that he has done everything to deserve.

THE RADIANT TREATMENT OF CANCER.

The best informed members of the medical profession are watching in a conservative state of mind the efforts in progress in various parts of the world to ascertain with some approach to precision the effects of the Röntgen ray and certain other rays upon malignant growths. But the newspapers are not hampered with any such conservatism; even now they are proclaiming as an accomplished fact the cure of a distinguished man whose case has recently been submitted to ray treatment. We should all feel glad if what they are so ready to take for granted were really confirmed, but we cannot for the present avoid the reflection that false hopes are probably being raised in the hearts of many credulous persons. When a cure for cancer is discovered, it will certainly be announced, but false announcements can do nothing but harm.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 8th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; New York Medicohistorical Society (private); New York Ophthalmological Society (private); Gynæcological Society of Boston; Corning, N. Y., Medical Association; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, May 9th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); New York Obstetrical Society (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y. (annual); Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, May 10th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital, New York; Society for Medical Progress, New York; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, May 11th.—New York Academy of Medicine (Sections in Pediatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the

County of Cayuga, N. Y. (annual); South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, May 12th.—Yorkville Medical Association, New York (private); Brooklyn Dermatological and Genito-urinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, May 13th.—Obstetrical Society of Boston (private).

NEW YORK.

Change of Address.—Dr. Frederick E. Beal, to 76 West Eighty-fifth Street.

A Dinner to Dr. Emmet.—A dinner in celebration of Dr. Thomas Addis Emmet's seventy-seventh birthday will be given at Delmonico's on Monday, May 29th.

Infectious Diseases in New York.—We have not received any report from the Health Department regarding the cases of infectious disease for the week ending April 29th.

Personal.—Dr. L. Pierce Clark, of New York, has been appointed consulting neurologist for the Craig Colony for Epileptics.

Dr. John H. Borden, of New York, has been appointed from the civil service list as assistant in the clinical laboratory of the Pathological Institute on Ward's Island.

Dr. Frank Wickham, registrar of vital statistics for the borough of Queens, has been retired on his own application and placed upon the pension list.

Willard Parker Hospital.—Plans have been filed for the enlargement and remodelling of the main building of the Willard Parker Hospital, in Sixteenth Street, east of Avenue C. A three story extension 38 feet wide and 78 feet long is to be added on the front and rear, new fireproof staircases are to be built, and a new up to date plumbing plant installed throughout the reconstructed building. The new construction work is to be fireproof.

St. Mark's Hospital.—Dr. Carl Beck, president of St. Mark's Hospital, announced on April 29th at the semiannual graduation of nurses from the training school, that this year, for the first time in its history, the hospital has been able to pay its own way. He made a plea, however, for funds to establish better quarters for patients and nurses. "We believe in the expansion policy," he said, "and we are waiting for the great Carnegie or Rockefeller to give us the money we need." Nine young women graduated.

Society of the Medical Inspectors of the City of New York.—A stated meeting will be held on Tuesday, May 9, 1905, at 8.30 p. m., at the Chemists' Club, 108 West Fifty-fifth Street. Order: Executive Session; papers of the evening: The Importance of Prophylaxis in the Diseases of Children, by Dr. Floyd M. Crandall; The Physical Examinations of School Children by the Department of Health Medical Inspectors, and What May be the Ultimate Results, by Dr. John J. Cronin. General discussion of these papers by members and guests. A. C. McGuire, M. D., presi-

dent; Edward M. Thompson, M. D., secretary, 315 West Fifty-eighth Street.

Tenth Anniversary of the Medical Class of 1895, New York University.—On Tuesday, May 9, 1905, at 8 p. m., the tenth anniversary of the graduation of the class of 1895 of the medical department of New York University will be fittingly celebrated in a reunion and banquet to be held at the St. Regis Hotel, Fifty-fifth Street and Fifth Avenue. Four members of the class have departed this life in ten years. Ninety-seven are left, of whom seventy-five are expected to be present. Dr. E. Foskett, of 314 West Eighteenth Street, is chairman, and Dr. J. Carlisle DeVries, of 34 West Thirty-eighth Street, is secretary of the committee having the matter in charge.

New Hospital Planned.—Assemblyman Hackett, of New York, succeeded in passing through the Assembly on April 26th his bill for the establishment of a hospital in New York, between Twentieth Street and Forty-second Street, to accommodate 700 persons. The Board of Estimate and Apportionment is to acquire the site in a district on the West Side, shall secure plans and contracts, and equip same with furniture and necessary surgical outfit. Corporate stock is to be issued for payment, and when opened the institution shall be under the same control and administered in the same manner as other city hospitals.

The Medical Association of the Greater City of New York.—A stated meeting of this association will be held in Hosack Hall, New York Academy of Medicine, on Monday, April 10, 1905, at 8.30 p. m. Order of Exercises: Immunity and Infection; Introductory on Immunity, by Dr. Edward K. Dunham; Phagocytosis in Its Relation to Immunity, by Dr. Eugene L. Opie; Therapeutic Value of Antitoxic Sera, by Dr. H. T. Marshall; Therapeutic Value of Bactericidal Sera, by Dr. H. D. Pease; Diphtheria Antitoxine in Cerebrospinal Meningitis, by Dr. Arthur J. Wolff; Limitations of Serum Therapy, by Dr. Henry W. Berg; discussion by Dr. William H. Park, Dr. James Ewing, Dr. Frank Grauer, Dr. James C. Ayer, and Dr. Edward Waitzfelder. J. Lee Morrill, M. D., treasurer; P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street.

Margaret Fahnestock Training School for Nurses.—The following young women graduated from this institution on April 25th:

Agnes Cozine Allen, Julie Lydia Ambler, Eva Elizabeth Campbell, Leta Card, Jessie Morrison Christie, Margaret Anna Clark, Elizabeth Donalda Cole, Lizzie Amelia Collins, Edith Macy Cromwell, Irene Eacret, Mary Gardiner, Lillian Adell Hanford, Josephine Hughes, Rosemary Kellner, Ella Camille Ligg, Ruth O'Leary, Louise Burdette Robinson, Florence Margaret Rochotte, Mary Elizabeth Salmond, and Frances Mildred Shore. Champe S. Andrews made an address, Professor James N. West, M. D., presented the diplomas, and Professor Henry D. Chapin, M. D., presented the badges. The reception committee included Miss Ella E. Russell, Mrs. Robert M. Thompson, Mrs. Charles C. Beaman, Mrs. Grant Squires, Mrs. J. W. De Agüero, Mrs. Robert Clarkson, and Mrs. Henry A. Alexander.

A Special Pavilion for Cases of Cerebrospinal Meningitis.—A new pavilion was opened at Belle-

vue Hospital on May 1st for the reception of all cases of cerebrospinal meningitis sent to Bellevue, Harlem, Fordham, and Gouverneur hospitals. While this action was taken partly to relieve the overcrowded condition of the city hospitals the chief purpose is to enable the meningitis investigating commission to study the disease to better advantage. The pavilion holds thirty-five cots. It will be overfilled when the fifteen cases now at Gouverneur Hospital are transferred to Bellevue. Harlem Hospital has sent six cases, while Bellevue already had eighteen. Nine tenths of the sufferers are under ten years of age.

Academy of Medicine.—The Section in Pædiatrics will meet on Thursday, May 11th, at 8.15 p. m. Order: Presentation of Patients: (a) A Case of Retained Intubation Tube Treated by Gradual Dilatation, by Dr. Fielding Lewis Taylor; (b) Two Cases of Hydrocephalus Treated by Autodrainage, by Dr. Alfred S. Taylor; Reports of Cases: Some Cases of Congenital Syphilis, by Dr. Henry S. Patterson; paper: Measures for the Relief of Symptoms in Cerebrospinal Meningitis, by Dr. Francis Huber; discussion; paper: Ulcer of the Stomach in Children, by Dr. William L. Stowell; discussion by Dr. Bovard, Dr. Foote, and others. L. E. La Fetra, M. D., chairman; John Howland, M. D., secretary, 49 East Fifty-third Street.

The Section in Otology will also meet on Thursday, May 11th, at 8.15 p. m. Order: Clinical meeting. All members having patients to present will kindly notify the secretary and send title at earliest possible convenience. Report of a Case of Meningitis Secondary to Otitis Media, with Demonstration of Pathological Findings in Temporal Bone by Microscopical Projection, by Dr. George S. Dixon. Emil Gruening, M. D., chairman; W. H. Haskin, M. D., secretary, 42 East Forty-first Street.

Dinners to Dr. Osler.—Among the entertainments given to Dr. Osler during the week, two dinners figured. The first was given on May 2nd at the Waldorf-Astoria, and was attended by 520 physicians from various parts of the world. It was America's farewell to the distinguished professor. Those who sat the right and left of Dr. Osler were: Dr. James Tyson, of Philadelphia, the chairman of the dinner; Dr. S. Weir Mitchell, of Philadelphia; Dr. W. W. Keen, of Philadelphia; Dr. F. Sandwith, of Cairo, Egypt; Dr. James R. Chadwick, of Boston; Dr. John S. Billings, of New York; Dr. F. J. Shepherd, of Montreal; Dr. A. Jacobi, of New York; Dr. John H. Musser, of Philadelphia; Dr. Edward L. Trudeau, of New York; Dr. Frederick C. Shattuck, of Baltimore; Dr. Stephen Smith, of New York; Dr. Frank Billings, of Chicago; Dr. W. H. Welch, of Baltimore; Dr. J. C. Wilson, of New York; Dr. E. G. Janeway, of New York; Dr. Francis Delafield, of New York; Dr. A. E. Malloch, of Hamilton, Ont.; Surgeon-General George W. Sternberg, of Washington, D. C.; Dr. D. B. St. John Roosa, of New York; Dr. William M. Polk, of New York; Dr. G. K. Dickinson, of Jersey City; Dr. Eugene F. Cordell, of Cleveland; Dr. William B. Gibson, of Philadelphia; Dr. John A. Wyeth, of New York;

and Dr. Robert Fletcher, of Washington. The second dinner followed the annual meeting of the Society of McGill University Graduates, and took place at the Imperial Hotel, May 4th. Many old friends of Dr. Osler were present and the affair was much less formal, if not more enjoyable, than the larger dinner.

PHILADELPHIA.

The Sixth Annual Meeting of the American Therapeutic Society was held at the Hotel Bellevue-Stratford on May 4th, 5th, and 6th.

Hospital Benefit.—As a result of the annual ball, which was held on April 27th, the treasury of Mt. Sinai Hospital will be benefited by the addition of \$2,000.

Marriages.—Dr. Sidney Alexander Chalfont and Miss Edith List were married in Philadelphia on April 24th.

Dr. John Laurence Davies Eisenberg and Miss Mabel Irish were married in Norristown, Pa., on April 27th.

Dr. Alexander MacLeod Brown and Miss Helen Heydrick were married in Franklin, Pa., on April 26th.

Scientific Society Meetings for the Week Ending May 13, 1905.—Monday, May 8th, Section in General Medicine, College of Physicians; Wills Hospital Ophthalmic Society. Tuesday, May 9th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, May 10th, Philadelphia County Medical Society. Thursday, May 11th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, May 12th, Northern Medical Association; West Philadelphia Medical Association. Saturday, May 13th, West Philadelphia Branch, Philadelphia County Medical Society.

Philadelphia County Medical Society.—The following will be the programme of the Philadelphia County Medical Society at its meeting, Wednesday, May 10th: Dr. M. H. Fussell, Two Cases of Malignant Endocarditis; Dr. Norman B. Gwyn, Typhoid Fever; Accidental Infection with the Bacillus of Malignant Oedema or the Gas Bacillus; Death with the Symptoms of Intrathoracic Irritation; Dr. Joseph Price, The Importance of Repairing Cervical and Perineal Injuries at the Termination of the Child-bearing Period; Dr. G. Betton Massey, The Present Aspects of the Cancer Problem. On Wednesday, May 17th, at 8.30 p. m., Dr. Henry Leffman will lecture on Medicine and the Newer Chemistry, under the auspices of the society.

Deaths.—Dr. William B. Ulrich died in Chester, Pa., on April 24th, from the after-effects of influenza. Dr. Ulrich graduated from the medical department of the University of Pennsylvania in 1851 and from the New Orleans School of Medicine in 1866. He was a member of the Medical Society of the State of Pennsylvania and of the Delaware County Medical Society. He was president of the State Society in 1903 and 1904.

Dr. Andrew Douglass Hall died on April 27th, aged 72 years. He graduated from the medical

department of the University of Pennsylvania and from the Jefferson Medical College. For many years he was on the staff of the Wills Eye Hospital.

The Reverend Frederick Wischan, secretary of the board of trustees of the German Hospital of Philadelphia, died in that institution on April 28th of osteomyelitis.

The Health of the City.—During the week ending April 22, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	149	19
Scarlet fever.....	43	0
Chickenpox.....	50	0
Diphtheria.....	66	3
Cerebrospinal meningitis.....	9	4
Measles.....	54	0
Whooping cough.....	10	0
Tuberculosis of the lungs.....	36	60
Pneumonia.....	57	31
Erysipelas.....	5	1
Puerperal fever.....	1	1
Trachoma.....	1	0
Tetanus.....	1	0

The total number of deaths was 455, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.45 per 1,000 population. The total infant mortality was 83; 67 under one year and 16 between one and two years. The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 10; dysentery, 2; diarrhoea and enteritis under two years, 10. The temperatures have ranged from a maximum of 79° on the 21st to a minimum of 33° on the 19th. On the 16th there was quite a fall of snow, which did not accumulate, and on the 21st a severe wind and rain-storm at 3.15 p. m., which lasted about fifteen or twenty minutes, and was accompanied by a little thunder. The humidity was not excessive.

State Department of Health.—The governor has signed the bill referred to on page 814 of our issue of April 22nd, known as the State Department of Health Bill. The provisions of this bill have been criticised severely in certain quarters, but it appears to us to be directly in line of modern development in governmental matters—namely, the appointment of a responsible head of executive affairs who shall receive all the credit for good administration and all the blame for poor administration. We quote the following editorial from the *Public Ledger* of April 29th as properly stating the situation:

"The act creating the State Department of Health, which has been approved by the governor, is the most important piece of general legislation accomplished at the recent session. The bill was very carefully drawn, to provide an effective sanitary organization for the whole State. With this end in view, it confers such comprehensive, and often arbitrary, powers, to be enforced by severe penalties, that Governor Pennypacker's approval was by no means assured. Apparently he has satisfied himself that the operations of the new department can be held sufficiently in check by due process of law, or that any dangers of abuse are compensated for by the many conspicuous merits of the act.

"While the department of health, with its executive officer or director, will not supplant the regularly established local boards, it has very large supervisory power over them, and the district health officers, to be under its control, will be the really responsible agents of a general sanitary system. This extends not only to the prevention and treatment of epidemic and contagious diseases, but to the enforcement of general sanitary regulations, the protection of water

courses and other measures of more than local significance. The registration of vital statistics is also within its scope. The whole system appears so well conceived that it will be the fault of the men appointed to administer it if it does not prove of vast advantage and credit to the State.

"It is an inevitable incident of this scientific measure that it falls in with the current of political development. With its centralized power, extending through appointed agents into all sections of the State, it can easily be made a powerful channel of political influence. This consideration doubtless helped to commend the measure to the organization, which is not otherwise especially concerned for the public welfare. Any ulterior purpose of this kind, however, should be defeated by such appointments as we may expect Governor Pennypacker to make. It is he who must determine whether this important new department shall be started right or wrong, and no one doubts his purpose to give to Pennsylvania an honest, enlightened, and skillful administration."

GENERAL.

The Louisiana State Medical Association elected the following officers at their recent meeting: President, Dr. E. H. Martin, of Clarksdale; first vice-president, Dr. R. A. Seal, of Holly Springs; second vice-president, Dr. W. W. Crawford, of Hattiesburg; third vice-president, Dr. Stephen Eggleston, of Greenwood; secretary, Dr. L. T. Fox, of Water Valley.

Alabama Medical Association.—This association closed a four days' session at Montgomery on April 21st, and after selecting Birmingham as the next place of meeting, elected the following officers: President, Dr. E. D. Bondurant, of Mobile; junior vice-president, Dr. Johnston, of Tuskegee; Dr. T. L. Robertson, of Birmingham, and Dr. V. B. Gaines, of Mobile, to succeed themselves on the board of censors.

The Georgia Medical Association has elected the following officers for the ensuing year: President, Dr. William Z. Holliday, of Augusta; first vice-president, Dr. W. B. Hardman, of Commerce; second vice-president, Dr. R. P. Izlar, of Waycross; secretary and treasurer, Dr. Lewis H. Jones. The salary of the secretary was raised to \$600. The convention decided to meet next year at Augusta.

Suffolk County, N. Y., Medical Society.—The Suffolk County Medical Society held its regular spring meeting at Riverhead on April 27th. There were twenty-four physicians in attendance, which was the largest meeting ever held in Riverhead. The following officers were unanimously elected: President, Dr. W. E. Ross, of Brentwood; vice-president, Dr. C. C. Miles, of Greenport; secretary, Dr. Frank Overton, of Patchogue; librarian, Dr. J. H. Benjamin, of Riverhead.

The Medicochirurgical Medical College, of Kansas City, graduated the following on April 12th:

Allan T. Coffman, B. Frank Overstreet, Alfred E. Braden, V. Harvey Greenwood, Thomas W. Scanlon, Harvey M. Mayer, Samuel T. Henshaw, T. Restin Heath, James B. Mercer, Rowland P. Yeagle, Charles R. Zener, Albert H. Tribble, Walter C. Purviance, John C. Lynch, Alney N. Minear, and William H. Mallory.

These two colleges, together with the College of Physicians and Surgeons, of Kansas City, have been amalgamated with the Kansas University. This creates the largest medical school west of Chicago.

Wayne County, Mich., Medicine Society.—The following officers were elected by this society on April 24th: Chairman, Dr. L. J. Hirschman; secretary, Dr. Ray Connor.

St. Lawrence County, N. Y., Medical Society.—At the annual meeting of this society, held at Potsdam on April 15th, the following officers were elected:

President, Dr. Harold J. Morgan, of Ogdensburg; vice-president, Dr. F. J. Fuller, of Potsdam; secretary, Dr. S. W. Close, of Gouverneur; treasurer, Dr. A. H. Allen, of Gouverneur; censors, Dr. R. H. Hutchings, of Ogdensburg; Dr. W. B. Hanbridge, of Ogdensburg; Dr. B. F. Drury, of Gouverneur; delegates to New York State Medical Society: Dr. D. M. Taylor, of Edwards; Dr. S. W. Dodge, of Massena; Dr. H. J. Morgan, of Ogdensburg; Dr. E. M. Somers, of Ogdensburg; Dr. C. C. Bartholomew, of Ogdensburg.

Buffalo General Hospital.—The Buffalo General Hospital and the Ingleside Home will benefit to the extent of about \$30,000 each by the will of Mrs. Mary Stockdale, of Flint, Mich. Mrs. Stockdale died on April 26th, 91 years old, and with no near relatives. Trustees of the Buffalo General Hospital have made inquiries concerning the bequest of that institution. According to a press report, Mrs. Stockdale left about \$30,000 to the hospital. The inquiries which were made elicited the information that the hospital is likely to get \$50,000 instead of \$30,000.

Union Protestant Infirmary, Baltimore.—The following young women graduated as nurses from this institution on April 26th:

Roberta Lee Ball, of Maryland; Beatrice M. Brackenridge, of Maryland; Lulu Braddy, of North Carolina; Edith Child, of Maryland; Olive Irene Doll, of Maryland; Estelle C. Glocker, of Maryland; Maude Montague Gardner, of South Carolina; Agnes Pickett Kloman, of Virginia; Lucy Chilton Kloman, of Virginia; Wie Townsend Lower, of New York; Harriet Nelson, of Maryland; Martha Rutledge, of Maryland; Anne Lowry Semple, of Virginia; Elinore Davis Stuchfield, of Pennsylvania; Mary Turnbull Sims, of Maryland; and Nannie de Dion Wilson, of New York.

Maryland Medical and Chirurgical Faculty.—Officers of the faculty were elected at Baltimore on April 26th, as follows:

President, Dr. Samuel T. Earle; vice-presidents, Dr. Charles O'Donovan, Dr. T. M. Chaney, and Dr. Joseph B. Seth; secretary and treasurer, Dr. Wilmer Britton. The councilors from the Western Shore are: Dr. J. W. Leitch, Dr. T. H. Brayshaw, Dr. Arthur Williams, and Dr. William P. Miller; Eastern Shore, Dr. Paul Jones, Dr. W. F. Hines; Baltimore city, Dr. T. A. Ashby, Dr. R. W. Johnson, Dr. Hiram Woods, Dr. William H. Welch, and Dr. T. S. Latimer. The committee on scientific work and arrangements is composed of Dr. Jeffrey T. Brick, Dr. Arthur Herring, and Dr. John Ruhrah. The committee on public policy and legislation comprises Dr. William H. Welch, Dr. J. W. Chambers, Dr. J. D. Blake, Dr. Samuel T. Earle, and Dr. John Ruhrah.

Meetings of Alumni Associations.—The Alumni Association of the Albany Medical College held its thirty-second annual meeting in Albany on Tuesday, May 2nd. The programme began at 9.30 a. m. and continued all day.

The thirtieth annual meeting of the Alumni Association, Medical Department, University of Buffalo, was held May 3rd and 4th. Members

of the association had luncheon on Thursday noon, May 4th, with Dr. Mann, Dr. Park, Dr. Stockton, Dr. Snow, Dr. Williams, and Dr. Rochester, at the Saturn Club, Delaware Avenue and Edward Street. Out of town alumni were entertained at luncheon by the resident alumni at the University Club, Delaware Avenue and Allen Street.

Statement of Mortality in Chicago for the Week Ending April 29, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	April 29, 1905.	April 22, 1905.	April 30, 1904.
Total deaths, all causes.....	527	558	561
Annual death rate per 1,000.....	13.80	14.56	15.17
Males.....	308	307	324
Females.....	219	251	237
By age—			
Under 1 year.....	121	108	75
Between 1 and 5 years.....	61	67	41
Over 60 years.....	97	109	125
Important causes of death			
Acute intestinal diseases.....	30	17	15
Apoplexy.....	14	15	19
Bright's disease.....	42	40	53
Bronchitis.....	20	25	23
Consumption.....	82	78	62
Cancer.....	30	32	24
Convulsions.....	8	12	6
Diphtheria.....	6	8	8
Heart diseases.....	36	45	45
Influenza.....	0	1	2
Measles.....	9	13	1
Nervous diseases.....	17	18	39
Pneumonia.....	74	72	114
Scarlet fever.....	0	3	7
Smallpox.....	0	2	0
Suicide.....	8	8	7
Typhoid fever.....	3	6	12
Violence (other than suicide).....	21	20	26
Whooping cough.....	27	8	1
All other causes.....	99	135	107

Personal.—Dr. William H. Marcy has been appointed surgeon to the Buffalo fire department.

The Medicopsychological Association, in session at San Antonio, Texas, has made Dr. William F. Bentler, superintendent of the asylum for the chronic insane at Wauwatosa, a member of its executive council to succeed Dr. Moses J. White, superintendent of the Milwaukee Hospital for the Insane.

Major George E. Bushnell, surgeon, has been detailed to represent the medical department of the army at the meeting of the National Association for the Study and Prevention of Tuberculosis, to be held in Washington, May 18th and 19th. Major Bushnell is in charge of the United States General Hospital at Fort Bayard, N. M., established for the special treatment of tuberculosis cases in the army.

Word has been received from Albany announcing the appointment of Dr. F. Park Lewis, of Buffalo, as a trustee of the New York State School for the Blind.

Dr. C. O'Reilly, medical superintendent of the Toronto General Hospital, has severed his connection with the institution. This announcement, which was received with much regret, was nevertheless not wholly unexpected, as it has been for some time understood that Dr. O'Reilly has found the duties of the position growing onerous beyond his strength.

Dr. Henry W. Bettmann was elected president of the Gastroenterological Society at its biannual meeting in New York city on April 26th.

Pith of Current Literature

PRESSE MEDICALE.

April 1, 1905

1. Application of Continuous Extension in Oblique Fractures of the Leg, By L. OMBREDANNE.
2. The Casein Coagulating Ferment and the Digestion of Milk, By LEON MEUNIER.

1. **Continuous Extension in Oblique Fracture of the Leg.**—Oblique fractures of the tibia often produce a considerable deformity on account of the overlapping of the fragments, and to prevent this Ombredanne uses a modification of Hennequin's apparatus to maintain a constant extension.

2. **Digestion of Milk.**—Meunier says that the amount of casein coagulating ferment produced in the stomach varies considerably in different persons in both normal and pathological conditions, and those who have a gastric juice poor in this ferment are subject to gastrointestinal troubles when placed on a milk diet. The chemical study of the digestion of milk and the determination of the coefficient of intestinal utilization of the constituent elements of milk show that there is a distinct relation between the secretion of this ferment and the digestion of fatty material. It regards the passage of the milk along the intestinal tract so that the fat is subjected for a longer time to the action of the saponifying ferments, while at the same time the absorption of fatty material during intestinal digestion is favored. But when this ferment is not present in sufficient quantity the fatty material in the milk is badly digested and this indigestion gives rise to the above mentioned intestinal troubles when persons with this lack in their gastric juice are put on an exclusive milk diet.

LYON MEDICAL.

April 2, 1905.

1. Protection of Infants During the First Year of Life, By Dr. HORAND.
2. Primary Tuberculous Rheumatism, By PAUL CAUTHIER.
3. Congenital Absence of the Right Kidney, By RENE HORAND.

1. **Protection of Children.**—This, the first installment of Horand's exhaustive paper on the subject, deals mainly with the statistics of mortality among infants, chiefly in France, but also as found in other countries. The causes of death at this age are stated as three in number: gastroenteritis, acute diseases of the respiratory system, and congenital debility.

2. **Primary Tuberculous Rheumatism.**—Cauthier reports a case of this nature and concludes with this quotation from Poncet: Acute articular rheumatism is to be distrusted, especially when it resists treatment with the salicylates. Inquire carefully into the antecedents of the patient, his past and present condition, and make use of laboratory processes, experimentation, serum reaction, cytological examination, etc. Think the more of tuberculosis in that no definite

infectious cause has been discovered for this rheumatism, and that it occurs in children and young people.

3. **Congenital Absence of the Kidney.**—Horand reports a case in which the following conditions were present. The right kidney was absent, the left lobulated and hypertrophied, but otherwise normal. The right ureter was permeable and connected with the left kidney, the left atrophic and permeable only at its vesical orifice. The right suprarenal capsule was present, but very atrophic and supplied only by small vessels, the left capsule was of normal size and well formed. The renal vessels on the right side were absent. The right seminal vesicle was normal. Its canal lay normally in front of the ureter to the inguinal canal. The right testicle and epididymis were present. The left seminal vesicle was absent; its canal passed in front of the left ureter, with which it seemed to communicate through the inguinal canal. The left testicle and epididymis were well developed.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE

February 26, 1905.

1. A New Method of Serumtherapy in Syphilis, By M. BOSSI.
2. The Relations of Chloroform Narcosis to the Elimination of Urea Nitrogen, By NICOLINO FEDERICI.
3. The Fallacies of Freund's Method for the Determination of Sulphuric Acid, By EMILIO PITTARELLI.
4. The Epidemic and Polymorphous Course of an Infection Presenting the Characters of Streptococcus and Staphylococcus Infection, By GIOVANNI MORELLI.
5. Iodine in Typhoid Fever, By GIUSEPPE CAMPANELLA.
6. The Treatment of Tetanus, By ADRIANO GIANELLI.

1. **Serum Therapy in Syphilis.**—The new treatment which was tried by Bossi, of the obstetric clinic of Genoa, consists in the use of the serum of mothers who had given birth to syphilitic children. The rationale of this treatment is based on Colles's law, which affirms that a mother who has given birth to a child with hereditary syphilis (of paternal origin) remains free from syphilitic infection. As yet, the results are not sufficiently definite to allow of a positive conclusion, but the author is conducting other experiments on the same line, and calls attention to the new method of treatment, hoping that other observers may be induced to try it.

2. **Urea and Chloroform Anæsthesia.**—Federici uses the ureometer of Fiori for the determination of the amount of urea eliminated in the urine after chloroform anæsthesia. He found that, during the first and second days after the operation, the amount of urea excreted is diminished, and that it again is increased on or about the sixth or seventh days. Inasmuch as the decrease of urea eliminated in the worst cases is but slight, the author thinks that chloroform anæsthesia does not produce such serious or such frequent disturbances in the renal function as is supposed.

3. **Iodine in Typhoid Fever.**—Campanella employed iodine in the form of hypodermic injections in the treatment of typhoid fever with the idea

of directly combating the action of the bacillus. He bases his treatment upon the experiments *in vitro* performed by Cavazzani, and the tests in lower animals by Brunazzi and Lucchesini, who demonstrated the antiseptic and antitoxic virtues of iodine in typhoid infections. In this case Campanella injected one centigramme of metallic iodine, according to Durante's formula, into the subcutaneous tissues, and was gratified to find that the temperature had fallen one degree on the same evening. The injections were repeated daily, and after six days, the patient entered into convalescence. A general improvement in his condition was noted from the time the injections were begun.

RIFORMA MEDICA.

March 25, 1905.

1. Researches on the Metabolism of Chronic Leucæmia (*To be concluded*), By FRANCESCO DE GRAZIA.
2. On the Significance of Intestinal Putrefaction, By ALBERTO ROVIGHI.
3. Infantile Tabes, By AUGUSTO GIANELLI.
4. Specific Changes in the Blood Serum as the Result of the Injection of Various Sputa, By CARLO QUADRONE.

2. **Significance of Intestinal Putrefaction.**—Rovighi's article contests the views recently uttered by Albu, that intestinal putrefaction presents little that has any clinical significance, and is merely of scientific value. The appearance of ethereal sulphates in the urine, according to Albu, is of no special clinical significance. Rovighi shows that a milk diet diminished markedly the amount of putrefactive products in the intestines in patients with an excessive intestinal putrefaction. Milk diet or even a restricted diet is able to diminish considerably the amount of ethereal sulphates passed in the urine. The same is true of a diet consisting chiefly of kefir. The products of intestinal putrefaction, he found, are developed in larger amounts during the day than at night, and more markedly after meals and after the ingestion of large amounts of fluids, although the amount of fluids drunk has no effect on the amount of fermentation in the intestines in health. According to the experiments of Caldesi, a pupil of Rovighi, a cold bath diminishes, while a hot bath increases the amount of putrefaction in the intestines. On the other hand, anything that produces perspiration, such as exercise, e. g., bicycle riding, will diminish the amount of intestinal putrefactive products eliminated, as some of the toxic products are perspired by the skin.

ROUSSKY VRATCH.

March 12 and 19, 1905. (Double Number)

1. The Significance of Heredity in Multiple Exostoses, By N. I. MOUKHINE.
2. The Fate of Salicylic Acid in the Organism, By I. V. ZAVADSKI.
3. On the New Method of Removing the Entire Cancerous Uterus by the Abdominal Route (Modified Wertheim's Operation), By N. M. PROZOROVSKI.
4. Artificial Cultures of the Leprosy Bacillus and Their Action on Animals, By I. I. KLITINE.
5. Emotional Sides of Hypnotism and the Psychotherapy of Alcoholism, By E. P. RADIN.

6. The Limitations of the Operation of Expression in Trachoma (*To be concluded*), By S. A. OLIKHOFF.

1. **Heredity and Multiple Exostoses.**—Moukhine reports the case of a little girl, 8 years old, who had 34 exostoses in various parts of the body. The chief point which he makes in connection with the ætiology of multiple exostoses, is that they may be phenomena of degeneration—that at least in this case they were evidences of physical degeneration. A remarkable feature of this case was the fact that no exostoses could be traced in the girl's ancestors, as far back as they were known. This is not in consonance with the commonly accepted hereditary theory of multiple exostoses. The child presented a number of other marks of degeneration; for example, asymmetry of the cranium, hysterical symptoms, and, above all, retarded development of speech and compulsory motor phenomena, in the shape of involuntary smiles and laughter. These Moukhine, who is a neurologist, regards as of great importance among the signs of degeneration. Thus far exostoses have been studied almost exclusively by surgeons and not by neurologists. Féré is the only author who has recently taken up the neurological aspect of the matter, and he also declares exostoses to be signs of degeneration. Moukhine therefore considers degeneration as the cause of multiple exostoses.

2. **What Becomes of Salicylic Acid in the System?**—Zavadski found that salicylic acid in the body forms double combinations with glycuronic acid or with substances representing the preliminary stages in the formation of glycuronic acid. This combination is very unstable. The question as to what becomes of salicylic acid in the body was first studied by Bertagnini in 1856, this author stating that salicylic acid in the body enters into combination with glyccoll, and is excreted as salicyluric acid. In 1877 Baumann and Herter found that the amount of sulphuric ethers in the urine was increased after the administration of salicylic acid, but they could not isolate the combination which this acid forms in the body.

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 27, 1905.

1. Stricture of the Rectum: A Plastic Operation for the Relief of Certain Varieties, By HOWARD A. LOTHROP.
2. Chronic Gonorrhœal Prostatitis, By CHARLES GREENE CUMSTON.
3. The Employment of the Blind for Massage, By NATHANIEL BOWDITCH POTTER.
4. Chronic Bronchitis in the Adult as Influenced by a Change of Climate, By EDWARD O. OTIS.
5. Evolution and Tuberculosis, By JOHN B. HUBER.

1. **Stricture of the Rectum.**—Lothrop treated a simple annular stricture of the rectum as follows: The rectum was first dissected free from the vagina. By means of two incisions the bowel was cut anteriorly and posteriorly in the line of its axis and at the location of the stricture. The incisions in the bowel were then sutured in such a manner as to bring the line of incision at right angles to the axis of the gut.

2. **Gonorrhœal Prostatitis.**—Cumston has had good results by treating gonorrhœal prostatitis according to the following plan: "Dilate the stricture or strictures, especially those seated in the membranous urethra, proceeding with delicacy so as never to cause hæmorrhage; Secondly, rectal massage of the prostate for from three to five minutes; Thirdly, request the patient to urinate in order to wash out the prostatic urethra and thus remove the secretions that the massage has caused to accumulate there. I believe that this is quite sufficient and preferable to large irrigations of potassium permanganate which are dirty and often produce useless traumatism. Fourthly, instill 1 c.c. or 2 c.c. of a solution of silver nitrate into the prostatic urethra, at the strength 1 to 100 for the first few times and rapidly arriving at 1 to 50. The treatment should be carried out every other day and the length of time that it must be kept up varies very considerably, but I have rarely met with a case where a cure could be accomplished in less than six or seven weeks, and usually about three months is required."

3. **The Blind for Massage.**—Potter urges instructing the blind in the art of massage. This is done extensively in Japan, and to a much less degree in some European countries. In the United States hardly a beginning has been made.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 29, 1905.

1. Some Interesting Autopsy Findings in Epileptics,
By B. ONUF (ONUFROWICZ).
2. Cerebrospinal Fever. Epidemic Cerebrospinal Meningitis,
By J. C. WILSON.
3. The Action of the Intracellular Poison of the Colon Bacillus,
By VICTOR C. VAUGHAN.
4. The Diagnosis of Syphiloma of Kidneys,
By R. R. CAMPBELL.
5. The Pathogenesis and Treatment of Gout,
By E. SCHMOLL.
6. The Intercommunicability of Human and Bovine Tuberculosis,
By SILVIO VON RUCK.
7. The Treatment of Gonorrhœal Arthritis by Hyperæmia,
By JOHANNES H. M. A. VON TILING.
8. Smokeless Powders. The Nature and Effects of the Deleterious Gases Given off in Their Explosion,
By CHARLES F. KIEFFER.
9. Local Anæsthesia by Injections of Sterile Water,
By FRANK W. STEVENS.
10. Immunity. Chapter XIV.

1. **Epilepsy.**—Onuf's paper is based on sixteen autopsy cases of epilepsy, in thirteen of which the brain was examined. Even excluding the meninges and blood vessels there was not a case in which the brain was found free from some distinctive organic lesion. The cases are carefully tabulated and a number of photographs of the brains examined are reproduced. The author admits that the cases are too few to serve as material from which to draw formal conclusions, yet the findings must at least be admitted to be suggestive. Starr has held that epilepsy is usually, if not always, an organic disease. The author leaves it to the reader to judge to what extent, if

any, Starr's statement is corroborated by his own studies.

2. **Meningitis.**—Wilson writes a formal paper on meningitis. He prefaces his remarks on treatment as follows: "The mildest cases require no treatment; the malignant cases react to none. Medicine with all its resources is neither capable of combating the attack nor responsible for its results. Of this group of cases Stillé has said 'the first symptoms of the disease are the first phenomena of death.'" A summary of the various methods of treating the disease is then given.

3. **The Colon Bacillus.**—Vaughan concludes: (1) The colon bacillus produces a powerful poison when grown on artificial media. (2) This poison is intracellular in character, and is contained within both the living and the dead bacterial cell. (3) The poison can be separated from the other constituents of the bacterial cell only by means which chemically breaks up the latter. (4) The peritonitis which occurs after intraperitoneal inoculation with the colon bacillus is due to the presence of the poison in a combined and not in a free state. (5) The intracellular poison of the colon bacillus causes a marked fall in the body temperature. (6) The poison of the colon bacillus apparently causes death by paralysis of respiration. (7) The intracellular poison is an essential group of the bacillus, and can be built up synthetically on proteid-free media. (8) This intracellular poison is the poison which causes death in animals inoculated with cultures of the living colon bacillus.

5. **Gout.**—Schmoll propounds a theory regarding gout which accounts for two phases of the disease, (1) the precipitability of the uric acid in the serum and (2) the uric acid deposits in the joint. Normally uric acid results from the oxidation of purin bodies. Thymic acid also is produced, and it combines with the uric acid and keeps it in solution. In gout the uric acid is not only produced by oxidation of purin bases, but also by synthesis; this synthesized uric acid, therefore, has not at its disposal the thymic acid necessary for its solution. It is the reason why we can detect uric acid in the serum. If the formation of the synthetic uric acid increases for one reason or another, there follows a saturation of the serum with this kind of uric acid, and as no thymic acid prevents it from precipitation, it is deposited in the joints as tophi.

7. **Gonorrhœal Arthritis.**—Von Tiling has had good results by following the method recommended by Bier for treating various forms of inflammatory affections by means of hyperæmia. In order to get the best results by Bier's method, it is important not to produce too much constriction by the elastic bandage.

MEDICAL RECORD.

April 29, 1905.

1. Multiple Myeloma (Kahler's Disease). A Contribution to Its Symptomatology and Its Morbid Anatomy,
By JOSEPH COLLINS.
2. Let the Lungs Alone in Consumption,
By WOODS HUTCHINSON.

3. Aerophagia and Flatulence, By C. D. SPIVAK.
4. The Conduct of the Perineal Stage in Normal Labor, By B. A. FEDDE.
5. A Case of Premature Separation of a Normally Situated Placenta, By J. WIRT ROBINSON.
6. Presentation of the Portrait of Dr. Fessenden Nott Otis to the Academy of Medicine of New York, By L. BOLTON BANGS.

1. **Multiple Myeloma.**—Collins reports his case in some detail. Special attention is given to the urinary examinations and to the autopsy protocol. It has been stated that the presence of albumose in the urine is pathognomonic of multiple myeloma. In the present case albumose was never detected in the urine. The most striking clinical features of the author's case follow: There was no deformity or alteration in the contour of the bones to be made out during life. Despite the fact that the substance of the bone was largely replaced by new growth, and the existence of rarefying osteitis to a high degree, there were no indications that there had ever been fractures or dislocations. At no time was albumose found in the urine, and whereas other cases have been reported in which albumose was not found in the urine, this would seem to be the first case which was for a long time under observation in which repeated examination of the urine, extending over several months, during which time the disease was fully developed, failed to find albumose. It is because of this, rather than to discuss the anatomical features of the new growths, that the case is recorded.

2. **Consumption.**—Hutchinson asserts that pulmonary tuberculosis is a general disease with localized lesions in the lungs. It is therefore irrational to devote our attention too exclusively to the pulmonary lesions. The author is inclined to accept the conclusions of Robin and Binet as correct, and to believe that the predisposition to tuberculosis is dependent upon an exaggerated tendency on the part of an individual organism to kill oxygen and form carbonic acid, that is, to consume itself. Treatment must therefore be directed so as to overcome this tendency. Rest and overfeeding are the best measures at our command.

3. **Aerophagia.**—Spivak concludes: (1) Swallowing of air in small quantities is a normal phenomenon. (2) Abnormal swallowing of air may be voluntary (hysteria), and involuntary (dyspepsia, idiopathic). (3) Air may enter the stomach by swallowing, aspiration, or gulping. (4) Cases of aerophagia are not as rare as the earlier writers used to think. (5) Aerophagia, although at the beginning, makes "much ado about nothing," and is, as a rule, a sequel to some other affection, yet when it is not alone it may, in its turn, produce grave symptoms and undermine the health. (6) Aerophagia, tympanites, nervous eructation, pneumatosis, and merycism have an ætiological relationship. (7) The best treatment in voluntary aerophagia is to impress the patient with the fact that he can stop it if he will. For otherwise "they have sown the wind, and they shall reap the whirlwind."

AMERICAN MEDICINE.

April 29, 1905.

1. Adaptation and Tuberculosis, By J. G. ADAMI.
2. Biliary Drainage in Operations on the Gall Bladder and Biliary Ducts, By EUGENE A. SMITH.
3. A Case of Chorea, Fatal, Apparently, from Excessive Muscular Action, By J. P. CROZER GRIFFITH.
4. A Method of Uniting Intestines of Very Small or of Unequal Calibre, By J. SHELTON HORSLEY.
5. Briefs on Genitourinary Surgery, By G. FRANK LYDSTON.
6. Intraabdominal Anastomosis, By A. GROVES.
7. On the Pathogenesis of Lead Intoxication Apropos of the Pathological Findings in a Case, By ALFRED GORDON.

1. **Adaptation and Tuberculosis.**—Adami discusses (1) the adaptation of the organism to the tubercle bacillus and (2) the adaptation of the tubercle bacillus to the organism. What he says of the tubercle bacillus can be said of any other form of microorganism. The theory is this: When a microorganism invades the body and is not immediately destroyed, it produces certain toxins which produce local and general disturbances. The body reacts to the toxins and produces antitoxines and substances which are inimical to the further growth of the invading germs. The offending microorganisms in turn produce defensive substances. Disease of microbic origin reduces itself, therefore, to a struggle between the invaded organism and the invader. Under certain conditions the end result is an increased resistance on the part of the organism to a specific infection and an increased virulence on the part of the invading germ for a like organism.

2. **Biliary Drainage.**—Smith emphasizes the benefits that are to be derived from biliary drainage in operations on the gall bladder and biliary ducts. The author holds that the symptoms in gall bladder and biliary duct disease are due mostly to a toxæmia or septicæmia, and it is for this reason that drainage is of so much importance. He even goes so far as to assert his belief that enlargement, and later, cirrhosis of the liver may be produced by a simple damming back of non-infected bile. A number of cases are briefly reported.

7. **Lead Intoxication.**—Gordon reports the clinical history of a man who died of lead poisoning. An autopsy was done and the affected nerves and the spinal cord were carefully studied. The points which the author believes should be emphasized are: "(1) Involvement of the cells of anterior cornua. Comparatively few cases reported in the literature showed cellular changes. Although the diseased cells are not numerous, they are, however, present. (2) Very slight degeneration in all the nerves and roots; the paralysis of the upper extremities was nevertheless almost complete. (3) Involvement of the posterior roots and posterior columns in the lower cervical and in the lumbar cord. The involvement of tracts in the cord is an infrequent occurrence in lead intoxication. The majority of those cases in which cord changes were found presented

degeneration of a disseminated character. There are, however, a few cases on record showing systemic involvement. Pal, in his work on multiple neuritis in 1891, describes a case of chronic lead poisoning which came to autopsy; polyneuritis of the peripheral nerves with extensive changes in the posterior roots and posterior columns was found. In E. D. Fisher's observation the columns of Goll were sclerosed. E. Redlich's case is one of chronic lead poisoning associated with tabes and verified on autopsy. Carl Bechtold has reported recently a case of spastic paraplegia caused by lead poisoning. The findings in my case are therefore of special interest from the standpoint of the pathogenesis of lead poisoning. It shows that not one theory advanced can be accepted individually, but that several elements play their rôle in the causation of paralysis. With Vierordt, Raymond, and Perrier I think that lead exerts its deleterious influence upon the central tissue, peripheral nerves, and blood vessels simultaneously."

MEDICAL NEWS.

April 29, 1905.

1. A Protest Against Radiological Misinformation,
By HENRY G. PIFFARD.
2. Intramuscular Injections of Insoluble Preparations of
Mercury in Syphilis, By HERMANN G. KLOTZ.
3. A Case of Syphilitic Pseudoparalysis,
By JACOB SOBEL.
4. Two Cases of Gastrostomy with Examination of Stomach
Walls by Means of the Cystoscope,
By R. E. PICK.
5. The Continuous Current in Relation to Inflammatory
Exudates, By MARGARET A. CLEAVES.
6. Rheumatism and the Eye Muscles,
By FRANCIS VALK.

1. **Radiological Misinformation.**—Piffard, by means of a number of quotations from medical books and articles, attempts to prove, what perhaps many have suspected, that there are a number of gentlemen writing on the subject of radiology that are not as familiar with their chosen subject as is desirable from a strictly scientific point of view.

2. **Mercury Injections.**—Klotz is strongly in favor of the insoluble mercury salts for hypodermic administration. He has made in all some 2,500 injections, and has used chiefly the salicylate of mercury. The paper does not touch upon the technics of administration, but is a plea for the more general use of the method. The advantages and disadvantages of the insoluble salts are reviewed.

4. **Gastrostomy.**—Pick's two cases do not present any special features. After the operations the interior of the stomach of each patient was examined by means of a cystoscope. No discoveries were made. The author emphasizes the possible value of this method of obtaining information regarding the inside of the stomach in cases in which an opening into the viscus exists.

5. **Inflammatory Exudates.**—Cleaves asserts that in very many cases, and when all else fails,

it will be found that the continuous current will dissipate inflammatory exudates. Seven illustrative cases are reported. In all were made brilliant recoveries. The types of cases suited to this method of treatment are thus given by the author: Phlebitis, exudative inflammations about the articulations of joints and sheaths of tendons, both rheumatic and septic, pelvic exudates involving the uterus, its mucous lining, and one or both ovaries, the urethra, the bladder, the conjunctiva, the cornea, the membrana tympani, the nasal mucous membrane, the Eustachian tube, the pharynx and tonsils, the intestinal tract, intestinal catarrh, mucomembranous enteritis, the liver, chronic hepatitis, ascites from cirrhosis, perineuritis of the brachial, lumbosacral distribution, etc., and spinal cord lesions, as in tabes and following spinal hæmorrhage. It does not matter what tissue or organ is affected, so long as it is possible to apply electrode contacts, so as to expend the chemicophysical energy of the continuous current directly upon or within the mass of organized exudate. The less fully organization has taken place the quicker and better the result. If it has gone on to the formation of connective tissue bands little can be done for them beyond the improvement of circulatory conditions, softening the morbid tissues, and putting them in a better condition for manipulation by the skilled masseur or for the action of an alternating current.

AMERICAN JOURNAL OF OBSTETRICS.

April, 1905.

1. Hand Sterilization, with Special Reference to the Use of
Oil of Cloves, By WEBSTER.
2. Hand Sterilization by Oil of Cloves, By ROSNOW.
3. Postoperative Complications Involving the Bronchi,
Lungs, Etc., By MILLER.
4. Non-operative Treatment of Eclampsia, By BACON.
5. The Technics of the Operation of Ventrosuspension
of the Uterus, By BEVEA.
6. The Results of Ventral Suspension of the Uterus at the
Johns Hopkins Hospital, By HOLDEN.
7. Cæsarean Section Following Ventral Fixation,
By SMITH.
8. Uncomplicated Varicose Veins of the Female Pelvis,
By MILLER and KANAVAL.

2. **Hand Sterilization by Oil of Cloves.**—Rosnow made experiments in connection with hand sterilization, making cultures (1) before scrubbing, (2) after thorough scrubbing, (3) after both scrubbing and the use of an antiseptic. This was done with, (1) the oil of cloves method, (2) the creolin method, (3) the bichloride method. The cultures were made by scraping epithelium from the skin of the hands and under the nails, and inoculating upon the surface of agar. The results showed great diminution in the number of the bacteria after the use of the scrubbing brush, and still greater after the use of the antiseptics. They also showed (1) that the skin ordinarily harbors many bacteria, (2) that thorough scrubbing with green soap and brush removes many bacteria, but not all, (3) that antiseptics destroy or dispose of a still larger number, and of the antiseptics tested clove oil seemed the most efficient. While it does not destroy all the bacteria in so short a time as

other antiseptics, its volatile and penetrating qualities enable it to reach where the others cannot, and so to destroy the bacteria.

4. Non-operative Treatment of Eclampsia.—Bacon thinks that the present theory that eclampsia means intoxication of the maternal organism with fetal or placental products will, if established, lead to the discovery of a specific serum treatment. Nicholson states that thyroid extract is a specific, but the author thinks this improbable, however valuable it may prove to be. Treatment which is not designed to empty the uterus may be classified as eliminative and symptomatic. The former includes catharsis, diuresis, and diaphoresis, whether by means of drugs, injections, or venesection. The latter includes such means as chloroform, ether, morphine, veratrum viride, lumbar puncture, and oxygen inhalation. Diet, rest, and bodily activity are also influential as means of treatment. The latter, with regulation of elimination, are the principal means for treating the preconvulsive period. A milk diet is suitable for most cases during this period. Rest in bed is almost equally important. Many of the available diuretics must be excluded, because of their irritating effect upon the kidneys. This will exclude the metals, coal tar products, volatile oils, digitalis, aloin, urotropin, and most of the alkaline salts. Excessive ingestion of water is not desirable, but water and salt solutions may be used freely per rectum. For intestinal eliminants we should be limited to calomel, saline cathartics, castor and croton oils, with senna and cascara occasionally. Edema and its effects should be treated by daily sweating. Venesection should be resorted to with great caution. During the convulsive stage treatment should be influenced by the condition of the patient, the severity and number of convulsions, the condition of the child, and the patient's surroundings. With reference to the use of drugs during this stage the author prefers morphine to all others. He does not favor veratrum viride. Lumbar puncture is not looked upon with favor. Oxygen is of great value, and should always be at hand. If convulsions occur after delivery the treatment should follow the lines already suggested; especially should it be supporting and symptoms eliminating. Strychnine and nitroglycerin may be added to the list of drugs which will be serviceable.

6. The Results of Ventral Suspension of the Uterus at the Johns Hopkins Hospital.—Holden gives the following conclusions for 445 cases in which the postoperative history is known: 1. Successful symptomatic results may be expected in 60 per cent. of uncomplicated cases; 2. dysmenorrhea is present with 90 per cent. of nulliparae with retrodisplacement, and with 55 per cent. of multiparae. In uncomplicated cases the dysmenorrhea is relieved by suspension in 50 to 60 per cent. of cases; 3. the suspensory ligament resulting from the operation averages 3.5 cm. in length. After a year its length does not depend on the time elapsing since the operation, or the thickness of the ligament; 4. in most cases there are no adverse symptoms resulting from suspension, dur-

ing pregnancy or labor. Occasionally there is abdominal pain during pregnancy; 5. recurrence of retrodisplacement may occur after labor. In cases in which pregnancy does not result, there are not more than 5 per cent. of recurrences.

7. Cesarean Section Following Ventral Fixation.—Smith draws the following conclusions from cases which have been reported: 1. Ventral fixation is contraindicated during the child-bearing period; 2. if ventral suspension is undertaken, care must be exercised that it does not become a fixation; 3. Alexander's operation or some one of the many varieties of intraabdominal shortening of the ligaments are more suitable operations for women at this period; 4. in severe cases of dystocia from this cause, immediate Cesarean section is preferable to prolonged attempts at vaginal delivery; 5. to prevent recurrence of the trouble the offending band should be removed.

8. Uncomplicated Varicose Veins of the Female Pelvis.—Miller wishes to emphasize the following points: 1. Varicose veins of the blood ligament may be a primary lesion, uncomplicated by other serious conditions; 2. the analogy to varicocele in the male is not proved in the reported cases, beyond the fact of preponderance of left sided cases; 3. a primary varicocele may give rise to a distinct syndrome, upon which a probable diagnosis can be based; 4. as a primary lesion it may demand surgical interference; 5. the treatment consists in ligation and excision or section of the veins with such treatment of the ovaries, tubes, and uterus as may be indicated; 6. the condition may be a factor in causing sclerocystic ovary and subinvolution of the uterus; 7. reports of primary cases uncomplicated by other lesions are desirable; 8. this condition is often secondarily present with retroversion and other pelvic lesions; 9. when present with other lesions recovery cannot be complete until it has been remedied. Correction of the primary lesion is essential, but this will not give tone to the dilated veins, which are a potential if not an active cause of trouble; 10. rupture of the veins may give rise to fatal hemorrhage. This has occasionally been demonstrated, but has probably occurred in other cases in which a diagnosis was not made.

ARCHIVES OF THE ROENTGEN RAY.

March, 1905.

1. Roentgen Rays and Sterility. By BROWN and OSGOOD.
2. Exophthalmic Goitre Reduced by Radium. By ABBE.
3. Notes of a Case of Peripheral Neuritis Treated by High Frequency Currents. By SOMERVILLE.
4. The Importance of Developing the Chest in the Young. By CORNER.
5. The Alcohol Question. By DUTTON.

1. Röntgen Rays and Sterility.—Brown and Osgood call attention to the fact that abrogation of spermatogenesis has been found to occur among those who have worked much in an x ray atmosphere. It is not known as yet to what degree and kind of x ray exposure the worker of average age and health must have experienced before this condition resulted, or whether there is a gradually progressive tendency from the first or a

sudden climax after some particularly long and intense action of the rays. The cases examined show that all who have been working at x rays as a specialty for years, whether physicians or artisans in electrical apparatus suffer with this condition. The question of prognosis is of great importance, but upon this point the authors are not yet prepared to report.

2. Exophthalmic Goitre Reduced by Radium.—Abbe reports a case of this character, undesirable for operation. An opening was made in the tumor into which a tube containing radium was inserted and retained for twenty-four hours. At the end of four months there was still a certain degree of tachycardia, but the tumor had contracted to one sixth of its former size. Two possible explanations of the favorable action are given; there may be retrograde change in all overgrown tissue, or there may be irradiation of the ganglia of the sympathetic, even of the thoracic and cardiac ganglia.

April, 1905

1. On Osseous Formations in Muscles Due to Injury.
By JONES and MORGAN.
2. The Treatment of Epilepsy by X Rays, By MANDERS.
3. A New and Possibly Improved Method of Using Radium,
By LIEBER.
4. A Case of Severe Hysteria Successfully Treated by High Frequency Currents,
By SOMERVILLE.
5. Reflections on the Position of Oscillatory Currents in Therapeutics and the Present State of Our Knowledge Concerning Them,
By BOKENHAM.
6. Note on Sanatoria for Insane Patients,
By MURRAY.
7. The Thyroid Gland. The Influence of Diet on Its Structure and Function,
By WATSON.

2. The Treatment of Epilepsy by X Rays.—Manders states that it is only two or three years since Branth conceived the idea of using x rays for the relief of epilepsy, on the theory that these rays stimulate protoplasm into greater vital activity. He gave three treatments a week, beginning with five minutes' exposure at fifteen inches distance, and increased to ten minutes' exposure at ten inches distance. A different part of the skull was exposed at each sitting. A hard or high vacuum tube, backing up a spark gap of five to eight inches was used. One objection to this treatment is the alopecia which follows it, but the hair will return in a stronger growth than before. It may also be desirable to continue the use of the bromide with the x rays. This treatment is usually followed by a gain in weight, by improvement in enunciation, if that were faulty, and by lighter seizures of shorter duration, and at longer intervals. This treatment is not available if degenerative processes of the brain have begun. A case is narrated in great detail which shows the changes which occurred from day to day under treatment.

3. A New and Possibly Improved Method of Using Radium.—Lieber recalls the facts that recent investigations show that radium discharges primarily emanations and alpha rays only. The emanations soon disintegrate and the disintegrated product gives rise to beta rays, which are

always accompanied by gamma rays. The radiations consist of 95 per cent. alpha rays and 5 per cent. combined beta and gamma rays. The alpha rays and the emanations are lost if the radium is kept in a container. If several layers of radium are superimposed, the upper layers will retain a large percentage of both alpha rays and emanations. Hence a given mass of radium must be of such form that the surrounding walls of the container will not intercept alpha rays or emanations, and it must be spread in such thin layers that practically but one layer exists. The physiological effect of radium rays is frequently far superior to that of x rays. It will determine the presence or absence of blindness, it will change the tissues in sarcoma, carcinoma, lupus, etc.; it also has bactericidal properties upon many varieties of bacteria. The author's production consists in what he terms radium coatings, radium being dissolved and a celluloid rod, or disc, or other instrument being dipped in the solution. The solvent then evaporates and leaves the coating of radium, and this is then fixed with a layer of collodion. The collodion film permits the passage of both alpha rays and emanations. A hollow tube can be similarly coated. This plan enables one to apply radium to any part that is locally accessible.

7. The Thyroid Gland; The Influence of Diet on Its Structure and Function.—Watson states that his object is to show that different diets may cause histological changes in various organs and alteration in their functional activity; this being especially true of the thyroid gland. Two series of experiments were performed, one on fowls, the other on rats. The conclusions which were reached were: 1. An excessive meat dietary induces distinct structural changes in the thyroid gland; 2. these changes must be associated with a modification of the functional activity of the gland. As to the nature of the modification this diet may cause: 1. Excessive activity of the gland followed by diminished activity, or even exhaustion of its function; 2. diminished activity from the outset; 3. alteration in the quality of the secretion, a persistent secretion. The clinical application of these data to the English people, with whom the quantity of meat consumed per capita has increased greatly since 1875, is that as a result of an excessive meat dietary there has been established in many individuals a change in the character of the thyroid secretion. When this change takes the form of a simple deficiency of the thyroid secretions the defect can be remedied by administration of thyroid extract.

INTERNATIONAL JOURNAL OF SURGERY.

April, 1905.

1. Two Cases of Pancreatic Cyst,
By KNOTT.
2. Report of a Few Surgical Cases, with Remarks on Surgery of the Kidney,
By HOLMES.
3. Practical Gynecology,
By SELLMAN.
4. Practical Treatment of Diseases of the Eye,
By COOKE.
5. The Treatment of Movable Kidney,
By GOELLET.
6. Prostatectomy with Union by First Intention,
By DAMERON.

1. **Two Cases of Pancreatic Cyst.**—Knott operated in both these cases. They were differently placed and had different anatomical relations. Neither of them occupied the usual position. Each of them involved the tissues of the pancreas alone. There was disturbance of function in the first case before there was any evidence of cyst formation, while in the second case such symptoms were absent. One of the tumors was spherical in shape, while the other was sausage shaped, expanding into a spherical termination. One operation was incomplete; in the other the entire tumor was removed, but recovery was more rapid in the first of these cases. In the first case the stomach was almost unavoidably wounded; in the second it was not. On the walls of the first cyst was a sticky, grayish, ashlike deposit, while the lining membrane of the second was clean and smooth. In neither case was the skin dry and sallow, as is said to be the case when cyst of the pancreas is present.

MEDICINE

April, 1905

1. The Clinical Value of Fæces Examination,
By SALISBURY.
2. Syphilis as Related to the Problem of Longevity,
By HYDE.
3. The Dunbar Antitoxine Method of Treating Hay Fever,
By STEIN.
4. Simplified Diagnosis,
By HOLLEN.
5. The Treatment of a Case of Severe Burn and Frost
Bite Occurring in the Same Patient, By PERCY.

1. **The Clinical Value of Fæces Examination.**—Salisbury refers to such examinations as analogous to examination of the contents of the stomach. Work in this direction has aimed at the discovery of gallstones, or eggs of parasites, but seldom at the determination of the degree of perfection with which the digestive functions have been performed. The fæces normally consist of the indigestible residue of the food, bacteria, and the remains of the digestive secretions, especially the coloring matter of the bile. If they contain muscle fibres, connective tissue, elastic fibres, free starch, soluble albumen, or fat, digestion has been imperfect. A test diet has been suggested by Schmidt, which shall be perfectly digested by the normal intestines. The resulting stool will be more homogeneous and of lighter color than the previous ones. Urobilin, which is brown in color, indicates the action of the liver secretion upon the intestinal contents, but colorless stools may occur when bile has passed normally into the intestine. Examination of fæces is at present insufficient to throw light upon functional disorders of the pancreas. In studying the fæces for intestinal disorders a gramme of carmine may be given and its subsequent presence noted. Increased peristalsis lessens the quantity of food digested and affects the quantity absorbed. Muscle fibres, plant residues, and mucus stained with bilirubin show disturbed function in the small intestine. Abnormal fermentations indicate disease. They may be determined by Schmidt's or Strauss's apparatus. Pus or mucus from the small intestine is not usually found in the stools. When present it is from the

colon or rectum. Blood from any part of the intestinal canal may be recognized by the Weber test. Examinations of fæces are recommended because of the accessibility of the material, and the simplicity of the methods.

2. **Syphilis as Related to the Problem of Longevity.**—Hyde draws the following conclusions: 1. Syphilis may destroy life, or mutilate and disfigure the body. 2. Skilful, energetic, and prolonged treatment should never be neglected. 3. In inherited syphilis the fatality to ovum, fœtus, and infant amounts to 80 or 90 per cent.; 3. the percentage of fatality in acquired syphilis, where the disease is implanted upon a previously sound organism, is probably less than 2 per cent.; 4. the fatality in acquired syphilis is due less to the active invasion of the disease than to loss of resistance; by which serious effects are produced especially in the nervous system; 5. the efficient factors in producing these effects are chronic alcoholism, tobacco narcosis, extreme fatigue, affliction, malnutrition from poverty, and the stress and strain of business; 6. in the absence of these factors success may be attained in 75 to 80 per cent. of cases of acquired syphilis; 7. the damage from syphilis means not only fatal results, but impairment of the general condition, of the organs, and of the moral sense, and a possible foundation for mental degeneration, alienation, and suicide; 8. the expectation of life after syphilis has been acquired is based in part only upon the tendencies of the morbid process. Such expectation is affected by the inherited tendencies, the habits of life, and the environment. The longevity prospects are better for women than for men.

3. **The Dunbar Antitoxine Method of Treating Hay Fever.**—Stein speaks of Dunbar's demonstration that hay fever is caused by a toxine in the pollen of certain grasses, cereals, and plants. This must be exhibited in an individual who is predisposed to the disease. In seeking a cure Dunbar followed the lines of investigation adopted in other diseases, a serum being finally obtained which would neutralize the toxine. This is prepared in the form of a fluid and of a powder, and is to be dropped upon the conjunctiva or the nasal mucous membrane or both. Its best effects are obtained when given before the onset of an attack. If taken during an attack it modifies, but does not cure it. The serum is very unstable and becomes contaminated almost as soon as exposed to the air.

BRITISH MEDICAL JOURNAL.

April 15, 1905

1. Remarks on the Treatment of Empyema,
By J. H. PRINGLE.
2. A Contribution to the Treatment of Chronic Empyema,
By O. GRÜNBAUM.
3. Iron Acetate in the Treatment of Pneumonia,
By H. J. ROBSON.
4. New Methods of Studying Affections of the Heart,
By J. MACKENZIE.
5. A Case of Purulent Pericarditis in an Infant: Operation: Death, By J. A. COUTTS and R. P. ROWLANDS.
6. The Hepatic Factor in Biliousness, By F. HARE.

7. On the Closure of Traumatic Defects of the Skull,

By C. LEEDHAM-GREEN.

1, 2. **Empyema.**—Pringle says that whenever pus exists in the pleural cavity, it should be evacuated at the earliest possible moment. The only result of delay is to give time for adhesions to form between the parietal and visceral layers of the pleura, where they remain in contact, and more or less thickening of those areas where they are separated by the fluid. These conditions form two of the chief causes for the delay in healing and the consequent necessity for secondary operations. The site of the opening through the chest wall is best made in the line of the scapula at the ninth rib; in the supine position this is the most dependent part of the thorax, and affords best and most complete drainage of the cavity. It is usually necessary to remove from one and a half to two inches of the rib, to open the pleural cavity through the centre of the periosteum thus exposed, and to empty the cavity of pus. It is usually best to operate with the patient in the supine position. Before incising the pleura, as much pus as possible should be allowed to run away through a cannula, for the purpose of avoiding a possible sudden dislocation of the thoracic organs and any tendency to collapse that might be induced thereby. The pleura is then to be incised and all fibrin masses washed out. The principle underlying the operation ought to be to get the lung freed from its adhesions and to give it the opportunity to expand if it can, which it will do in all cases unless there are interstitial changes in the pulmonary parenchyma. The process of separation of the adhesions is most easily and safely begun posteriorly where the lung is in contact with the costal pleura. Once started with the finger the separation usually goes on with ease, and the lung can be stripped downwards, and then forwards along the diaphragm, and upwards off the pericardium. In the upper region of the cavity the lung can be freed with a thick metal bougie. As soon as possible the patient should begin respiratory exercises. As regards the treatment of tuberculous empyema and pyopneumothorax, the author holds that many of the cases should have the benefit of operation, but it should be carried out in such a manner that the cavity will be obliterated in the shortest possible time. But no attempt should be made to free the lung from adhesions or to decorticate it. Grünbaum's treatment of chronic empyema consists in the application of a negative pressure to the pleural cavity for several hours every day. The development of a negative pressure of from ten to fifteen millimetres of mercury can be easily maintained by inexpensive apparatus; Fischer's filter pump is almost ideal, because the regulation of the negative pressure developed is easily carried out by altering the length of tube used. The advantages which may be claimed for this treatment are two: the negative pressure tends to expand the lung without necessarily causing emphysema of the other lung, which may be expected from the use of James's bottles. The negative pressure produces a hyperæmia of the tissues of the pleural cavity, which probably increases their local resistance. The comparative opsonic value of exudates from the

pleuræ under normal and under reduced pressures are now under observation.

3. **Treatment of Pneumonia.**—Robson states that the treatment of pneumonia by the alternate administration of acetate of iron and strychnine (where the latter is called for) seems to be particularly useful under the following conditions: 1. Cases of severe bronchopneumonia occurring in infants or children and in catarrhal and lobar pneumonia occurring in debilitated subjects. 2. Where one has not got two properly trained nurses for night and day, respectively, as by the regular administration of the strychnine through the night as well as through the day, the heart's action is kept up, and the danger of heart failure at the crisis is very much lessened. 3. In that infectious, creeping, and spreading form of pneumonia following influenza. 4. The crisis is hastened and favorably modified, the virulence of the disease is lessened, and the complication of empyema seldom occurs. 5. Even when bronchitis is present, there seldom seems need to order depressing drugs like ipecacuanha, as the iron acetate seems to act as a good expectorant.

6. **Biliousness.**—Hare points out that the ætiological factors commonly regarded as responsible for biliousness concur in tending to cause accumulation of glycogen in the liver. Biliousness may be divided into: (1) The acute form, due as a rule to some distinct error of diet, such as a surfeit of plum pudding; (2) the subacute (recurrent) form, due not to isolated indiscretions in diet, but to continued habitual over-indulgence; and (3) the chronic form, usually met with in adults, especially old residents of the tropics, and extending, it may be, to months in duration. Conformably, we may speak of: (1) Acute glycogenic distention of the liver, due to a large sudden irruption of glycogen forming material into the portal venous system; (2) subacute or recurrent glycogenic distention of the liver, in which there is a continued absorption of glycogen-forming material in excess of consumption, and a consequent progressive accumulation of hepatic glycogen, which attains its maximum at more or less regular intervals; and (3) chronic glycogenic distention of the liver, in which recurrent relief fails, and in which consequently the organ remains more or less continuously packed with glycogen. Factors, most of which are admittedly capable of dispersing biliousness, concur in tending to reduce the amount of glycogen in the liver. Some of these may be regarded as therapeutic—namely, abstinence from food, physical exercise, climate, purgatives, restriction of meat and nitrogenous foodstuffs, and restriction of carbohydrates. Others must be regarded as pathological—namely, pyrexia and glycosuria. The rational treatment of recurrent and other forms of biliousness consists simply in limiting the intake of carbohydrate material, and sugar is the first foodstuff to be excluded. Herein is involved no functional impairment in any direction. The treatment consists merely in cutting down excess of supply. But an increase in regular physical exercise must also be advised, in order to obviate the necessity for any severe degree of carbohydrate restriction.

LANCET.

April 15, 1905.

1. Some Considerations on the Nature of Diabetes Mellitus. (*Goulstonian Lectures, II*),

By W. C. BOSANQUET.

2. The Dissemination of Mammary Carcinoma. (*Hunterian Lectures, II*),

By W. S. HANDLEY.

3. The "Cure" of Cancer,

By E. OWEN.

4. Cyllin Inhalant,

By E. KLEIN.

5. The Relationship Between Dental and Other Diseases,

By R. D. PEDLEY.

6. A Case of Tetanus Successfully Treated with Antitetanic Serum and Curare,

By E. COLLINS.

7. Notes on Some Interesting Surgical Cases in African Natives,

By A. R. YOUNG.

8. An Investigation Into the Causation of Puerperal Infections (*Concluded*),

By A. G. R. FOULERTON and V. BONNEY.

1. **Diabetes.**—Bosanquet, in his second Goulstonian lecture, deals with the relationship between the pancreas and diabetes. In animals removal of the pancreas is followed by a condition indistinguishable from diabetes. In man the chief pathological changes found are atrophy, carcinoma, cystic disease, acute and chronic inflammation, calculi affecting the ducts, and hæmorrhage into its substance and into the surrounding connective tissue. It may also undergo fatty degeneration, be the seat of abscess formation, or of total necrosis. Fibrosis of the pancreas is a relatively common lesion, and is often found in association with diabetes. The condition may be correlated with fibrosis of the arterial system and with chronic granular kidney. Diabetes is usually a disease of advanced life, so that its incidence somewhat corresponds with that of pancreatic fibrosis. But fibrosis of the pancreas often exists without diabetes. The rapidity and fatality of diabetes in children suggests the existence of some extensive or progressive lesion of the pancreas. In atrophy of the pancreas in diabetes, it is probably the associated fibrosis which is the principal lesion. Fatty degeneration of the pancreas and the presence of calculi in the pancreatic ducts probably do not exert any direct action on the process of sugar formation. But both may lead to fibrosis, which in turn may be followed by glycosuria. In cancer of the pancreas, glycosuria is not constant—it may appear and pass off. The absence of permanent diabetes is probably due to the fact that the disease does not destroy the pancreatic cells entirely. In cases of hæmorrhage into the pancreas, with complete destruction of tissue, typical fatal diabetes may result, such a case constituting a natural experiment on removal of the pancreas in a human being. It seems to be admitted that hyaline degeneration of the islands of Langerhans is rarely observed, except in diabetes, but it is possible that such degeneration may be a secondary phenomenon. The suggestion of these structures as the source of the internal secretion of the pancreas is a very tempting hypothesis, but even so there remain some cases to be explained in which no alteration of any part of the pancreas can be discovered. Arteriosclerosis is closely connected with diabetes, being responsible for the gangrene

of the extremities seen in diabetics, as well as being one of the assigned causes of the onset of the disease. Syphilis is another cause of pancreatic fibrosis. The frequency of a history of alcoholism in diabetic cases fits in well with the pancreatic hypothesis of its causation—there being a general resemblance to cirrhosis of the liver in this connection. In hæmochromatosis or bronzed diabetes there is probably a functional disturbance of the pancreas. In some cases the pancreas undergoes serious organic changes towards the end of the illness, and true diabetes may result. Nothing is known as to the source of the poison which causes the destruction of the red blood corpuscles.

2. **Spread of Cancer.**—Handley, in his second Hunterian lecture, gives the histological proofs in support of his theory as to the dissemination of mammary cancer: *i. e.*, that cancer of the breast spreads in the parietes centrifugally and by continuity, and that it probably spreads primarily in the plane of the deep fascia where the principal parietal lymphatic plexus is situated, by actually growing along (permeating) the vessels of this plexus. At first permeation spreads only along the lymphatics of medium size; later, the pressure within the permeated lymphatic is increased to such an extent that cancer cells are forced in a continuous line along the smaller branch lymphatics. The parietal metastases of cancer of the breast, however remotely situated, arise in genetic continuity with the primary growth. But the evidence of this original continuity is destroyed by the process of perilymphatic fibrosis. The spreading ring of cancerous permeation usually leaves in its track here and there isolated nodular foci, which give rise to macroscopic nodules.

3. **Cure of Cancer.**—Owen discusses the question as to whether a surgeon is ever justified in claiming that he has cured a patient of cancer. He reports a case of apparent cure of cancer of the breast, but states that in his opinion "no sign of return" is as much as a surgeon is ever justified in claiming as the best result of his treatment of cancer.

5. **Dental Diseases.**—Pedley endeavors to prove that the relationship between dental and other diseases is a very close and intimate one. The defective dentition met with in daily practice and among the poor has the effect, broadly speaking, of lowering the nutrition of the body and by doing so, opening wide channels by which other diseases are only too ready to find their way. Dental disease is the most prevalent of all diseases among civilized communities, and we are as far as ever from touching the cause of this defect. But we have in our own hands the means, not only of alleviating much suffering, but by systematic treatment improving the health, especially of the young who are, in a way, the most important members of the community.

8. **Puerperal Infections.**—Foulerton and Bonney, in their concluding article on this subject, reach the following conclusions: The old classification of cases of puerperal fever into sapræmic, septicæmic, and pyæmic has but little value, as

it is practically impossible to distinguish between mild septicæmias and sapræmias. They would divide the cases into: I. Infection of lacerations of the perineum or vagina; (a) localized infection and toxæmia; (b) localized infection, toxæmia, and generalized infection. II. Primary infection of the contents of the uterus or of the placental site; (a) localized infection and toxæmia; (b) localized infection, toxæmia, and generalized infection. Streptococcic infection is of such predominating importance in puerperal fevers, that in the absence of a definite bacteriological diagnosis the safe course to adopt is to deal with every case of puerperal fever in which the temperature rises above 102° F. as if it were a case of streptococcic infection. For serum treatment to be applied with any reasonable hope of success a polyvalent or compound serum from a horse immunized against the various strains of puerperal streptococci, is necessary. The use of the curette should be absolutely discarded in the treatment of puerperal uterine infection. The uterus should be digitally explored, any retained fragments removed, and the cavity should be douched with an antiseptic solution. Douching the vagina with antiseptic solutions before the commencement of labor is useless, but the statement that it is dangerous, since by such means bacteria may be conveyed from the vulva to the upper part of the vagina, appears to be without foundation.

THE PRACTITIONER.

April, 1905

1. On Some Obscure Cases of Cancer of the Stomach in Which the Main Symptoms Have Been Unconnected with That Organ, By PITT.
2. Otology and General Practice, By McBRIDE.
3. The Treatment of Scalp Ringworm; Some General Rules of Procedure, By COLCOTT FOX.
4. The Pathology and Treatment of Puerperal Eclampsia in the Light of Recent Work, By SKES.
5. The Cytodiagnosis of Plural and Cerebrospinal Fluids, By TURTON.
6. Prize Essay. The Treatment of Diphtheria, By NASH.
7. Attempts to Find a Specific Remedy for Tuberculosis, By CATTLE.
8. A Review of Recent Investigations on the Physiology and Pathology of Secretory Tissues, By BATTY SHAW.
9. A Review of Recent Work in Obstetrics. *Accouchement forcé*, and Vaginal Cesarean Section, By FOTHERGILL.

1. **Obscure Cases of Cancer of the Stomach.**—Pitt observes that the symptoms in gastric cancer vary with its site. If it is at the pylorus there is obstruction, overdistention, and increased peristalsis. Vomiting, emaciation, and loss of appetite occur and the tumor can usually be felt. If the body of the organ is involved the tumor is palpable, but there is no obstruction or overdistention. Emaciation, pain, and loss of appetite are also present. The development of the disease and its symptoms may be so gradual that the diagnosis of cancer may not be made until at the autopsy. A series of cases of this nature is narrated, the principal symptoms of which were not

associated with the stomach. They were divided into the following groups, according to the predominating symptoms: 1. Ascites and pleuritic effusion; 2. matted intestine; 3. intestinal obstruction; 4. abdominal suppuration; 5. profound anæmia; 6. iliac tumor; 7. thrombosed veins. Œdema occurred in several of the cases, but was not the only abnormal sign. Perforation occurred in two cases. Pyrexia was observed in several cases, but was not a prominent symptom. In none of the cases were there nodules of the skin or bones.

3. **The Treatment of Scalp Ringworm.**—McBride narrates a number of methods of treatment which have more or less enthusiastic advocates. His preference is for the croton oil treatment, which he thinks the most certain and effective of all. He calls attention to the fact that it requires most careful control and cannot be left to inexperienced hands. As practised by him, it consists in the daily application of an ointment which contains one drachm of croton oil to an ounce of a suitable base. It may be used oftener than once a day if necessary to produce a suitable degree of inflammation. The treatment must be continued until all the diseased hair stumps have fallen away or have been epilated. The tissues are kept scrupulously clean, and crusts are not allowed to form. For the treatment of residual and isolated stumps there is no method which will compare with croton oil needling.

5. **The Cytodiagnosis of Pleural and Cerebrospinal Fluids.**—Turton draws the following conclusions: 1. In pleural effusions the cytological formulæ of Widal and Ravant apply to the majority of cases. An excess of lymphocytes points to a tuberculous origin, an excess of polymorphonuclear cells to an inflammatory process, due to infection; 2. the cerebrospinal fluid in meningitis usually shows lymphocytes when of tuberculous origin, the pneumococcus or streptococcus in inflammatory conditions caused by the meningococcus, and by an excess of polymorphonuclear cells in posterior basic meningitis. Cytological examinations enable us to differentiate various forms of meningitis, to distinguish meningitis from typhoid fever and other infectious diseases, and from tetanus and hysterical pseudomeningitis; 3. lymphocytosis is almost constant in general paralysis of the insane, in tabes, and in syphilis of the nervous system, and may be useful in distinguishing these diseases from others which resemble them. General paralysis and tabes may be determined in very early stages by cytological examination. Cytology will also be useful in making an early diagnosis of syphilis. A diagnosis should not be based wholly upon the result of a cytological examination, but this should serve as a valuable link in the chain of clinical evidence.

6. **The Treatment of Diphtheria.**—Nash regards the ultimate pathological conditions in diphtheria as analogous to those produced by serpent venom, the diphtheria toxins working less rapidly. Many cases are also cases of mixed infection. Antidiphtheritic serum should be administered as soon as there is a suspicion that diph-

theria is present. It should be given in a hypodermic injection of 2,000 units on the first day of the disease and not deferred until the bacteriological report is received. It is useful as a preventive; it is useful for sore throat, which is not of diphtheritic origin, and it does no harm if diphtheria is not present. It should not be given by the mouth or rectum. Late administration of antitoxine will prevent further absorption of diphtheria toxins, but it must be given in a double or treble dose if deferred until this time. Strychnine also should be given with tincture of perchloride of iron in much larger doses than are ordinarily prescribed. Rest in bed should be insisted upon from one to three weeks. Milk, beef tea, and eggs should be given three or four days after which the ordinary diet can be used. Complications seldom occur if antitoxine is given early, hence tracheotomy is rarely indicated. The steam tent should be used early. Intubation is preferable to tracheotomy when possible. Nasal feeding may be required. Rhinitis is a frequent complication. The air passages should be douché with solutions of sublimate, lysol, formalin, or permanganate of potassium every four to six hours. The douche may take the form of a nebulizing spray. Treatment is best carried out in a hospital, if it is done at home the patient and his nurse must be isolated, and his room must be freely ventilated.

9. **Recent Work in Obstetrics.**—Fothergill states that the most interesting recent work has to deal with interference during the first stage of labor. They include methods of opening or dilating the cervix, or of gaining access to the uterine cavity without dilatation. Of 82 Cæsarean sections, 20 were performed for eclampsia, placenta prævia, cancer of the cervix, threatened rupture of the uterus, or accidental hæmorrhage. The various devices for opening the uterus have been tabulated by Williams chronologically as follows: 1. Dilatation of the cervix by the hand in the form of a cone; 2. the mechanical devices of Oslander, Busch, and others; 3. Champetier de Ribes balloon and other bags; 4. deep cervical incisions, whether multiple incisions, or vaginal Cæsarean section; 5. Bossi's and other dilators; 6. Harris's method of manual dilatation; 7. bimanual methods of dilatation advocated by Edgar and Bonnaire. Of these the third, fifth, and sixth are most in use. Williams thinks the Harris method of dilatation even more rapid than the method with the powerful Bossi dilator. The vaginal Cæsarean section is preferred by Dührssen to any form of dilatation, as it gives access at once to the uterine cavity and the fetus. It has been performed more than a hundred times, and is a comparatively safe operation. Its indications are: 1. Cancer of the cervix during pregnancy, the operation being followed by vaginal hysterectomy; 2. abnormal conditions of the cervix and lower uterine segment, such as rigidity, fibroma, stenosis, or incarceration; 3. dangerous heart, lung, or renal conditions of the mother; 4. the evident fact that the death of the mother is imminent. It may replace the classical Cæsarean section in eclampsia and all conditions in which the soft parts obstruct labor seriously.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of March 22, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

"SYMPOSIUM" ON PNEUMONIA.

The Health of the City.—Dr. THOMAS DARTINGTON, commissioner of health of New York city, in this paper, spoke upon the Pneumonia Commission, saying that it would conduct its investigation along two main lines—clinical and bacteriological—and that information was especially desired on the following points: 1. The occurrence and virulence of the pneumococcus and organisms related to or resembling it in the human mouth in health and disease. 2. The evidence and the extent of variations in virulence of the pneumococcus under different conditions. 3. The occurrence of the pneumococcus in children's hospitals, homes, and asylums, and the bacteriology of the mouth before and after outbreaks of pneumonia. 4. The vitality of the pneumococcus under various conditions. 5. The value of mouth disinfection. 6. The bacteriology of the air of public places, conveyances, and buildings and private dwellings, especially in reference to the amount of dust, the public buildings to embrace stores, factories, large office buildings, public schools, theatres, and hospitals. 7. The clinical evidence of the communicability of pneumonia as shown by the collection of cases in private houses and public institutions. 8. The seasonal relations of pneumonia. 9. The collection of statistics of pneumonia of the different varieties occurring in hospitals, special attention being paid to terminal pneumonia. 10. The collection of evidence as to the proportion of cases in which pneumonia could be regarded as an autoinfection and the proportion of cases in which there was evidence of the communicability of the infectious agent. 11. The study of sporadic cases of pneumonia, special attention being given to relationships of the individual to crowds or to exposure to other cases of pneumonia, and the determination of the presence of the pneumococcus in the mouth in those cases and cases associated with them. 12. The evidence for the belief that pneumonia was infrequent in Arctic regions. 13. A statistical study of pneumonia, covering its prevalence in different latitudes and in different countries and cities, its yearly and seasonal variations, and its types and mortality.

The Symptomatology and Diagnosis of Atypical Forms of Pneumonia.—Dr. J. C. WILSON read this paper (see page 788).

The Medical Treatment of Pneumonia.—Dr. H. A. HARE, in a paper with this title, dealt chiefly with the point that the statistics as to the mortality and as to the results of treatment in pneumonia were practically valueless, because different types of this disease were considered under the one heading of pneumonia, when in reality only the most careful distinction of different types

could give reliable statistics. Again, much depended upon the age of the patient and the time at which treatment was instituted. He approved of the use of moderate doses of digitalis and belladonna for a failing circulation and advised a more moderate employment of strychnine and the rare employment of nitroglycerin, except in cases of definite indication for its use. The subjects of venesection, hypodermoclysis, and intravenous injection were also considered.

Some Recent Developments in the Ætiology and Pathology of Pneumonia.—Dr. WARFIELD T. LONGCORE, in this paper, said that, in spite of the extensive investigations upon the pathogenesis of lobar pneumonia, bacteriologists and pathologists had added little which aided in the diagnosis, treatment, or prevention of the disease. The exciting cause was now known to be the pneumococcus, or *Micrococcus lanceolatus*, and the organism was recognized as an inhabitant of the mouth of many normal individuals, where it led a saprophytic existence. Until recently observers had not been able to produce lobar pneumonia experimentally in animals, but within the last year Wadsworth had succeeded in producing the typical disease in rabbits by intratracheal injections of virulent pneumococci in animals which had previously been partially immunized. It was now generally conceded that in the vast majority of cases of pneumonia, if not all, the pneumococci gained entrance into the blood and set up a general infection. Tizzoni and Pacucci had recently shown that pneumococci might circulate in the blood of immunized rabbits for weeks or months without perceptible harm to the animals. Resolution had been shown by Flexner to occur by autolysis of the exudate. Antipneumococcic serum, according to Rimpan and Neufeld, contained a substance which prepared pneumococci for phagocytosis.

The Surgical Complications of Pneumonia.—Dr. JOHN H. GIBBON said that, of the surgical complications of pneumonia, empyema was the most common, and that the success of surgical treatment depended largely upon early recognition. Confirmation of the diagnosis is made with the exploring needle, which procedure should be carried out with as much care as any surgical opening of a clean, healthy cavity. When pus is present, the procedure must be followed by thorough drainage. Dr. Gibbon used chloride of ethyl as an anæsthetic, either alone or as a precursor of ether. In practically every patient beyond the age of twenty, he would do a subperiosteal resection of the rib rather than simple drainage. Masses of lymph were removed by the fingers. There should be two drainage tubes as large as the finger, and they should be stitched in. The keynote of the treatment of empyema was early and thorough evacuation of the pus, with the opening made as low in the pleural cavity as possible.

Another condition which was very common was lung abscess, due to foreign bodies lodged in the bronchi, to tuberculosis, or to pneumonia. Of the three varieties, that due to pneumonia gave the best results from surgical treatment. The diagnosis was attended with more difficulty than

that of empyema. Drainage should be carried out exactly as in empyema. In the presence of adhesions between the lung and the chest wall, one of two courses might be followed: The protection of the healthy pleural cavity by gauze packs and immediate drainage of the abscess; or stitching of the lung to the parietal pleura, allowing the formation of adhesions before drainage.

Dr. JOHN H. MUSSER referred to a few points to which his attention had been especially called in his recent observation of pneumonia; first, to the cases simulating abdominal conditions. In deciding whether the condition was one of inflammation in the upper part of the abdomen or an infection above the diaphragm, attention to a few of the classical phenomena attendant upon each condition aided in the diagnosis. Of the greater importance were the phenomena attendant upon supradiaphragmatic cases. Here the rusty expectoration or the expiratory grunt was the most valuable sign of pneumococcic infection of the lung or the pulse and respiration ratio. Examination of the blood did not aid, because in both conditions there was leucocytosis.

In distinguishing between pneumonia and meningitis, the presence or absence of the phenomena of meningitis was more helpful than that of pneumonic symptoms. The slow pulse and the rather slow respiration were among the phenomena indicative of meningeal trouble. In other instances violent hæmorrhage at the onset of the disease suggested tuberculosis. The course of the disease offered more help than the specific symptoms or laboratory signs. In still other instances delirium was so marked in the period of convalescence as to make the case atypical. This delirium, both in hospital and in private patients, came on immediately after the crisis and raged violently for from three to five days or two weeks, unattended by fever or undue change in the pulse rate. The patients recovered without any unusual cerebral complications. In none of the instances had he seen empyema follow as a complication. In one case there was abscess of the lung. It should be remembered that empyema did not always form a loculus at the base, the infection often being between the lobes.

In the treatment of pneumococcic infection it was a mistake to regard it as a self-limiting disease, believing that it would run its course and the patient recover. While this might be true, no one could tell how quickly the simplest case might become gravely toxic.

Dr. JOHN B. ROBERTS said that the surgeon came in contact with traumatic pneumonia, ether pneumonia, pneumonia due to cold from insufficient clothing (no undershirt pneumonia) in patients in hospitals, croupous pneumonia, influenza pneumonia, and septic pneumonia.

It was often difficult to determine whether a given case was one of true croupous pneumonia or of influenza pneumonia. In the incipient stage of inflammation of the lungs, which was shown by dullness on percussion, crepitant râles, and a rise in temperature, prompt and efficient dry cupping should be used. He never lost time by sending for a cupper, who would probably put on small glasses, but sent for large tumblers and put on

half a dozen of them himself, using small pieces of paper dipped in alcohol to make the vacuum in the glasses. These were left on for half an hour or more and followed usually by turpentine stupes. In sthenic cases of pneumonia, and particularly in pneumonia following gunshot or stab wounds of the lung or injury of the lung from fractured ribs, venesection was often of great value. He was confident that he had prevented congestion of the lung becoming pneumonia by efficient dry cupping, and also that he had prevented disastrous results from acute pneumonia following injuries of the lung by phlebotomy. In cases with a great deal of mucus in the bronchial tubes, he had seen life apparently saved by inverting the patient in order that gravity might act as a mechanical expectorant. The serous effusion in the pleura which occurred as a complication of pneumonia should be treated by prompt tapping. This might be done as well with the ordinary hydrocele trocar properly sterilized as with the complicated apparatus known as an aspirator.

In empyema it is necessary to evacuate the pus and lymph masses promptly. This was easily done by putting the patient in the semirecumbent posture, freezing the skin with ice and salt, and making a two and a half inch incision with a straight bistoury. It was never necessary to resect a rib in order to get room for evacuation and drainage; and he believed it better not to take the time for resection of the rib when the patient was in the serious condition for which the operation was done. If it was found, after the lapse of some weeks, that the lung did not expand and the chest wall did not sink in to close the cavity, resection might be done with much greater safety to the patient than at the time of the original incision. Many patients would never need the rib resected, and even in young children, not over a year old, he had found it easy to get a finger between the ribs and to insert a drainage tube. The incision should be made with a quick thrust of the knife, just as one would open an abscess elsewhere. The wound should then be expanded with two fingers to allow the pus to flow and the masses of lymph to escape. The latter might need to be hooked out with the finger tip. Two rubber drainage tubes placed side by side should be inserted and stitched to the skin to keep them from falling out of the wound, and should each have a safety pin in the outer end to avoid their being sucked into the chest if the suture threads should cut through the skin unobserved by the physician.

Abscess of the lung should be treated in a similar way, by free incision and boring between the ribs with the finger to evacuate the pus. No resection of a rib is needed here. Irrigation was not needed in cases of empyema, unless the temperature should show that the cavity had become septic from putrefactive germs. Then it should be washed out once or twice a day with a weak antiseptic solution or with sterile salt solution. The temperature curve indicated when the intervals between the irrigations might be lengthened.

Dr. JAMES TYSON said that no disease was more treacherous than pneumonia. There was no single treatment which might be said to be in any way curative, although there were measures

which cooperated with whatever tendency Nature had in the way of self-immunization or in the way of elimination. He did not believe, however, that treatment was without effect and to be ignored. He emphasized the early and prompt use of dry cups after the manner described by Dr. Roberts, repeated for a number of days. Certain cases were favorably influenced by the application of the ice bag over the inflamed lung. Where this method had seemed to be lacking in efficiency, he thought it due to the imperfect method of application. He was inclined to think that the best application of cold was by cloths wrung out of ice cold water and kept in place until they became warm. That the ice cloths induced deep inspiration was an added advantage. They also reduced temperature. When the temperature dropped to 100°, he had the ice cloths removed, to be reapplied if the temperature went above this point. He had found good results follow the use of creosotal in ten minim doses every four hours. He believed the diagnosis of abscess of the lung to be more difficult than Dr. Gibbon found it. Cases of pneumonia associated with delirium were less apt to be fatal, although one would naturally think that delirium was an index to the severity of the toxine.

Dr. JUDSON DALAND mentioned dilatation of the right ventricle as an important complication of croupous pneumonia. The use of venesection he found of special importance. In no condition of the blood with which he was familiar was its coagulability greater than in certain cases of croupous pneumonia. In this class of cases the use of alkaline water in large amounts, to reduce the acidity of the urine, was important. Certain cardiac stimulants were also valuable.

Dr. FRANK WOODBURY asked that the president speak upon the mode of entrance of the pneumococcus. He thought that possibly the upper air tract was occasionally a portal of entrance for the pneumococcus, though occasionally its entrance was through the bronchial mucous membrane. He suggested the possibility that abnormal conditions of the nasal mucosa might afford entrance for the pneumococcus, and that its entrance into the blood from the upper air passages might give some of the atypical forms referred to by Dr. Wilson.

The PRESIDENT spoke especially with reference to the treatment of pneumonia, believing that attention should be directed to the limitation of the area of consolidation, to the assistance of Nature in the elimination of toxins, and to the meeting of indications as they arose. He agreed with Dr. Musser that water was given too sparingly to pneumonia patients and not systematically enough. He emphasized especially the support and maintenance of the heart's action. An important question was that of just when to aid the heart and with what agents; whether to wait until the pulse tension began to fall off and the first sound of the heart became weak, or to give this aid before that period arrived. In Dr. Anders's experience, after an attack of heart failure in pneumonia toxæmia increased and death almost invariably was the result. On the other hand, when he had given cardiac tonics and stimulants suffi-

ciently early, failure of the circulation had been warded off. Strychnine he had found to be the best agent for this purpose. Nitroglycerin was another valuable remedy. He believed that the pneumococcus often made its entrance through the upper air passages.

Dr. GITHENS referred to his experimental work in the injection of adrenalin chloride into animals. The chloride caused punctate hemorrhages throughout the lungs, and if the dose was too large, in a rabbit, death was caused promptly by pulmonary oedema. A similar effect might account for some of the bad results found in pneumonia.

Dr. DARLINGTON emphasized the value of the drinking of water in pneumonia. He had lobar pneumonia himself ten years ago, with six others, all of whom died. The other men had been accustomed to a different kind of drink, and it was impossible to get water into them. Dr. Darlington had taken water in great quantities in the course of the disease, and considered himself a monument to the value of the drinking of water in pneumonia. Quinine he gave in large doses, and the result of the remedy, in his opinion, depended upon the particular epidemic. Last year pneumonia had been very fatal; this year the mortality was less. In reference to heart stimulants, if the heart began to fail, it would go on to failure irrespective of the giving of a stimulant.

Book Notices.

The Surgery of the Diseases of the Appendix Vermiformis and their Complications. By WILLIAM HENRY BATTLE, F. R. C. S., Surgeon to St. Thomas's Hospital, etc., and EDRED M. CORNER, M. B., B. C., F. R. C. S., Surgeon in Charge of Out Patients to St. Thomas's Hospital, etc. Chicago: W. T. Keener & Co., 1905. Pp. 208. (Price, \$2.50.)

The authors state that they have tried to summarize, as briefly as the importance of the subject permits, the views held by the physician and pathologist in regard to diseases of the appendix vermiformis, and they have sought to present to the profession the surgeon's view in such a way that it shall be of practical value.

A well arranged chapter on anatomy is followed by a less satisfactory chapter on pathology. In the treatment of appendicitis, while the authors do not urge immediate and therefore clinically indiscriminate operations, as the diagnosis will be in some instances uncertain, they do urge that the decision for surgical procedure should be formed, whenever possible, within forty-eight hours of the onset. It is conceded that this is difficult, and it seems strange that they find it necessary to recommend that frequent examinations in these grave abdominal lesions must be insisted on.

The incision they employ is over the inner side of the outer border of the right rectus, parallel to that muscle, which is temporarily displaced inward. The posterior layer of the sheath is then incised, the fascia cut through, and the peritoneal cavity exposed. After freeing the appendix, a clamp is ap-

plied at its base at the junction with the cæcum; it is thought that this divides the mucous membrane and the muscular coats and leaves the peritoneal surfaces in opposition, the orifice of the cæcum being plugged by the ruptured coats. The appendix is ligated and cut away; and the stump is sewed into the cæcum. This method of operation does not seem to possess advantages over those in use in this country.

There is an interesting chapter on intussusception, sarcoma, carcinoma, actinomycosis, and tuberculous disease of the organ, and there are two chapters on the complications of appendicular inflammation.

Practical Dietetics. By A. L. BENEDICT, A. M., M. D., Councillor, American Gastroenterological Association, etc. Chicago: G. P. Engelhard & Co., 1904. Pp. 383. (Price, \$1.50.)

The author reviews briefly the compositions of the human body in chemical elements, the arrangement of the latter in proximate principles, their elimination and absorption, and the characteristics of the several classes of foods. The chapter on food requirements was written before the publication of Professor Chittenden's important investigations, which showed that much less proteid was essential to health than had been supposed. The food value of different comestibles is described, and the conditions of diet and digestion are summarized. There are chapters on the dietetics of the period of growth, on organotherapy, and on the diet in various diseases.

Miscellany.

The Intravenous Injection of Diphtheria Antitoxine.—Nearly two years ago, says the *Therapeutic Gazette*, for April 15, 1905, we called attention to the suggestion of Dr. Cairns in the *Lancet*, that diphtheria antitoxine should be administered intravenously in those cases in which there was evidence of profound infection. It will be remembered that Cairns reported fifty cases of diphtheria, twenty of which were treated in this manner, with three deaths. In the *Lancet* of December 24, 1904, we note with interest a report made by Dr. Biernacki, of Glasgow, and Dr. Muir, in which they detail their experiences with the method suggested by Cairns. They seem to be doubtful as to the advantage of this method of treatment over the ordinary subcutaneous injection, and yet, on the other hand, they tell us that there was a mortality of only three in thirty-eight severe selected cases. The fact, however, that there was a diminution in the mortality of cases of diphtheria under their care within the last few months prevents them from believing that all of this good result was due to the method which they employed.

Dr. Osler at the Annual Dinner of the McGill Medical College.—At this dinner, held on April 14th, the newly appointed Regius Professor at Oxford said:

"Mr. Chairman and Fellow Students: I taught pretty nearly everything here once except anatomy and obstetrics, and I still look back on the

period as one of the most delightful of my life. The quotation with which the chairman opened his remarks calls to my mind the great names of some of the great men whom you have here enrolled upon the lists of your professors. I am sorry that the younger of you here did not have the privilege of knowing some of the men with whom I came into contact as a student. To know George W. Campbell was in itself an education in all that was best and noblest in the medical career. Honorable, upright, and loyal, he made an ideal professor of surgery, and a splendid teacher in every way. And what impressed me most about the other men of the faculty at that time was the regularity, the punctuality, and the diligence with which every one of them, many of them in active practice though they were, attended to their duties in the medical faculty. It never surprised me that McGill grew as it has done, for these men were doing the work that they had to do, doing it thoroughly and self-denyingly, and thereby making plain to everybody what was needed to be done for the advancement of the science of medicine in this Province.

"And now that I return to the scenes of my early labors, nothing impresses me more than the great changes that have taken place in the twenty years since I left Montreal. You have two of the very best equipped hospitals on this continent (loud applause). I name those first because I believe these are the very features in which most faculties of medicine in this country are defective. Most of them are striving their hardest to secure even at great cost what this university possesses without paying a cent for. To-day I have seen two other indications of the greatest value as showing the growth of the medical school proper in this university. I went into the library this morning and there I saw fifteen or twenty students at work. There is no better indication of a healthy progress in a medical faculty than a library that is accessible to the students at all hours, and is used by them as it should be used. The second thing indicative of progress that I saw was in the museum. As I take a personal interest in the museum, and was looking around after the specimens that my friends had contributed, I saw there many students taking advantage of the facilities it offered for study. Now when you want to find out the standing and value of a medical school, always go to the museum. The museum will tell you better than anything else the status of that school.

"I will not speak of the growth of your laboratories, of the expansion of the scientific work of McGill University. Medical education is a totally different matter now from what it was in the days when I was at McGill. Medical education is a costly thing, now that you have and are obliged to have a large staff of paid assistants—not paid much, it may be, but still they get something, and it comes out of the university chest—and an immense and expensive system of apparatus, and the great difficulty all medical schools of to-day have to face is that of the pocket, and I would impress upon you that you cannot have a great medical school without full and free endowment by the citizens. You cannot have a great and growing

medical school unless the scientific departments of the university are well and fully endowed. When we think what the physiological laboratory was just twenty years ago it passes comprehension that so much has been accomplished in so short a space of time. Remember that a great medical school must be progressive, and to be progressive you must have money, and you cannot get money sufficient simply out of the fees of the students. Medical education is not much more expensive to-day in Montreal than it was when I was here, in the matter of fees at any rate, though I am told that boarding house rates are considerably higher. (Laughter.) The student does not as a matter of fact pay enough for his education. But what he does pay must be supplemented by endowments, and the point I wish to make is that these will come to you, as they have done in the past, just so long as you so richly deserve them.

"In conclusion, let me tell you briefly, how much I have been pleased at this opportunity to be present at the annual dinner of the medical faculty of McGill University, and to hear the very kind expressions that you have been good enough to voice concerning me. It gives me more courage to go across the water and enter on the duties of my new position to feel that I carry with me your kindly greetings and your good wishes for my success."

The Kansas City Medical College graduated the following young men on April 11th:

Oliver Faires, Frederick W. Tretbar, James T. Mahoney, Walter S. Hudiburg, Corydon J. Abrams, Joseph B. Blades, George T. Boyd, Roger B. Brewster, Isaac A. Campbell, L. Russell Carson, Hugh H. Cole, Laurence C. Cook, Henry C. A. Doms, Sol M. Edgerton, Albert J. Florian, Frederic E. Harvey, Claude H. Helman, William I. Huddle, Ralph W. Hull, Zachariah G. Jones, G. D. Moore Lambdin, Charles M. Miller, Fritz J. Moennighoff, Clarence A. Neighbors, James E. Ray, Wright Robertson, R. Lee Russell, James W. Sherley, C. Nelson Smith, Norris A. Smith, Eleazar M. Snodgrass, Clifton A. Thomas, F. Earl Tipton, Homer M. Walker, and Edward C. Wittwer.

The American Röntgen Ray Society.—The sixth annual meeting of this society will be held at Johns Hopkins University, Baltimore, September 28, 29, and 30, 1905. Arrangements have been made for an excellent programme, and a large attendance is expected. The papers of the meeting for the first day will deal with x ray diagnosis, and those of the second and third day will be therapeutical. There will also be an evening exhibit of lantern slides, which promises to be extremely interesting. The Belvedere Hotel has been selected as headquarters. Russell H. Boggs, M. D., secretary, Pittsburgh.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending April 20, 1905.

BILLINGS, W. C., Passed Assistant Surgeon. To proceed to Quebec, Canada, for duty in office of United States Commissioner of Immigration.

BURKHALTER, J. T., Assistant Surgeon. Granted leave of absence for three days from April 27th.

CUMMING, H. S., Passed Assistant Surgeon. Leave of absence for ten days granted. Passed Assistant Surgeon Cumming by Bureau letter of April 10th, revoked.

FRANCIS, EDWARD, Assistant Surgeon. To proceed to Mis-soula, Mont., for special temporary duty.

GOLDSBOROUGH, B. W., Acting Assistant Surgeon. Granted leave of absence for four days from April 25th.

RICE, W. E., Acting Assistant Surgeon. Granted leave of absence for fourteen days from May 1st.

SAWTELLE, H. W., Surgeon. To report at Washington, D. C., for special temporary duty.

SMITH, F. C., Assistant Surgeon. Granted leave of absence for seven days from April 22, 1905, under paragraph 191 of the regulations.

TRASK, J. W., Assistant Surgeon. Assigned as Chief of Miscellaneous Division in the Bureau, Washington, D. C.

Promotion.

McKAY, MALCOLM, Pharmacist of the second class. Promoted to the grade of pharmacist of the first class, effective January 8, 1903.

Board Convened.

Board convened to meet at Port Townsend, Washington, April 27, 1905, for physical examination of an officer of the Revenue Cutter Service. Detail for the board—Passed Assistant Surgeon J. K. OAKLEY, chairman. Passed Assistant Surgeon D. E. ROBINSON, recorder.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending April 20, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Apr. 8-25.....	3	
Dist. of Columbia—Washington.....	Apr. 15-22.....	2	1
Florida—Jacksonville.....	Apr. 15-22.....	5	
Illinois—Chicago.....	Apr. 15-22.....	29	2
Illinois—Danville.....	Apr. 15-22.....	2	
Louisiana-New Orleans.....	Apr. 15-22.....	2	
4 cases imported.			
Michigan—Detroit.....	Apr. 15-22.....	2	
Michigan—Grand Rapids.....	Apr. 15-22.....	1	
Missouri—St. Joseph.....	Apr. 15-22.....	9	1 imported
Missouri—St. Louis.....	Apr. 15-22.....	8	2
Ohio—Toledo.....	Apr. 1-15.....	2	
Pennsylvania—Lebanon.....	Apr. 15-22.....	3	
Pennsylvania—York.....	Apr. 15-22.....	13	
South Carolina—Charleston.....	Apr. 15-22.....	2	
South Carolina—Greenville.....	Apr. 8-15.....	1	
Tennessee—Nashville.....	Apr. 15-22.....	1	

Smallpox—Insular.

Philippine Islands—Manila.....	Mar. 4-11.....	1	
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Smallpox—Foreign.

Brazil—Pernambuco.....	Mar. 1-15.....	181	
Brazil—Rio de Janeiro.....	Mar. 26-Apr. 2.....	16	7
Chile—at many ports.....	Mar. 31.....	2	Present.
China—Shanghai.....	Mar. 4-11.....	1	2 foreigners, 3 native.
Colombia—Cartagena.....	Mar. 26-Apr. 1.....	1	
France—Nantes.....	Mar. 18-Apr. 8.....	42	8
France—Paris.....	Mar. 26-Apr. 8.....	41	8
Great Britain—Birmingham.....	Mar. 25-Apr. 8.....	19	1
Great Britain—Bradford.....	Apr. 1-8.....	1	
Great Britain—Cardiff.....	Apr. 1-8.....	1	
Great Britain—Hull.....	Mar. 25-Apr. 1.....	1	1
Great Britain—Leeds.....	Apr. 1-8.....	3	
Great Britain—Leith.....	Apr. 1-8.....	1	
Great Britain—London.....	Mar. 25-Apr. 1.....	2	
Great Britain—Southampton.....	Apr. 1-8.....	2	1
Great Britain—South Shields.....	Apr. 1-8.....	5	
India—Bombay.....	Mar. 21-28.....	127	
India—Calcutta.....	Mar. 18-25.....	7	
India—Karachi.....	Mar. 19-26.....	8	3
Malta.....	Mar. 25-Apr. 1.....	1	
Norway—Christiania.....	Apr. 1-8.....	2	
Russia—Odessa.....	Mar. 25-Apr. 8.....	18	2
Russia—St. Petersburg.....	Mar. 18-Apr. 1.....	8	
Russia—Warsaw.....	Mar. 28-Feb. 11.....	4	
Turkey—Constantinople.....	Mar. 19-Apr. 9.....	1	6

Yellow Fever.

Brazil—Rio de Janeiro.....	Mar. 26-Apr. 2.....	13	5
Mexico—Coatzacoalcos.....	Mar. 18-Apr. 8.....	3	1
Mexico—Tehuantepec.....	Apr. 9-15.....	1	

Cholera.

China—Tientsin.....	Mar. 4-11.....	1	1
India—Bombay.....	Mar. 21-28.....	1	
India—Calcutta.....	Mar. 18-25.....	1	68

Plague—Insular.

Philippine Islands—Manila.....	Mar. 4-11.....	2	3
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Plague.

Africa (British)—Cape Colony.....	Mar. 11-18.....	2	2
Africa—Uganda.....	Feb. 11.....	25	32
Arabia—Aden.....	Mar. 24-31.....	33	3
Australia—Brisbane.....	Mar. 18-Mar. 11.....	6	3
Chile—Arica.....	Mar. 31.....	3	2
Chile—Pisagua.....	Mar. 31.....	150	

Many deaths.

India—General.....	Mar. 11-18.....	47,602	42,088
India—Bombay.....	Mar. 21-28.....	652	
India—Calcutta.....	Mar. 18-25.....	570	
India—Karachi.....	Mar. 18-25.....	140	127
Peru—Arequipa.....	Mar. 31.....	3	Reported.
Peru—Chiclayo.....	Mar. 19-26.....	12	9
Peru—Guadalupe.....	Mar. 19-26.....	0	0
Peru—Lambayeque.....	Mar. 19-26.....	3	1
Peru—Huanchaco.....	Mar. 19-26.....	0	1
Peru—Chepén.....	Mar. 19-26.....	0	1
Peru—San Pablo.....	Mar. 19-26.....	1	1
Peru—Mollendo.....	Mar. 19-26.....	24	3
Peru—Callao.....	Mar. 19-26.....	0	0
Peru—Lima.....	Mar. 19-26.....	2	0
Straits Settlements—Singapore.....	Feb. 25-Mar. 4.....	1	

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 29, 1905:

BELL, W. L., Passed Assistant Surgeon. Ordered to the Naval Hospital, Mare Island, Cal., for treatment.

DESSEZ, P. T., Assistant Surgeon. When discharged from treatment at the Naval Hospital, Norfolk, Va., granted sick leave for two months.

FURLONG, F. M., Passed Assistant Surgeon. Detached from the Bureau of Medicine and Surgery, Navy Department, and ordered to report to the Surgeon General for a course of instruction at the Naval Museum of Hygiene and Medical School, Washington, D. C.

GARTON, W. M., Passed Assistant Surgeon. Ordered to Washington, D. C., to report to the Surgeon General for a course of instruction at the Naval Museum of Hygiene and Medical School.

MANCHESTER, J. D., Assistant Surgeon. Detached from the *Petrel* when put out of commission, and ordered to the Princeton.

REYNOLDS, C. F., Pharmacist. Detached from the *Hancock* and ordered to the Navy Yard, Mare Island, Cal., for duty in the Medicine and Surgery storehouse of that yard.

URIE, J. F., Surgeon. Ordered to the *Pennsylvania*.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Corps of the United States Army for the week ending April 29, 1905:

BROWN, HENRY L., First Lieutenant and Assistant Surgeon. Ordered to accompany First Squadron, Seventh Cavalry, from Fort Myer, Va., to Manila, P. I., for duty, instead of Ninth Infantry, from Madison Barracks, N. Y. Granted sick leave of absence for fourteen days.

BUSHNELL, GEORGE E., First Lieutenant and Assistant Surgeon. Detailed to represent the Medical Department of the United States Army at the meeting of the National Association for the Study and Prevention of Tuberculosis, to be held in Washington, D. C., May 18 and 19, 1905.

CHIDESTER, WALTER C., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

CLAYTON, JERE B., Captain and Assistant Surgeon. Relieved from duty at Fort W. H. Seward, Alaska, and ordered to proceed to Seattle, Wash., and report by telegraph to the Military Secretary for further orders.

CRAIG, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty at the United States Army General Hospital, Presidio of San Francisco, Cal., and assigned to duty as surgeon on the transport *Logan*, on arriving in Manila, to report for duty in the Division of the Philippines.

EBERT, RUDOLPH D., First Lieutenant and Assistant Surgeon. Ordered to make inspection of the medical de-

partment at Forts Walla Walla, Wright, Worden, Casey, Flagler, Lawton, Ward, and Columbia, Wash., and Fort Stevens, Oregon.

EDWARDS, JAMES F., First Lieutenant and Assistant Surgeon. Granted two months' leave of absence.

HUTTON, PAUL C., First Lieutenant and Assistant Surgeon. Left General Hospital, Fort Bayard, New Mexico, on ten days' leave of absence. Leave of absence extended thirty days.

PALMER, FRED W., First Lieutenant and Assistant Surgeon. Reports for duty at the United States Rifle Range, Arcadia, Mo.

REYNOLDS, F. P., Captain and Assistant Surgeon. Relieved from duty at the Presidio of San Francisco, Cal., and ordered to Fort W. H. Seward, Alaska, for duty.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Reports arrival at Fort Greble, R. I., for temporary duty.

ROCKHILL, E. P., First Lieutenant and Assistant Surgeon. Sick leave extended thirty days. Relieved from duty at the Presidio of San Francisco, Cal., and ordered to Fort Wingate, New Mexico, for duty.

RUSSELL, FREDERICK F., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Wingate, New Mexico, and ordered to the Presidio of San Francisco, Cal., for duty.

STRAUB, PAUL F., First Lieutenant and Assistant Surgeon. Having reported to the Secretary of War, ordered to duty with the Isthmian Canal Commission.

WADHAM, S. H., First Lieutenant and Assistant Surgeon. Relieved from duty as surgeon of the transport *Logan*, and ordered to report to the Military Secretary of the United States Army for further orders.

WEBBER, HENRY A., First Lieutenant and Assistant Surgeon. Detailed a member of the board to meet at Vancouver Barracks, Wash., to examine candidates for admission to the United States Military Academy, West Point, N. Y.

WILLIAMS, A. W., First Lieutenant and Assistant Surgeon. Assigned to temporary duty with the troops from Fort Hamilton, N. Y., to Army and Navy exercises, Fort Monroe, Va.

WILSON, JAMES S., Captain and Assistant Surgeon. Assignment to duty with the joint Army and Navy exercises, Fort Howard, Md., revoked.

YOST, JOHN D., First Lieutenant and Assistant Surgeon. Ordered to proceed from Honolulu, H. T., to the Presidio of San Francisco, Cal., for examination for advancement to rank of captain; upon completion of examination to return to Honolulu.

SPANGLER-KIEFER.—In Philadelphia, on Thursday, April 27th, Dr. Ralph Huston Spangler and Miss Marilla Kemmerer Kiefer.

STARIBD—HURST.—In Brooklyn, N. Y., on Wednesday, April 26th, Dr. Edward Perley Staribrd and Miss Eliza Hurst.

THOMAS—RHEINFRANK.—In New York, on Tuesday, April 25th, Dr. William Sturgis Thomas and Miss Emma Rheinfrank.

Died.

ALLEN.—In Haverhill, Massachusetts, on Sunday, April 23rd, Dr. Franklin H. Allen, in the fifth year of his age.

BARBER.—In Ossining, N. Y., on Monday, April 24th, Dr. Hiram Barber, in the eighty-sixth year of his age.

BROWN.—In Springfield, Massachusetts, on Saturday, April 22nd, Dr. Anthony L. Brown, in the forty-third year of his age.

CARPENTER.—In Newark, New Jersey, on Tuesday, April 18th, Dr. Charles W. Carpenter.

DE WITT.—In Oswego, N. Y., on Tuesday, April 18th, Dr. Byron De Witt, in the seventy-ninth year of his age.

EDWARDS.—In Ann Arbor, Michigan, on Wednesday, April 26th, Dr. William Edwards, of Kalamazoo, in the fifth year of his age.

GARD.—In Greenville, Ohio, on Monday, April 24th, Dr. Isaac Newton Gard.

GREENMAN.—In Troy, N. Y., on Tuesday, April 25th, Dr. C. E. Greenman.

GRIFFITH.—In Washington, D. C., on Sunday, April 23rd, Dr. Samuel H. Griffith, United States Navy.

HERTZOG.—In Pittsburgh, Pennsylvania, on Tuesday, April 18th, Dr. Charles Henry Hertzog, in the thirty-seventh year of his age.

HINTON.—In New York, on Wednesday, April 26th, Dr. John H. Hinton, in the seventy-ninth year of his age.

KAEMMERER.—In Hoboken, New Jersey, on Tuesday, April 25th, Dr. Charles Kaemmerer, in the eighty-third year of his age.

LYNCH.—In New York, on Saturday, April 22nd, Dr. Patrick J. Lynch, in the seventy-eighth year of his age.

MELLISH.—In El Paso, Texas, on Saturday, April 22nd, Dr. Ernest J. Mellish.

MOONEY.—In Standish, Michigan, on Friday, April 21st, Dr. G. Mooney.

NORDBROCK.—In Brooklyn, N. Y., on Wednesday, April 26th, Dr. Julius Adolph Nordbrock, in the thirty-eighth year of his age.

RICE.—In South Framingham, Massachusetts, on Tuesday, April 18th, Dr. George Rice, in the sixty-eighth year of his age.

SCHUYLER.—In Mecklenburg, N. Y., on Sunday, April 16th, Dr. J. E. Schuyler, in the seventy-fourth year of his age.

SHANNON.—In Elkhorn, Nebraska, on Friday, April 21st, Dr. William Cummings Shannon, United States Army, in the fifty-fourth year of his age.

SMART.—In St. Augustine, Florida, on Sunday, April 23rd, Colonel Charles Smart, assistant surgeon general of the United States Army (retired), in the sixty-fifth year of his age.

STEWART.—In Pittsburgh, Pennsylvania, on Sunday, April 9th, Dr. John Gordon Stewart, in the fifty-fifth year of his age.

TOWNSEND.—In Princess Anne, Maryland, on Saturday, April 15th, Dr. Elton W. Townsend.

ULRICH.—In Chester, Pennsylvania, on Monday, April 24th, Dr. William B. Ulrich, in the eighty-fourth year of his age.

WALKER.—In Rochester, N. Y., on Monday, April 17th, Dr. Charles E. Walker, in the fifty-first year of his age.

WEHRLI.—In Chicago, on Sunday, April 16th, Dr. Albert C. Wehrli.

WEYLAND.—In Denver, on Thursday, April 20th, Dr. I. S. Weyland, in the sixty-fourth year of his age.

WHITING.—In Telluride, Colorado, on Sunday, April 16th, Dr. Floyd A. Whiting, in the forty-sixth year of his age.

Births, Marriages, and Deaths.

Married.

ABBE—BROWN.—In Providence, Rhode Island, on Saturday, April 22nd, Dr. Truman Abbe and Mrs. Reginald C. Brown.

BARTHOLOW—BRICE.—In Philadelphia, on Tuesday, April 25th, Dr. Paul Bartholow and Miss Anna Lewis Brice.

GATES—HIGHTOWER.—In Denver, on Friday, April 21st, Mr. O. C. Gates and Dr. J. Gypsy Hightower.

MAHAFFEY—FOGG.—In Camden, New Jersey, on Wednesday, April 26th, Dr. Jesse L. Mahaffey and Miss Alice W. Fogg.

MCCONNELL—LISTER.—In Toronto, Ontario, Canada, on Wednesday, April 19th, Dr. John Herbert McConnell and Miss Frances Charlotte Lister.

MILLS—ALEXANDER.—In New York, on Wednesday, April 26th, Mr. Alexander Mills, Jr., and Miss Aimée Gabrielle Alexander, daughter of Dr. and Mrs. Welcome T. Alexander.

PARR—OLNEY.—In Spokane, Washington, on Thursday, April 20th, Dr. Howard Parr and Miss Aurora Olney.

SCHWYZER—ROBINSON.—In Minneapolis, Minnesota, on Thursday, April 20th, Dr. Gustav Schwyzzer and Mrs. Mary Robinson.

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SATURDAY, MAY 13, 1905

WHOLE No. 1380.

Original Communications.

THE INFLUENCE OF COBRA VENOM ON THE PROTEID METABOLISM.*

By JAMES SCOTT, B. Sc. EDIN., M. D., C. M.,

EDINBURGH.

(From the Research Laboratory of the Royal College of Physicians, Edinburgh.)

Although so much valuable work has been done upon the physiological action of cobra venom by Fraser, Calmette, Elliot, and others,¹ so far no observations of its effects upon the metabolism have been recorded. While its peculiarly selective action on the central nervous system would seem to suggest the absence of any marked general action, the demonstration afforded by Elliot's work of its influence and the way in which peripheral nerve mechanism may be attacked, and of its interference with respiration, and the direct local action on the tissues into which it is injected, seem to indicate that its toxic action may extend to protoplasm generally and that it may thus lead to modification of the proteid metabolism, whether in the direction of altering the rate of proteid metabolism or of modifying the synthetic processes in the liver by which urea is elaborated, as do the toxins of certain microorganisms.

I have to thank Sir Thomas R. Fraser for his kindness in giving me the cobra venom; and also to thank Dr. Noël Paton for much valuable assistance in this investigation.

GENERAL PLAN OF INVESTIGATION AND METHODS.

Dogs were used for this investigation. Before each experiment they were fed for some days on a fixed diet of oatmeal porridge and milk in order to establish nitrogenous equilibrium. The urine was collected by keeping the animal in a cage with a sloping bottom made of zinc under which a suitable vessel was placed. The floor was kept scrupulously clean, and faeces were removed as soon as possible after they were passed. The urine was collected daily at 10 a. m.

When the animal came into nitrogenous equilibrium, sublethal and in some cases lethal doses of cobra venom were injected subcutaneously.

* Communicated to the Royal Society by Sir Thomas R. Fraser, F. R. S., April 6, 1905.

¹ See Fayer: *Thanatophidia of India*; Brunton and Fayer, *Roy. Soc. Proc.*, vol. 22, 1874; Wall, *Indian Snake Poisons*, 1883; Nicholson, *Ophiology*, 1893.

Urine.—The reaction and specific gravity were taken. The quantity collected was noted and the urine diluted to a convenient volume. The amounts of the following ingredients were determined by the methods enumerated, duplicate analyses were made in all cases and the means of these taken:

1. Total nitrogen by Argutinsky's modification of Kjeldahl's method.
2. Nitrogen in urea by Bohland's method by precipitating with phosphotungstic (Merck's) and hydrochloric acids.
3. Nitrogen of ammonia by Schlössing's method.
4. Nitrogen not in urea (non-urea nitrogen) was calculated by difference.
5. Nitrogen in purin bodies by Krüger and Wulff's method.²
6. Phosphoric acid as P_2O_5 by titrating with uranium nitrate.
7. The percentages of nitrogen in urea, not in urea (non-urea nitrogen), in ammonia, in purin bodies, in other compounds were calculated in terms of total nitrogen.
8. The percentages of P_2O_5 were calculated in terms of total nitrogen.

Averages of the figures before and after the injections were determined.

Albumin was tested for by cold nitric acid and by heat and acetic acid.

Some of the experiments were rendered valueless by the early development of an abscess at the seat of inoculation, but the following were carried on, without disturbance from such accidents.

In all the experiments no marked symptoms were produced. In some cases after injection the dog lay very quiet for a few hours. In a few there was a local swelling observed next day, but it soon disappeared.

EXPERIMENT I.

For this experiment a retriever weighing 18 kilogrammes was used. The dog was kept in its cage for two or three days before the examination of the urine was begun, so that it might get accustomed to its diet and nitrogenous equilibrium be established.

FOOD ANALYSES.

Analyses of the food given to the dog showed the amount of nitrogen to be:

Daily diet: 500 c. c. milk.....= 1.83 grammes nitrogen.
200 grammes oatmeal.....= 4.30 grammes nitrogen.

Total intake of nitrogen per dlem.= 6.13 grammes nitrogen.

Analyses of the urine were begun on November

² Cf. *Zeit für Phys. Chem.*, vol. 20, p. 177, 1895.

TABLE I.

Date, 1903—	Quantity of urine in c.c.	Sp. gr. action.	Total nitrogen—		Nitrogen as urea.		Nitrogen not as urea.		Phosphorus as P ₂ O ₅ .		Percentages of Nitrogen	
			Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Nitro- gen in ammonia.	Nitro- gen in purin bodies, other as not as in am- monia, purin bodies, other P ₂ O ₅
November 16,	380 { diluted to } 1,000	1.023 acid	1.098	5.45	0.882	4.11	0.216	1.36	0.0728	0.364	0.0078	0.0390
November 17,	215 { } 500	1.018 acid	0.734	3.67	0.566	2.93	0.168	0.84	0.0301	0.105	0.0097	0.0485
November 18,	380 to 435 { } 500	1.020 acid	0.927	4.63	0.750	3.79	0.168	0.84	0.0301	0.105	0.0097	0.0485
November 19,	500 { } 500	1.021 acid	1.210	6.05	0.959	4.79	0.351	1.96	0.0889	0.4445	0.0092	0.0462
November 20,	385 to 435 { } 500	1.015 acid	0.829	4.02	0.622	3.01	0.208	1.04	0.0596	0.2982	0.0154	0.0770
November 21,	500 { } 500	1.019 acid	0.831	4.053	0.803	3.01	0.208	1.04	0.0596	0.2982	0.0154	0.0770
November 22,	435 to 450 { } 500	1.021 acid	0.977	4.89	0.829	4.14	0.148	0.75	0.0902	0.4508	0.0084	0.0420
November 23,	500 { } 500	1.021 acid	1.064	5.32	0.874	4.37	0.190	0.95	0.0714	0.3570	0.0087	0.0134
November 24,	435 to 450 { } 500	1.015 acid	0.692	3.458	0.573	2.86	0.176	0.88	0.0560	0.2800	0.0073	0.0364
November 25,	500 { } 500	1.015 acid	0.778	3.892	0.634	3.17	0.144	0.72	0.0612	0.3069	0.0094	0.0469
November 26,	500 { } 500	1.015 acid	0.746	4.477	0.547	2.59	0.197	0.98	0.0338	0.0528	0.0070	0.0420
November 27,	500 { } 500	1.015 acid	0.784	3.920	0.591	2.95	0.193	0.97	0.0916	0.4578	0.0104	0.0518
November 28,	500 to 550 { } 500	1.016 slightly alkaline	0.3738	1.869	0.2702	1.35	0.1036	0.51	0.0885	0.4424	0.0062	0.0308
November 29,	500 { } 500	1.015 acid	0.7608	4.259	0.585	3.51	0.1286	0.74	0.0641	0.3847	0.0073	0.0437
November 30,	500 { } 500	1.015 acid	0.7608	4.259	0.585	3.51	0.1286	0.74	0.0641	0.3847	0.0073	0.0437
November 16, 17 and 18, (before injection)	500 { } 500	1.015 acid	0.910	4.59	0.756	3.58	0.184	1.01	0.053	0.249	0.0074	0.0371
November 19, 20, 21 and 22, (after 1st injection)	500 { } 500	1.015 acid	0.751	4.22	0.585	3.51	0.166	0.83	0.062	0.308	0.0081	0.0371
November 23, 24 and 25, (after 2nd injection)	500 { } 500	1.015 acid	0.751	4.22	0.585	3.51	0.166	0.83	0.062	0.308	0.0081	0.0371

TABLE II.—WEIGHT OF DOG, 17 KILOGRAMMES.

Date, 1904—	Quantity of urine in c.c.	Sp. gr. action.	Total nitrogen—		Nitrogen as urea.		Nitrogen not as urea.		Phosphorus as P ₂ O ₅ .		Percentages of Nitrogen	
			Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Per- centage of urine.	Nitro- gen in ammonia.	Nitro- gen in purin bodies, other as not as in am- monia, purin bodies, other P ₂ O ₅
March 22,	750 { diluted to } 1,000	1.015 acid	0.552	5.52	0.455	4.55	0.097	0.97	0.0386	0.386	0.0059	0.059
March 23,	710 to 750 { } 1,000	1.014 acid	0.501	5.04	0.434	4.34	0.070	0.70	0.0311	0.311	0.0055	0.055
March 24,	550 to 600 { } 1,000	1.020 acid	0.585	5.85	0.490	4.90	0.095	0.95	0.0330	0.330	0.0069	0.069
March 25,	550 to 600 { } 1,000	1.019 acid	0.543	5.43	0.465	4.65	0.078	0.78	0.0361	0.361	0.0064	0.064
March 26,	265 { } 500	dark	0.714	3.57	0.579	2.89	0.135	0.975	0.0431	0.217	0.0053	0.0265
March 27,	610 to 650 { } 1,000	1.027 yellow acid	0.403	4.03	0.322	3.22	0.081	0.81	0.0325	0.325	0.0030	0.130
March 28,	1,000 { } 1,000	1.015 acid	0.759	7.99	0.643	6.43	0.156	1.56	0.0462	0.462	0.0087	0.087
March 29,	650 to 700 { } 1,000	1.015 acid	0.484	4.84	0.389	3.89	0.095	0.95	0.0325	0.325	0.0073	0.073
March 30,	800 to 850 { } 1,000	1.016 acid	0.711	7.11	0.601	6.01	0.110	1.10	0.0448	0.448	0.0102	0.102
March 31,	850 to 900 { } 1,000	1.016 acid	0.711	7.11	0.601	6.01	0.110	1.10	0.0448	0.448	0.0102	0.102
March 22 to 25, (before injection)	500 { } 500	1.015 acid	0.546	5.46	0.461	4.61	0.085	0.85	0.0347	0.347	0.0062	0.062
March 26 to 29, (after injection)	500 { } 500	1.015 acid	0.546	5.46	0.461	4.61	0.085	0.85	0.0347	0.347	0.0062	0.062

TABLE III.

Date, 1904—	Quantity of urine in c.	Sp. gr.	Re- action.	Total nitrogen—			Nitrogen.			Nitrogen in ammonia.			Phosphorus as P ₂ O ₅ .			Percentages of Nitro-Nitro-Neo-Nitrogen as not as in am- urea, monia, bodies, pounds, I ₂ O ₅						
				Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Nitro-Nitro-Neo-Nitrogen as not as in am- urea, monia, bodies, pounds, I ₂ O ₅						
April 8.....	No urine passed.																					
April 9.....	{ 760 to 1,000 }	1.015	acid	6.03	0.603	6.03	0.518	5.18	0.685	0.85	0.0408	0.408	0.0084	0.084	0.104	1.04	86	14	6.8	1.39	5.81	17
April 10.....	{ 690 to 1,000 }	1.015	acid	4.83	0.483	4.83	0.409	4.09	0.074	0.74	0.0314	0.314	0.0076	0.076	0.111	1.11	85	15	6.5	1.57	6.93	23
April 11.....	{ 500 to 1,000 }	1.015	acid	4.40	0.440	4.40	0.372	3.72	0.068	0.68	0.0316	0.316	0.0066	0.066	0.124	1.24	85	15	7.2	1.50	6.30	28
April 9, 10 and 11.....				0.509	0.509	0.509	0.433	4.33	0.076	0.76	0.0346	0.346	0.0075	0.075	0.113	1.13	85	15	6.8	1.49	6.35	23

TABLE IV.—WEIGHT OF DOG, 12 KILOGRAMMES.

Date, 1904—	Quantity of urine in c.c.	Sp. gr.	Re- action.	Total nitrogen.			Nitrogen as urea.			Nitrogen not as urea.			Nitrogen in ammonia.			Phosphorus as P ₂ O ₅ .			Percentages of Nitro-Nitro-Neo-Nitrogen as not as in am- urea, monia, bodies, pounds, I ₂ O ₅				
				Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.	Per centage of urine, dlem.
June 30.....	{ 600 diluted to 1,000 }	1.012	acid	3.69	0.369	3.69	0.311	3.11	0.058	0.58	0.0244	0.244	0.0042	0.042	0.132	1.32	84	16	6.6	1.14	8.26	33	
July 1.....	{ 350 to 500 }	1.016	acid	0.515	2.576	0.423	2.11	0.092	0.46	0.0468	0.234	0.0062	0.031	0.201	1.005	82	18	9.0	1.20	9.80	39		
July 2.....	{ 1,000 to 500 }	1.013	acid	0.386	3.86	0.322	3.22	0.064	0.64	0.0417	0.417	0.0052	0.052	0.162	1.62	83	17	10.8	1.34	4.46	42		
July 3.....	{ 600 to 500 }	1.015	acid	0.605	3.02	0.526	2.63	0.079	0.39	0.0582	0.291	0.0070	0.035	0.180	0.90	87	13	9.6	1.16	2.24	30		
July 4.....	{ 600 to 1,000 }	1.010	acid	0.274	2.74	0.249	2.49	0.025	0.25	0.0238	0.238	0.0050	0.050	0.106	1.06	90	10	8.7	1.84	0.0	39		
July 5.....	{ 500 1,000 }	1.015	acid	0.658	3.29	0.526	2.63	0.132	0.66	0.0560	0.280	0.0099	0.0497	0.280	1.40	80	20	8.5	1.43	10.07	43		
July 6.....	{ 270 to 1,000 }	1.010	acid	0.288	2.88	0.218	2.18	0.070	0.70	0.0375	0.375	0.0039	0.039	0.150	1.20	76	24	13.0	1.36	9.64	42		
July 7.....	{ 270 to 500 }	1.030	acid	0.470	2.35	0.342	1.81	0.128	0.54	0.0375	0.1875	0.0045	0.0225	0.206	1.03	73	27	8.0	1.04	17.96	44		
July 8.....	{ 100 to 500 }	1.048	acid	0.595	2.97	0.479	2.39	0.116	0.58	0.0465	0.2325	0.00728	0.0361	0.290	1.25	80	20	7.8	1.22	10.98	42		
July 9.....	{ 200 to 500 }	1.030	acid	0.616	3.08	0.489	2.44	0.127	0.64	0.0538	0.2690	0.00938	0.0469	0.270	1.35	79	21	8.7	1.52	10.78	44		
July 10.....	{ 500 1,000 }	1.013	acid	0.552	2.76	0.426	2.13	0.126	0.63	0.0566	0.2828	0.01288	0.0644	0.228	1.14	77	23	12.5	2.33	8.17	41		
July 11.....	{ 500 1,000 }	1.013	acid	0.655	3.27	0.446	2.48	0.069	0.34	0.0582	0.2910	0.01266	0.0633	0.233	1.21	76	24	8.9	1.92	13.8	37		
July 12.....	{ 500 1,000 }	1.012	acid	0.535	3.11	0.435	2.47	0.090	0.538	0.0557	0.3343	0.01068	0.0604	0.189	1.13	83	17	14.0	1.90	1.1	35		
AVERAGES OF SIX DAYS BEFORE AND SIX DAYS AFTER THE INJECTION.																							
June 30, July 1, 2, 3, 4, and 5 (before injections) 0.468				3.197	3.203	2.52	0.075	0.49	0.0418	0.2840	0.00625	0.0433	0.177	1.217	84	16	8.9	1.35	5.8	38			
July 6, 7, 8, 9, 10, and 11 (after injections) 0.529				2.88	0.42	0.24	0.121	0.65	0.0483	0.2730	0.0086	0.0453	0.219	1.19	77	23	9.8	1.59	11.79	42			

* In July 6, 7, and 8, cobra venom 3.3 milligrammes injected each day.

GENERAL RESULTS.

New albumin was ever passed as the result of any injections.

	I.		II.		III.		IV.	
	Percentage of urine.	Per dlem.	Percentage of urine.	Per dlem.	Percentage of urine.	Per dlem.	Percentage of urine.	Per dlem.
Averages before first injection.....	0.919	4.59	0.546	5.46	0.546	5.46	4.08	3.197
Averages after first injection.....	0.951	4.27	0.600	5.11	0.500	5.00	...	...
Averages after second injection.....	0.971	4.27	0.600	5.11	0.500	5.00	...	...
After three injections.....	0.971	4.27	0.600	5.11	0.500	5.00	5.29	2.88

In no case was there any indication of an increased proteid metabolism.

ber 16, 1903, and on the 19th, at 4 p. m., 1.25 milligrammes cobra venom dissolved in 0.5 c.c. sterilized normal saline solution was injected subcutaneously in the side.

The minimum lethal dose of the venom as determined is 0.00025 gramme per kilogramme of body weight. Aseptic precautions were used. The effects of this injection were studied for five days and a second injection of 2.5 milligrammes cobra venom dissolved in 1 c.c. saline solution was injected on the 25th at 9.30 a. m., and the examination of the urine carried on till November 30th.

EXPERIMENT 2.

For this experiment a collie, weighing 17 kilogrammes, was used. The same precautions were taken and the same amount of food given.

The analyses of the urine were begun on March 22, 1904, and on the 26th 5 milligrammes cobra venom in 0.5 c.c. sterilized normal saline solution was injected subcutaneously in the side at 11 a. m. A few hours after the injection, the dog vomited, but there was no other symptom. The effects of the venom were studied till the 30th.

EXPERIMENT 3.

The same collie was used for this experiment. On April 8th, at 1 p. m., 20 milligrammes cobra venom in 2 c.c. sterilized normal saline solution was injected subcutaneously. This amount is equivalent to two minimum lethal doses. No urine was passed on the 8th. The urine of the 9th, 10th, and 11th was examined. On the 11th an abscess was observed below the seat of inoculation and the animal was destroyed by chloroform.

EXPERIMENT 4.

For this experiment a retriever, weighing 12 kilogrammes, was used. The analyses were begun on June 30th and were continued till July 12th. On the 6th, 7th, and 8th of July 3.3 milligrammes cobra venom was injected subcutaneously each day at 3 p. m.

Distribution of Nitrogen in Urea and Other Compounds:

PERCENTAGES OF UREA NITROGEN TO TOTAL NITROGEN.

	Experiments			
	I.	II.	III.	IV.
Averages before injection.....	80	84	84	84
Averages after first injection....	80	81	..	..
Averages after second injection... 78	..	..	85	..
After three injections.....	..	..	..	77

In three of the experiments there was a slight fall in the production of urea nitrogen, most marked in Experiment IV, where three doses in succession had been given.

PERCENTAGES OF AMMONIA NITROGEN TO TOTAL NITROGEN.

	Experiments			
	I.	II.	III.	IV.
Averages before injection.....	5.57	6.4	6.4	8.9
Averages after first injection....	7.99	6.7	..	..
Averages after second injection... 11.6	..	..	6.8	..
After three injections.....	..	..	..	9.8

In Experiment I there was a marked rise and in Experiment IV a slight rise, while the changes in the other two was in the same direction.

PERCENTAGES OF NITROGEN IN PURIN BODIES TO TOTAL NITROGEN.

	Experiments			
	I.	II.	III.	IV.
Averages before injection.....	0.85	1.12	1.12	1.35
Averages after first injection....	1.18	1.64	..	..
Averages after second injection... 1.16	..	..	1.49	..
After three injections.....	..	..	..	1.56

These changes show a slight rise in each experiment.

PERCENTAGES OF NITROGEN IN OTHER COMPOUNDS TO TOTAL NITROGEN.

	Experiments			
	I.	II.	III.	IV.
Averages before injection.....	13.91	8.11	8.11	5.8
Averages after first injection....	10.58	11.18	..	..
Averages after second injection... 8.89	..	..	6.35	..
After three injections.....	..	..	..	11.78

In two experiments there was a rise and in two a fall.

PERCENTAGES OF P_2O_5 TO TOTAL NITROGEN.

	Experiments			
	I.	II.	III.	IV.
Averages before injection.....	23	31	31	38
Averages after first injection....	29	31	..	..
Averages after second injection... 28	..	..	23	..
After three injections.....	..	..	..	42

In two experiments a rise, in one no change, and in one a fall. The variations in the P_2O_5 do not correspond to the changes in the purin bodies.

CONCLUSIONS.

1. Practically no change in rate of proteid metabolism was induced by the administration, in spite of well marked local reaction.
2. A slight decrease in the proportion of urea nitrogen, quite insignificant compared with that produced by diphtheria toxine, and various drugs was observed.
3. A slight rise in the proportion of ammonia nitrogen occurred.
4. There was a slight rise in the proportion of nitrogen in purin bodies.
5. The nitrogen in other compounds showed no constant change.
6. The P_2O_5 excreted showed no constant change, but in two experiments there was a slight rise.

The change produced in the proteid metabolism is, therefore, small, and such as it is, being in the directions of decreased elaboration of urea and increase in the proportion of nitrogen excreted as ammonia, it seems to indicate a slight toxic action on the hepatic metabolism rather than a general action on the proteid changes; and tends to confirm the view that the poison acts chiefly upon the nervous system.

Huron Street Hospital, Cincinnati.—The following young women have received nurses' diplomas from the training school attached to this hospital:

Grace W. Bentley, Florence B. Horner, Edith J. Allen, Blanche A. Nash, Louisa E. Ostrander, Anna M. Price, Caroline M. Osburn, Mary E. Sarr, Tillie E. Sornsen, and Mrs. J. Sinclair Castle

SOME OF THE PRINCIPLES OF MANUAL THERAPY. ITS APPLICATION BY THE PHYSICIAN.*

By JOHN P. ARNOLD, M. D.,

PHILADELPHIA.

I cannot hope to give you more than a few ideas of the principles involved in the practice of manual therapy, but I shall try to arouse your interest sufficiently to induce you to make some observations for yourselves. I do not ask you to accept the "hall marks" that I may have stamped on the subject personally, but ask you to investigate for yourselves and draw your conclusions from the evidence you obtain.

We have advanced in bacteriology, pathology, hygiene, and the general study of medicine, but we are not much better equipped than our forefathers were in treating a large proportion of cases, especially those of chronic disease. There are several reasons for this. One is the difficulty in ascertaining the exact value of the ordinary therapeutic measures, especially of drugs. So long as we are not in a position to determine the effect of the remedies that we put into the system, and so long as we cannot localize their effects, we are still in the position of our predecessors in that we have to prescribe our medicines very largely upon an empirical basis.

The chemist well knows the fact that if he wishes to determine the result of mixing two chemicals, he must know the composition of both. The composition of *living* protoplasm is to-day just about as unfamiliar to us as it was fifty years ago, and it is probably impossible for us to determine the composition of *living* protoplasm, for the moment the chemist attempts to analyze it the protoplasm is killed. While we know the composition of dead protoplasm we have no idea of the changes that take place in passing from life to death. As the effect of drugs in the main is a chemical reaction upon protoplasm, we are not in a position to determine the effects we are going to produce upon the body, and we have very largely to determine our results and regulate our practice by empirical prescribing.

If we are treating a case of sciatica by drugs we put something into the stomach that goes throughout the organism, and no matter what good results we may obtain, we have no idea of the damage that may be done to other cells. We realize the fact that the proper and judicious prescribing of drugs may help patients get well, but there are some other therapeutic measures that we have neglected. For instance, I may cite the

use of heat and cold. We all know that valuable results are obtained by the application of the hot water bag and the ice bag, yet we prescribe these things with very little or no knowledge of their physiological action, and often use heat when cold would be better and vice versa.

There is no doubt, not only from my own experience and that of others, but from abundant literature, that we have a valuable therapeutic measure in manual therapy. I do not for a moment want you to feel that I advocate manual treatment as a "cure all." We get out of college with several erroneous ideas in regard to practical work. In the first place we somehow or other feel that it is rather beneath our dignity to place our hands on our patients for the purpose of treatment. This is a mistaken idea. There are many things we have to do to help our patients get well that may seem beneath the dignity of the physician, but so long as they are a part of the physician's work, they are well worth doing. I think that this has been one of the things that has prevented the physician from studying and using manual therapy. Another reason has been the prevailing idea that muscular force and a great deal of time was necessary in applying manual treatment. This is entirely erroneous.

The results of manual treatment are recognized. We know very well that massage, Swedish movements, and exercise produce serviceable results in the treatment of disease. We know that very often when we cannot cure a patient by the ordinary methods of prescribing we send the patient to a masseur and the patient gets well. Naturally, with the egotism that belongs to most individuals, we take the credit of curing the patient, though the masseur should have some of it. If patients get well by this method, applied in this crude form, by comparatively uneducated individuals; if they get patients well when we fail, it seems to me that it should be forced upon us that here is a therapeutic measure capable of much good, and the question should naturally arise, Is there not a larger field and is there not something that we might do better than can be done by the masseur?

Some years ago I noticed that the moment you put a muzzle, such as is commonly used in the laboratory, on a dog, no matter how violent the animal was it became quiet. In making a large number of observations upon animals under these conditions, and in studying the physiology of the results of pressure upon various parts of the body, I found that pressure upon the occipital nerves produced a certain amount of cerebral anæmia. This served to explain why the animal became

* Address delivered before the Medical Society of the Women's Medical College, Philadelphia, April 9, 1904.

quiet. You will find in patients, if you will take the trouble to make the observation, that light continued pressure over the occipital nerves produces a peculiar quiet, and they often say they feel as if they would like to go to sleep. If we carry out these observations a little more systematically we find that pressure along the spinal column and in certain regions of the neck does produce distinct changes in the circulation in the central nervous system. This is well recognized empirically, but we have not had heretofore the knowledge which would enable us to apply it with that certainty and system which would give us the ability to localize the effects in certain regions. I must say that the experimental evidence of this is for several reasons rather unsatisfactory to demonstrate to those untrained in physiological work. One of these is that the spinal cord is very richly supplied with blood, and experimental work upon the cord is unsatisfactory to the general observer, because the amount of hæmorrhage is such that the results are very much obscured.

The study of the development of the organism and the fundamental laws which determine the activity of every living organism teaches us that there are principles which serve to explain the results that can be obtained by pressure along the spine. The body is developed practically as two double tubes, one, the anterior body tube which consists of the trunk and contains the primitive intestinal tube; posteriorly, that region supplied by the posterior primary divisions of the spinal nerves, consisting of the muscles of the back in a region about three inches on each side of the spinal vertebræ, the vertebræ, and the ligaments makes up the outer tube and this contains the neural tube. We have long recognized the fact that the circulation in the anterior body tube, or the muscles and skin of the trunk, was in a measure compensatory to the circulation of the organs within (developed from) the inner tube; e. g., the application of a mustard plaster over a pleurisy or a congested liver is of service in relieving the congestion. We have never applied the same principles to the circulation in the skin and muscles of the back as compensatory to the circulation in the spinal cord. This thought occurred to me in working on this subject, and I might say that that is one of the fundamental principles of the application of manual treatment. I have seen so many times agents that produce a dilatation of the blood vessels in the skin and muscles of the back relieve congestion of the spinal cord that I came to the conclusion, I might say empirically, that there must be some sort of a compensatory relationship between the circulation in the two

parts. That these results were produced has frequently presented itself to me as evidence in practical work, and to make the matter more clear I carried out a series of experiments some eight years ago which shows very distinctly that pressure along the back does modify the circulation in the cord.

We find that internal conditions, no matter what they may be, manifest themselves by certain distinct signs that may be observed by the proper examination of the back. For instance, I have not seen any case of dyspepsia, no matter of what type, in which there was not distinct evidences in the mid-dorsal region of a disturbance of the nervous mechanism controlling the stomach, and here we have to realize that fact that we have not only a nervous mechanism to the blood vessels of the stomach, but one controlling in part the musculature of the walls of the stomach itself. If we examine a case of asthma we will find the disturbance in the upper dorsal region between the third and the seventh, and so on throughout the whole list of diseases.

With a subject so broad as that of therapy I cannot hope, in this brief talk, to give you any more than a faint idea of what we may be able to determine and what we may be able to do, but there is one thing I do hope to do and that is to arouse your interest sufficiently to have you make observations yourselves, and I am quite sure if I can do that I will need say little more, because the evidence is so plain that you will have no difficulty in corroborating what I tell you.

In recent years we have placed too much dependence upon laboratory methods—blood examination, analysis of gastric contents, analysis of urine, and so on—to the exclusion of some of the things that our predecessors in medicine knew very well. We have, in consequence, largely lost the art of careful observation of the things we see, feel, and hear. There are no things that are too trifling or of too little consequence to be carefully observed and carefully analyzed in examining the sick. We must recultivate our ability to observe carefully.

If you will take the trouble to examine the backs of your patients you will find that you will get data of value not only as to the conditions that exist, but also data which will be extremely serviceable to you in curing your patients. If a person starts in prejudiced, with the idea of finding certain things that he is looking for, the chances are that his judgment will be so biased that he will find them whether they exist or not. I have made it a rule to examine the patient first and listen to his story afterward so that my conclu-

sions will not be vitiated by the tale of the patient, and I believe that this is a good plan to follow. We know very well that if a patient comes into the office and tells us the history of the case with the belief that he is suffering from such and such a condition we are very apt to be swayed in our judgment and come to conclusions that are entirely unjustified by the physical signs that present themselves. Make the examination of the patient and then modify your judgment by the history. You will find that you are very much more likely to come to the correct conclusion if this plan is followed.

How can manual therapy affect the organism? If we take a few moments in consideration of some of the elementary principles of biology we realize the fact that every living organism is a mechanism which expresses its activity in response to changes in the conditions that surround it. In other words, we, as men and women, are machines that respond to changes in conditions that surround us. If an *amœba* is placed under the microscope and observed closely, it will show in a simple way all of the fundamental principles which serve to explain the activity of the higher forms of animal life. For instance it moves across the stage of the microscope. If in any way we alter the conditions surrounding the cell, as by pricking it with a pin, it will respond by actual movements. The prick of a pin will produce a contraction of the protoplasm. If a pseudopodium happens to be projecting from the opposite side from the pin prick it will immediately be withdrawn, showing that the cell possesses the power of conductivity. This mass of protoplasm responds to external irritation. It possesses one of the fundamental characteristics of living material, *irritability*. It possesses *conductivity*. It is found after a time to divide by simple cell division, and instead of one there are two. It possesses the power of *reproduction*. If the water which surrounds the *amœba* is examined we will find that oxygen is absorbed and that carbonic acid gas is given off (*respiration*). It also takes into its interior certain materials which are found in the water which surrounds it, *digests* them, *assimilates* them, and uses them for the production of energy. We will also find that the protoplasm in this little cell is in constant motion, and in very many of the *amœbæ* we find a clear space that has the property of rhythmically contracting and relaxing. This produces a certain amount of constant motion of the protoplasm. In other words, the *amœba* has a *circulatory apparatus*. This corresponds to the circulatory apparatus in the higher animals.

In man we have to deal with a social cell community made up of simple individuals which correspond to the *amœbæ*. And we should approach the study of physiology and anatomy and the study of disease from this standpoint and look upon the human being as simply a cell community made up of a large number of simple organisms, realizing that these simple cells are governed by the same laws and principles, modified, but not altered, because in the social organization of the cells they have undergone certain changes in form and specialization of function.

In the development of the organism of the higher animals, just as there is in the development of every social organization, certain individuals in the organism develop peculiarities which fit them best for the work they have to do, and very often they lose some of the primitive attributes. In the organization of the higher forms of animal life a certain group of cells became specialized in two of the characteristics of the simple cells, and these are irritability and conductivity. Irritability is the capacity to respond to changes in environment, and conductivity is the ability to conduct the results of changes in environment to different parts of the organism. Thus in the higher forms of animal life is developed a group of cells which make up the central nervous system. The community of cells which make up our bodies becomes so complex from the number of individuals present that it becomes necessary for some governing mechanism to be developed in order to control the activity of the various cells and prevent damage from occurring in distant parts of the organism. The nervous system is that part of the organism which responds most readily to changes in external conditions and which enables us to adapt ourselves to the conditions which surround us. We all realize the fact that if we go into a cold region we preserve our body temperature within very narrow limits, and the same is true if we are exposed to excessive heat. This is brought about by the regulation of the calibre of the blood vessels and the production and distribution of heat. This is accomplished by the central nervous system. This being the fact brings this point to mind; may we not so systematically change the environment of the body that we may in a measure modify not only the normal conditions of the body, but also be able to govern pathological conditions? That we may is borne out by clinical, embryological, and physiological evidence.

Physiologists have for years recognized that the vasomotor system consisted of certain cells, located in the spinal cord and in the medulla,

which send impulses to the muscular walls of the blood vessels, and also of sensory nerves which transmit messages from different parts of the body to the central nervous system. They have also recognized the fact that certain kinds of stimulation, or, I might say, changes in external conditions, bring about dilatation of the blood vessels, and certain others, contraction. For instance physiologists have recognized that the rapidly interrupted electrical current produces contraction of the blood vessels in the part supplied. If instead of the rapidly interrupted current we apply the continuous current, after a brief contraction dilatation of the vessels occurs. The same holds true of mechanical stimulation. It was with this thought in mind that I was able to explain satisfactorily that this is the result obtained in treatment by manual pressure along the spinal column. In other words, that repeated, brief pressure along the spinal column arouses the reflex constrictor nerves and brings about a certain amount of contraction in the blood vessels of the skin and muscles of the back in the region of the back treated. That this does occur can very easily be shown by very simple experiments, and it also undoubtedly produces at the same time a certain amount of dilatation of the vessels in the cord. On the other hand continuous pressure along the spine arouses the reflex dilators and brings about a certain amount of dilatation of the blood vessels in the skin and muscles of the back and a corresponding contraction of the blood vessels in the cord.

It may seem that this is a broad statement to make with very little actual evidence that could be demonstrated. However, that these results are obtained is borne out by actual experience in the treatment of patients; it is borne out by embryological evidence and experiments in physiological work. Whether this is the true explanation or not carries with it very little weight. The most important thing to bear in mind is that we get results, but one thing you can be quite sure of is that if we apply manual treatment along the spine, used with judgment which should come to us because of our education in medicine, we can do no harm, but in the hands of the ignorant much damage may be done.

Why should we neglect a valuable therapeutic measure for sentimental reasons or because we feel that we may be called masseurs? Our real object in life is to get our patients well no matter what means we use, and if we cannot do that we are not good doctors. You need not fear what the people will say about you. There has been a great deal of condemnation of manual therapy which has been the outcome of ignorance of its

real value and ignorance of the proper methods of application. In the ordinary application of manual therapy it takes no more time than it takes us to write a prescription. The idea has prevailed that it took from a half hour to an hour to treat a patient. We have had ground into us that muscle is needed, and the harder we do it the better it is for the patient. This is not true. Manual therapy is probably one of the sharpest instruments we have, and it must be applied with brains and not with muscle. A great many patients that we have to treat require no more than the pressure that would be produced by a half pound weight and less than ten minutes' time. That this does produce results is shown from day to day by the fact that patients get well, patients who have been under the ordinary therapeutical measures not only for months, but sometimes for years. As I said in the presence of some of you here, there is no reason why I should be able to do more than any of you may do. What I have done in the treatment of some cases that have been looked upon as incurable, can be done by any of you if you will take the trouble to observe your patients and apply the methods. It is not necessary for one to have brain power above the capacity of the ordinary individual or doctor, but it means that we must take the trouble to investigate and make use of all those things which are of value in the treatment of disease, and we must blame ourselves if we neglect any of those things which may help us get our patients well. If we will take the trouble to approach all of these things with an open, clear mind, with the idea of getting everything of value, and not allow our prejudices to interfere with our judgment, we shall have performed our duties to our patients and to ourselves, but if we allow our sentiments to vitiate our judgment we shall have failed in our duties as physicians.

I do not ask any one to accept manual therapy from my evidence alone. I only ask those who are interested in the matter to make the effort to determine the evidence for themselves, and I believe they will find a sufficient amount of very plain evidence that will enable them to make not only a better diagnosis, but will put them in a better position to help the patient get well. If in your practice you will take the trouble to examine the backs of the patients and discover all the physical signs you can, you will find there are lots of things of the existence of which you had no idea. A large class of patients come in with complaints of some minor trouble, such as an occasional attack of indigestion, constipation, etc., and when you examine the back in these cases you will find some fundamental disturbance of the nervous mechanism controlling the part of the organism affected. I

believe there are numbers of people who go through life constantly or periodically going to the doctor for what they consider some minor condition, who have had since childhood a disturbance of the nervous mechanism controlling the part of which they complain.

Above all, our duties as physicians are not alone those of curing patients when they get sick, but our chief duty is to prevent people from getting sick, and if you will take the trouble to examine the children that are brought to you and cure the minor disturbances, which do not always show themselves by distinct sickness, but which may determine sickness later in life, you will do much to further our progress toward that goal which is the highest duty of the profession of medicine, the prevention of disease.

110 SOUTH NINETEENTH STREET.

URETHROPLASTIC DISLOCATION.

By CARL BECK, M. D.,

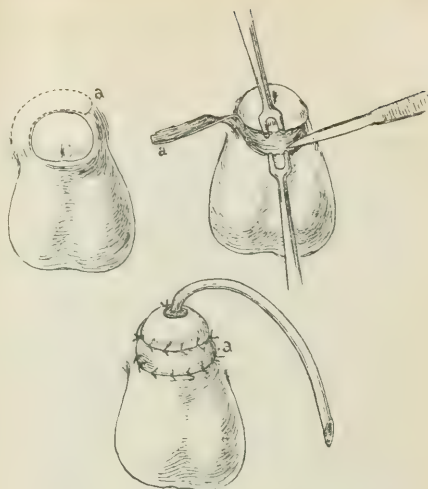
NEW YORK,

PROFESSOR OF SURGERY IN THE NEW YORK POSTGRADUATE MEDICAL SCHOOL AND HOSPITAL, VISITING SURGEON TO THE ST. MARK'S HOSPITAL AND THE GERMAN POLIKLINIK.

In previous publications on this subject I have given a warning against employing my method of dislocating the urethra whenever excessive tension is required to place it in proper position. The extensibility of the urethra varies, however, with different individuals, and therefore, while in one case an extensive dislocation may prove to be a success, in another it may be a failure, although under similar anatomical conditions. These conditions, of course, can be discriminated with certainty only after the urethra has been mobilized. Thus the decision by the *fait accompli* puts a great responsibility upon the skill and instinct of the surgeon in the proper selection of cases.

Recently, in the case of a boy four years old, I could not resist the temptation to mobilize the urethra, although it represented that unfortunate type of hypospadias, the scrotal. One of the factors which encouraged me to risk the dislocation method even in this case was the instinctive impression that there was sufficient material for forward displacement. This impression was founded somewhat on the possibility of pulling the penis forward together with a rubber catheter introduced into the urethra.

I found little difficulty in dissecting the urethra as far as the *pars prætrigonalis*. In fastening the orifice at the top of the glans a moderate amount of tension was caused, which was partly overcome by supporting the urethra by relaxation sutures of fine catgut. These sutures are meant to fasten the outer



FIGS. 1, 2, and 3. Rectangular preputial flap; a, top of flap

urethral wall to the sulcus of the new canal at various points. As a rule two are sufficient, both to be applied below the glans.

As far as the creation of a normal orifice at the top of the glans was concerned, I had complete success; but considerable retraction occurred, the penis appearing short and slightly incurvated. In a similar case (see *New York Medical Journal*, Dec. 8, 1900) I had made a plastic correction by perforating the very long prepuce with a bistoury and dilating it by lateral excursions, so that the glans could be pulled through the preputial gap. Then the skin above the newly formed urethra was



FIG. 4. —Covering defect of abdominal wall by scrotal flap.

dissected backward toward the scrotum, so as to form a gaping wound surface, into which the preputial flap was inserted. Thus the flap appeared like a keystone between the lower margin of the glans and the retracted scrotal skin. After union had taken place the penis appeared to be elongated.

In this case there was an abundance of preputial tissue attached anteriorly, and for this reason I utilized the prepuce in a different manner. As indicated by Fig. 1, I formed a rectangular preputial flap, the top of which was at *a*, and turned its base (Fig. 2) so that it covered the wound surface made below the glans, for the purpose of relieving the retraction. The top of the flap (*a*) was then transferred to the opposite side (Fig. 3). While the penis appears rather small, yet the result as a whole is good, and further development promises more improvement still.

In the absence of the prepuce, portions of the scrotum can be utilized for the same purpose, as has been shown by Lauenstein and others. How well the scrotum can be used for covering large defects, caused by luetic as well as cancerous destruction, after restoring the urethra by the dislocation method, is illustrated by Figs. 8 and 9 of my publication in this *Journal* (Dec. 8, 1900). Fig. 3 (*l. c.*) illustrates the good use which can be made of the scrotum in destructive processes of this kind.

In a man of twenty years of age, whose suprapubic region was the seat of extensive luetic destruction, I mobilized a large portion of the scrotum and pulled it up far enough to cover the defect completely, fastening it there with a row of interrupted iodoform silk sutures (Fig. 4).

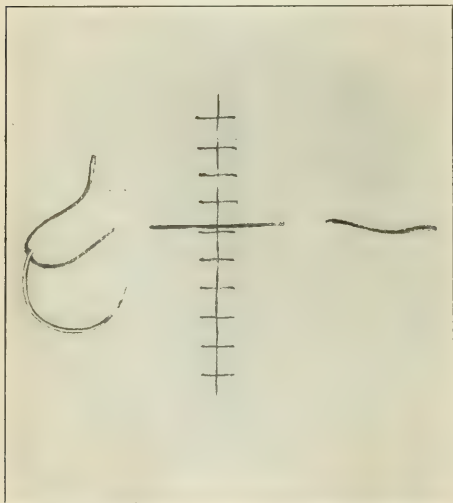


FIG. 5.—Relaxation suture introduced over simple suture.

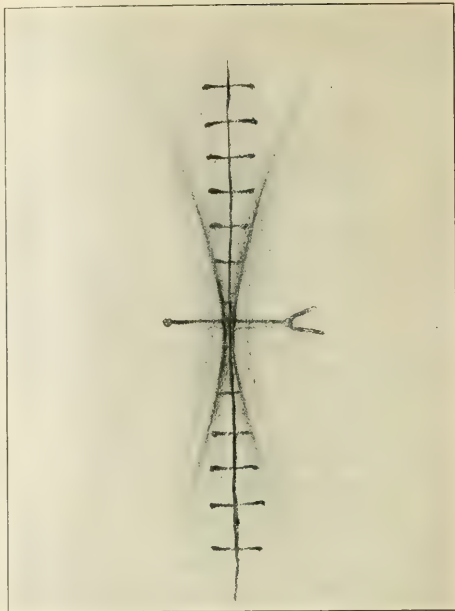


FIG. 6.—Relaxation suture complete.

I may again call attention to the necessity of relaxation sutures such as I describe, whenever any amount of tension is expected, especially in plastic operations for inguinal, umbilical, or ventral hernia, after perineorrhaphy, or in ligamentopexis, etc. The safety relaxation sutures are applied laterally from the wound margin, so that there is no direct contact with the wound line. (Fig. 5.) Strong iodoform silk, armed with a needle of medium size, is introduced about one and one quarter inch, and brought out three fourths of an inch distant from the wound margin. The same procedure is repeated at the opposite side, so that the relaxation suture overlaps the sutured wound line. (Fig. 6.) When the relaxation suture is tied, any possible tension is taken away from the wound margin, and it seems to me of little importance what kind of suture material is used below. The separation of the wound margins, superficial as well as buried, is rendered impossible as long as the relaxation suture holds. As a rule one relaxation suture suffices. In the case described three were needed, as a certain amount of tension had to be overcome all along the upper wound margin. In abdominal cases I use thin catgut for the deeper layers as well as for the integument, while for the relaxation suture I use silk invariably.

As emphasized in the publication mentioned (*N. Y. Med. Jour.*, Dec. 8, 1900), the dislocation method



FIG. 7.—Epispadias.

can also be utilized in epispadias. Parham in his classical publication (*New Orleans Med. and Surg. Jour.*, Jan., 1901) describes a case in which with admirable success he combined the ingenious technics of Cantwell with the fastening of the dislocated urethra at the tip of the glans. Parham also suggested cutting off the urethra at its junction with the glans.

In such cases a scrotal flap is sometimes found useful for protecting and strengthening the suture line of the new urethral canal, just as I advised it for unfavorable cases of perineal hypospadias (see Fig. 12, *N. Y. Med. Jour.*, Dec. 8, 1900).

In a boy four years old (Fig. 7) I tried to protect



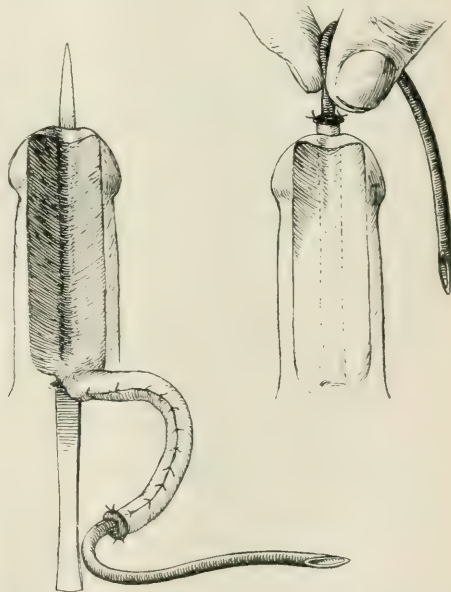
FIG. 8.—Large flap from suprapubic region.

the suture line after mobilizing the urethra and pulling it forward, by a scrotal flap. But the scrotum was so poorly developed that the transplanted flap proved to be too small and the result was imperfect.



FIG. 9.—Plaster of paris dressing with copal varnish.

The fact that the patient was extremely nervous had also contributed to the failure. A few months thereafter I made another attempt, this time trans-



FIGS. 10 AND 11.—Mobilized urethra pulled through penile tissues.

planting a larger integumental flap from the suprapubic region (Fig. 8). At the same time I surrounded the pelvis by a plaster of paris dressing painted with copal varnish. A small hole was left in front, just large enough to pass a rubber catheter through it, which was left *in situ*. This precaution was taken in order to prevent the patient from disturbing the area of operation, as he had done before. Siphon drainage was employed until

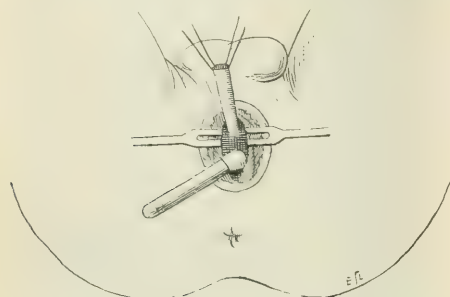


FIG. 12.—Urethral stumps in apposition.

a week after the operation, which proved to be successful this time. (Fig. 9.)

In a boy seven years old I recently pulled the mobilized urethra, after it was sutured, through the penile tissues. Then I fastened it at the top of the glans just as I do after perforating the glans in hypospadias. I approached the posterior surface of the penis as nearly as possible, avoiding any communication with the former bed of the epispadiac groove. After fastening, the penis appeared as it does after tunneling the glans for penile hypospadias, with the difference that the orifice was situated further backward (see Figs. 10 and 11). The result in this case was more satisfactory than in the former. The remaining anterior defect was filled up by a scrotal flap.

I conceived this idea of tunneling the penis as well as the glans for the purpose of urethral dislocation, when I observed a tendency to partial separation in a case of perineal hypospadias, after I had formed a new urethral canal from the hypospadiac groove.

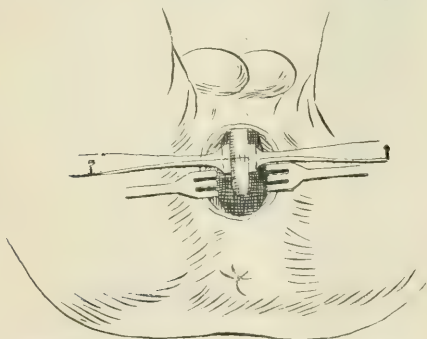


FIG. 13.—Mucous membranes united with fine sutures.

There being abundant tissue, I felt encouraged to isolate the upper portion of the newly formed urethra, not leaving its posterior surface in connection with its penile tissue, and to pull it through the longitudinal tunnel made through the penis.

As mentioned in previous publications, the dislocation method can also be utilized in a retrograde manner and in many pathological conditions of the urethra, and also in the female.

This was recently corroborated by no less a surgeon than Koenig, who called the result he obtained in utilizing the principle of forward dislocation in a case of partial resection for carcinoma a surgical triumph. In the publication mentioned he said: "In all destructions of an ulcerative or traumatic nature my method will also come into consideration." In a case of formidable destruction of the urethra by a phagedenic chancre (*N. Y. Med. Jour.*, Dec. 8, 1900, Figs. 8 and 9), I succeeded in obtaining a perfect result. Not only was the glans ulcerated on the twenty-four year old patient, so that two glandular halves had formed, but the anterior third of the pendulous portion of the urethra was also totally destroyed. After the ulceration process was stopped under energetic local treatment, the necrotic urethral remainder was removed and the normal urethra situated behind mobilized and pulled forward. (Patient presented to the Medical Association of the Greater City of New York, October 8, 1900.)

Since that time I have had repeated opportunities to test the dislocation method in sclerotic conditions of the urethra, generally caused by gonorrhœal strictures.

Wherever there is an impassable stricture, urethral resection may come into consideration. In the presence of much fibrous periurethral induration, internal urethrotomy means a temporary relief only, while excision, followed by urethral dislocation, means a radical cure.

The technics of the operation is as follows: After the patient is brought into the lithotomy position, a medium sized metal catheter is introduced and gently pressed against the entrance of the strictured area. If firmly held by an assistant it will serve as a landmark. The indurated area is now exposed by a three inch incision made in the raphe. The tissues are divided step by step until the urethra is reached. The sclerotic area generally extends into the neighboring perineal muscles. After its length is ascertained, the urethra is grasped with toothed forceps, raised, and carefully freed from the surrounding tissues. After isolation is perfect, and not until then, the indurated portion is excised at its central as well as its peripheral end. The urethral stumps are now caught with silk ligatures so that they can be pulled forward and further mobilized until they can be placed in apposition (Fig. 12).

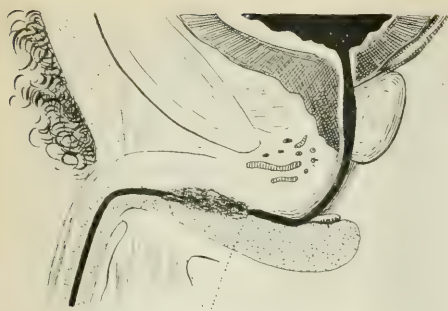


FIG. 14.—Gonorrheal stricture; dotted line shows extent.

If mobilization of the central end offers any technical difficulties, a large catheter is introduced and serves as a handle during dissection. After the mucous membranes of both urethral ends are united with fine catgut sutures (Fig. 13), a large rubber catheter provided with a shield (described below) is introduced and fastened at the top of the glans. A row of periurethral sutures is then added, and the skin wound is closed with interrupted silk sutures. No wound drainage is used.

In a man, thirty-five years of age, with a gonorrheal stricture twelve years old, the condition had been aggravated by repeated urethrotomies, internal as well as external, which were necessitated by urine infiltration. Although the cicatricial indurations had in fact displaced even the superficial fascia (Fig. 14), exsection could be completely done. Immediately afterward a large sound could be passed, while before it was only possible to pass the stricture by a filiform bougie, and even this was sometimes impossible.

All these urethroplastic procedures are of a more or less delicate nature, especially so in the case of children. Delicate operations require delicate instruments, and those commonly used do not, in my experience, answer this desideratum.

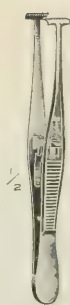
A thumb forceps, as generally used, may tear the thin urethral membrane of a child. The retractors

FIG. 16.
Toothed retractor.

holding the reflected skin flaps must hold the tissues without injuring them. The knives for dissecting out the urethra, as well as the bistoury used to perforate the glans, must be of a special and delicate construction.

I therefore requested the Kny-Scheerer Company to construct for urethroplastic operations a special set of instruments (Fig. 15)

containing all that are needed for that purpose, viz.: A small, short scalpel for the dissection of the urethra from its bed, a long bistoury for the perforation of the glans or the penile substance, two toothed thumb forceps, delicate blunt scissors curved on the flat for blunt dissection, a toothed retractor (Fig. 16), two specially adjustable holding forceps (Fig. 17), which may serve as retractors at the same time, two small elastic artery clamps, various round needles, a special needle holder, and a rubber catheter provided with a perforated shield.

FIG. 17.
Toothed adjustable holding forceps.

THE SKIAGRAPHY OF THE FUTURE.

By J. RUDIS-JICINSKY, A. M., M. D., M. E.,

CEDAR RAPIDS, IA.

Nearly ten years have passed since the first shadow picture, skiagraph, or radiograph was made with the aid of the marvelous Röntgen ray, and it seemed to open a path to other wonders which soon followed, and to-day we not only see, but photograph objects unseen by the unassisted eye. Like the work of some fabled device the Crookes's tube is the key that unlocks a world of wonder in medicine and surgery, the invisible in the living human body is made beautifully visible, and of practical value in diagnosis, which is not only possible, but absolutely correct. With the development of our special tube with prolongation, other tubes with all the accessories of our apparatus to-day, we are enabled to produce skiagraphs with all the detail possible, with all the perspective in the picture, depth, internal structure and substance of the bones, and a beauty which may be appreciated only by an experiment. We can photograph deeper structures in adults, such as the hip, spine, and shoulder. If we succeed in obviating the diffused rays throughout the mass of tissue which is interposed between the tube and the sensitive plate,

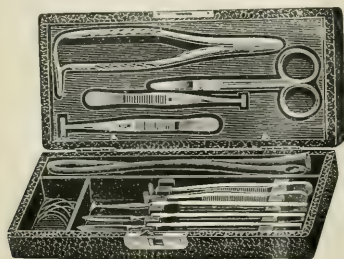


FIG. 15.—Set of urethroplastic instruments.

we will get not only clear pictures, with sharp contrast, but pictures altogether different from others made thus far. All of the forms of apparatus, which would obviate the diffusion, as for instance the lead box, tungstate of calcium,

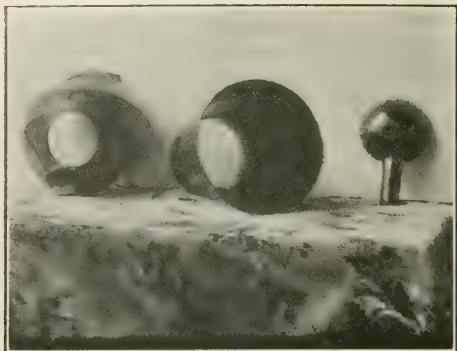


FIG. 1.—Parts of the "protector."

screens alone, etc., had the disadvantages of being clumsy to handle, or imperfect in intensification. To eliminate all of these objections we have used in our laboratory for years a sort of "protector" with a funnel-shaped cylinder, and specula. I have promised to the readers of this *Journal* the description of this, my own device, and here it is.

The protector (see Fig. 1) is a home made combination of a protective screen and shield, mask,

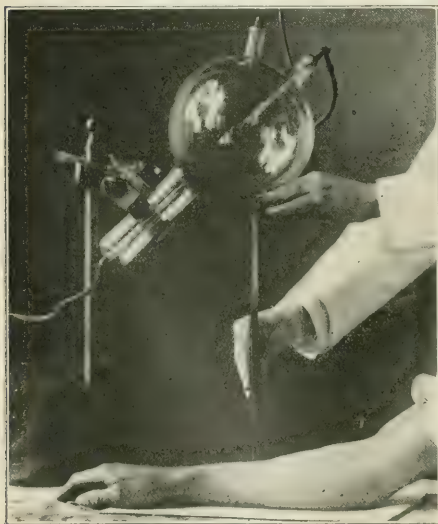


FIG. 2.—Finding the proper position and measurement.

and a lead box, with diaphragms and a metal cylinder and specula for precluding the diffused x rays. The device may be used with great advantage in therapeutic work, in diagnosis, in fluoroscopic examination, and skiagraphy, giving most excellent results not obtainable without it. During the whole exposure of a patient we may observe the tube in action anteriorly and posteriorly, without disturbing the patient. In this way we not only protect the patient in prolonged exposures, but protect also ourselves during such operations and for the future from medicolegal complications, because there is no burn possible.



FIG. 3.—In action connected with Kienraide coil.

Any tube of a good make works with this arrangement more steadily, the spreading of the rays when the tube becomes high in vacuum is avoided, and so called concentration becomes possible, giving the illumination of the part exposed only. The illumination can be regulated at will. Note (Figs. 2 and 3) that the main opening is situated in such a manner that the best rays only may be employed.

With the help of this simple device we see the image on the fluoroscopic screen much sharper and clearer, without any special fluoroscope, the ordinary fluoroscope serving in all cases. In examining the hand, or some other thin object with a low vacuum tube, no particular difference is seen, but in viewing the hip joint with a medium high tube the difference in contrast is very marked, the diaphragms or cylinders with open-

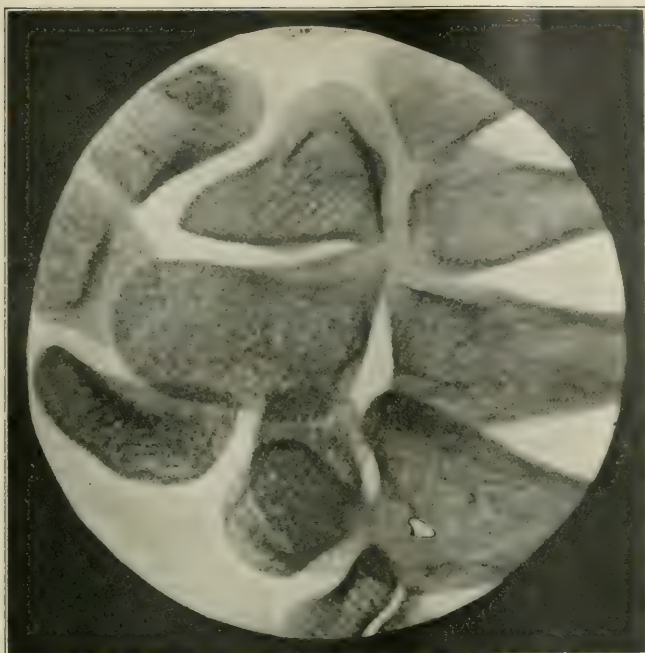


FIG. 4.—Carpus, showing internal structure of bones, substance, etc., with all possible detail (enlarged). Kinraide coil exposure two seconds with a screen. Alternating current. Three plates exposed at once. Lead plate underneath.

ings technically perfect and accurately measured, enable us to preclude the diffused rays or screen them off, except the parallel rays, which are absolutely required to give us the desired shadow and the desired illumination of the part exposed. In skiagraphy with intensifying screens against the film of the photographic plate, and a lead plate underneath, the lead box can be dispensed with altogether, and we shall get beautiful pictures, clearer, and with more detail (Fig. 4). The whole arrangement and accessories to the protector weigh only about one pound and one ounce, and are easily portable with the tube, and in the same compartment, or the same box without other attachment.

DIRECTIONS.

1. Cover the tube with the protector containing lead foil inside, and papier mâché outside, and select the diaphragm or the opening suitable to each individual case. Secure the protector at the anode and the cathode with bands to the tube, or if the tube is of smaller size, simply lay the same into the shield, the anode disc being in the middle of the field to be illuminated, and at the usual angle found, as in Fig. 2.

2. In fluoroscopy and skiagraphy both, illuminate only the parts examined to get more contrast and sharpness in the pictures and shadows. Select the proper cylinder and observe the action of the tube anteriorly through the small window, which must be closed again in skiagraphy. To concentrate the rays use the special device in the shape of a funnel, or a metal cylinder, which may be raised or lowered around the openings, which again may be made larger or smaller according to the illumination necessary. If we wish, the action of the tube may be observed posteriorly also. The body of the protector, being of lead, has not only the screening off properties, but also discharging qualities, the spreading of the rays being impossible, and the work of the tube is

made steady. It may be moved with the tube in any desired direction, or put in any desired position with the tube on the same stand, or we may hang it with the tube over our operating table as we please and at any distance. The protector with the tube is lowered to fit over the part to be skiagraphed, and the metal cylinder is pressed down into the skin, and the picture taken through it.

3. To find out which opening shall be used in each individual case, use the fluoroscope and observe the pencil of the rays of the best order.

4. The opening rings are applied very easily, but have to fit properly and to be adjusted as near as possible to the tube, or rather to the anodal disc in the tube. In this way the diffused rays will be precluded.

5. The distance from the tube, the length of the cylinder, through which a part and the photographic plate must be exposed, to secure not only the illumination, but essential correctness and non-distortion has to be found with the help of our fluoroscope. The position of the subject has to be such that the best rays penetrate properly through and through the subject exposed, and only at the area examined. This depends alto-

gether upon the proper selection of the opening in the body of the protector. In skiagraphy, use the funnel shaped device always, with the largest or smallest opening. See that only the area within which a body of any thickness will shadow a right angled relation of the parts at a certain distance is illuminated and that the dry plate is as near as possible to the lesion sought. If the intensifying screen is used, the tungstate of calcium crystals have to lie right against the film of the dry plate in the two envelopes, or the casket, with a lead plate underneath. The intensifying screen must be of very fine grain.

WHEN AND HOW SHOULD THE TUBERCULOUS PATIENT BE TREATED?*

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It is the sad experience of all who treat pulmonary tuberculosis, that the great majority of individuals who seek aid are not seen until they have advanced to such a stage of the disease that recovery is beyond question. It is the experience of such institutions as Rutland, where it is understood that none but early cases need apply, that more than fifty per cent. of applicants must be rejected, and even then many unfavorable cases are taken.

There seems to be a very vague and erroneous idea on the part of both laymen and physicians as to when the individual is suffering from pulmonary tuberculosis, and also as to when he should begin to take active measures for the cure of the malady when it has been determined that the disease is present.

The patient thinks, as long as he has no pain in the chest and as long as he is not expectorating ounces of purulent sputum accompanied by a cough which annoys him day and night, that he cannot have anything the matter with his lungs, and when this stage has been reached he only begins to fear that the cough will "go to his lungs," unless something is done for it.

Pulmonary tuberculosis should be treated as early as it can be detected, and it can be detected before there is any serious damage to the lungs, before bacilli appear in the sputum. The medical profession has mastered appendicitis by early diagnosis, followed by immediate and energetic treatment. The same has been done for diphtheria. The same must be done for tuberculosis.

While from seventy-five to ninety-five per cent. of early cases of tuberculosis can be cured, not more than thirty per cent. of advanced patients can hope to have their disease arrested, and to the far advanced not even this hope can be offered.

It should be remembered that nearly every individual suffering from incipient pulmonary tuberculosis can be cured by appropriate treatment, and it must also be remembered that nearly every one from whom this is withheld passes on to the advanced stage and dies of pulmonary consumption.

While the fact that pulmonary tuberculosis is a very curable disease, the most curable of all chronic maladies, should be branded upon the minds of the medical fraternity, and while this blessed hope should be speedily made known to the world at large, it should be accompanied by an equally important truth, that the most curable stage is the early stage, before serious harm has been done to the lung and before the general vitality of the patient has been undermined.

In recent years it has been demonstrated to the profession that an early diagnosis, followed by immediate operation, will cure nearly all cases of appendicitis, and to-day professional opinion endorses this so strongly that a man almost fears to treat a case in any other manner. It now remains to demonstrate the same curability of tuberculosis. The evidence is at hand. The facts are obtainable, but they have not been impressed upon the profession.

Skillful treatment of tuberculosis in the incipient stage will show a mortality almost as low as early operative treatment of appendicitis. Even where breaking down has occurred and bacilli appear in the sputum and a large area of lung tissue is involved (usual so called first stage) most sanatoria secure happy results in at least sixty-five per cent. of cases. When we consider that the earliest cases rarely go to our institutions, we must call this an excellent showing.

While the clinical symptoms of early tuberculosis are not distinctive, and may easily be confounded with the signs of other diseases, nevertheless they are sufficient to put us on the alert. The clinical symptoms are at least sufficient in nearly every case to place tuberculosis in the list of diseases that must be excluded before a diagnosis can be reached. Here let me emphasize what I said on a former occasion: "A careful physical examination, made by one who is able to detect the delicate changes produced by the presence of early tubercles, together with painstaking observation and inquiry into clinical symptoms, will

* Read before the Pasadena branch of the Los Angeles County Medical Society, November 15, 1904.

either detect or exclude tuberculosis in the majority of cases before the advent of the open stage of the disease with its bacillus-bearing discharges."

It should be remembered as an important aid in making a diagnosis that tuberculosis is most apt to manifest itself when the individual's resisting power is below normal. After a prolonged physical overexertion, or mental strain, or when reduced by disease, tuberculosis often takes advantages of a man's weakened condition.

EARLY SYMPTOMS.

Some of the symptoms which should direct our attention to tuberculosis are:

1. A general run-down condition. The patient finds his energy is waning, notes a decrease in his powers of endurance; ordinary tasks become hard, sleep fails to bring rest, the appetite lags, a few pounds of weight may be lost. This condition, if it is presented to the physician, is too apt to be ridiculed, or to be treated by some simple tonic and assurance that nothing is the matter. In such cases tuberculosis must always be thought of.

2. There is apt to be a slight rise in temperature. This rise does not need to be great. It is usually only of a fraction of a degree and occurs most often in the afternoon. In order to detect it, a two hourly chart should be kept. Sometimes after an invasion of tubercles the disease becomes apparently quiescent and the rise in temperature subsides, but in such cases it can usually be detected by causing the individual to exert himself to the point of becoming tired. In women it will usually show at the time of the menses.

3. An increase in the pulse rate is usually noted. This irritability is especially noted in young persons, and is perhaps of toxic origin.

4. Another symptom sometimes present is a hoarseness, which is perhaps due to the irritation of the vagus.

5. The disease is frequently traced back to a cold from which the patient was very slow to recover. It is not natural for a simple cold to last three or four weeks, and all such should be looked upon with suspicion and be carefully investigated. These patients ascribe a great deal to "colds" that is simply due to the natural progress of the tuberculous process. Unless this erroneous idea is corrected, they will shut themselves up in the house and deny themselves the fresh air which is essential to their recovery.

6. It is unfortunate that we do not have any really definite, unmistakable sign of early tuberculosis, which presents itself in all cases. However, there is one symptom that does present it-

self often, of which I am sorry to say, advantage is not always taken. I refer to hæmoptysis. In a certain percentage of cases hæmoptysis is the first sign to the individual that he has any trouble. He goes to his physician who too often promptly relieves him of all anxiety and at the same time of the opportunity of getting well, by telling him "that it amounts to nothing, it was only from the throat." Throat hæmorrhages are very, very rare, and this initial hæmoptysis should be the means of calling attention to an existing tuberculous process, thus saving the life of nearly every individual in whom it occurs. But alas! this is not true. These patients are comforted by false hopes and lulled into a forgetfulness of their condition until the disease extends and they find themselves suffering from advanced tuberculosis. Now that we know of the curability of early tuberculosis, what a pity that the phrase "throat hæmorrhage" should ever have been coined! The time will shortly come, if, indeed, it is not already here, when it will be as culpable to tell a patient that an initial hæmoptysis is "from the throat" as it would be to treat appendicitis as "cramps." Every case of "blood spitting" should be considered as a case of tuberculosis, unless proved otherwise.

7. Pleurisy is a symptom that should be carefully watched. It is certainly tuberculous in many, many cases. Carefully compiled statistics show that many individuals who have active tuberculosis had a premonitory pleurisy months and often years before, and I would call attention to the necessity of carefully examining these patients for tuberculosis and of carefully watching them in after years.

8. A slow recovery after disease, especially after the acute febrile diseases, should be investigated for tuberculosis, for it is a frequent cause of slow recuperation, and during this period of low vitality, it often makes rapid progress.

I do not want to be understood as saying that it is an easy matter to detect incipient tuberculosis, for the physical examination of these cases is a delicate matter, the most difficult of all stethoscopic work. The point that I wish to emphasize is, that there are clinical symptoms present in the early period of nearly all cases, which force the exclusion of tuberculosis before a diagnosis can be made. The diagnosis will require the trained ear of one who frequently examines chests; and even then may have to be confirmed or disproved by the tuberculin test. In passing, let me emphasize the importance, the reliability, and the harmlessness of this important measure. I know it is feared by some; but how can a man

condemn this procedure on the ground of danger and advocate exploratory incisions with the double danger from the operation and the anæsthetic? In this connection, permit me to call attention to the recent studies of tuberculin made in the Saranac Laboratory, which confirm the harmlessness of this test.

EARLY TREATMENT.

When the diagnosis of tuberculosis is once made, what is to be done? This question may seem foolish, nevertheless it is well worthy of consideration. The tuberculous individual usually feels able to go about his work, and as a rule, is permitted to do so. Is this right? Is this justice to the patient and those dependent upon him, if such there be? Is it justice to the medical profession? Most emphatically it is not.

It is very unfortunate that the early symptoms of this disease are not sufficient to make the patient feel ill. If they were, the disease would be easier to cure; but since they are not, the burden is upon our profession. We must not allow the personal desires of the patient to militate against his recovery.

It is my practice to advise every person afflicted with pulmonary tuberculosis to desist from work for a time and to take energetic measures for regaining health, and I am happy to say that I have never had a case of tuberculosis develop in my practice and a patient die of the disease, since I have treated them in this way.

While tuberculosis is a curable disease, yet it is a serious one and it must not be treated lightly, for a life is threatened in every instance.

It is sometimes said that it is wrong to subject these early patients to the annoyance and expense of getting well, because they will often get well of their own accord. Let the innumerable deaths of those who have been neglected answer this supposed argument. If the physician was to treat only such patients as would be unable to live without his aid, he would be compelled to have the power of reading the future, and much of his usefulness would be eliminated. The man who makes this argument in case of tuberculosis must equally criticise the treatment of most cases of pneumonia, typhoid fever, and other acute febrile diseases. He must also condemn the operation for appendicitis and gallstones, especially during the quiescent stage, for how can he tell that these patients will ever have another attack, if they are let alone? We ask the exercise of the same judgment and common sense in dealing with tuberculosis that we do in dealing with other maladies; no more, no less; and we believe that we should fall short of our duty as physicians and

fail in our endeavors for our patients, if we should do otherwise than advise immediate treatment when the diagnosis of tuberculosis has been made; for, when the process is sufficiently extensive to cause recognizable signs, the chances are against the individual without intelligent help.

What should be the nature of this treatment? In the first place, it should be thorough. In order to be thorough, it must be carried out under the supervision of the physician, for there are very few people who will follow out a plan of treatment, if left to themselves, and especially is this true when they feel in fairly good health.

The best place to treat such patients is in a sanatorium, where they are forced to care for themselves, and where everything can be done to help restore their health. My patients often tell me that their physicians have told them that they were not really sick enough to go to a sanatorium. This comes from a misconception of the nature of such an institution. A sanatorium is a place to cure tuberculosis, and tuberculosis is most curable when treated in its incipency. In the history of a case of tuberculosis there is never a time when it is too early for sanatorium treatment.

Often when tuberculosis is diagnosed, the patient is ordered to the country or the mountains, or at least to make some change; and as a rule in these early cases the patient improves. Often the disease quiets down and the patient resumes his work. This has been accomplished by the sacrifice of a little time and at a comparative small expense.

Why not recommend this change then instead of institutional treatment? Let the after history of cases treated in the two ways tell. Tuberculosis is a disease which heals slowly. This so called recovery of health which follows change is often only apparent. It takes months to get well of incipient tuberculosis. The patient who simply makes a change of surroundings has only the change and rest from which to derive his benefit. He returns to work, knowing nothing of his disease or the things which are necessary to retain the health to which he has been apparently restored. On the other hand, the individual who has been treated in a thoroughly equipped institution has the benefit of the rest and change. He has appropriate food, the proper amount of rest and exercise, a thorough enforcement of the fresh air principle, and besides, has advantage of all active measures which science knows to be of value. He returns to work after a few months when all active symptoms have disappeared, but he well understands that it will take a year or

two to make the cure permanent. He is educated in the care of himself and thus prevents a relapse, while the individual who has simply made the change sooner or later is apt to break down again. His apparent saving has been a loss, and with it perhaps has come the loss of health and life as well.

It is positively wrong to send a patient with tuberculosis away from home to shift for himself before he has been thoroughly trained as to what to do. It is just as rational, and it would be no greater injustice to the individual, to allow a pneumonia or typhoid fever patient to shift for himself as to allow one suffering from pulmonary tuberculosis to do so. Individuals suffering from this disease often come to our western health resorts and tell how their physicians, upon discovering the disease, advised them to go away before another day rolled around, just as though there were a specific climate somewhere that would somehow in some mysterious manner cure them. How much better would a little wholesome, rational advice have been! The cure of tuberculosis must be based upon commonsense.

If a physician has not a sanatorium where he can take his patients, he can give them good training and intelligent treatment in their own homes and make them aware of the nature of the disease, and as to what is necessary to cure it. Then when trained he can send them away if necessary. When a change of climate is advised, the patient should be instructed to place himself in the hands of some competent physician when he arrives in the new country.

In treating tuberculosis, the first essential is for the patient to thoroughly understand that whether or not he gets well depends on his own individual effort. A physician cannot cure a tuberculous patient, but he can make it possible for the patient to cure himself.

In the way of treatment, these patients need fresh air all the time. If in our climate, they can live in a tent with open sides, or on an open porch. If they must stay in the house, they should have a light sunny room well ventilated, with several windows, if possible, and the bed should be drawn near the windows so as to get the fresh air.

The patient should be put through a process of hardening. He should be in the open air all the time; in winter it is usually unnecessary to raise the temperature of his room above 60°, except when he is dressing in the morning and when undressing, and he should have a cold sponge bath every morning. After a short period of such treatment he will never mention "draught" and will feel almost immune to "taking cold."

In passing, let me say a few words about the open air treatment of tuberculosis, which is emphasized from every quarter to-day. The lay press and the professional journals are full of "open air" treatment. This is all well and good. I am a thorough believer in it, but I believe it is time to sound an alarm and call a halt. The cause of the tuberculous patient is in danger of suffering great injury. Pure air is one of the essentials in treating tuberculosis, but it is not all. The idea is becoming prevalent that all that is necessary for the cure of tuberculosis is "open air." Nothing could be farther from the truth. These patients need most careful attention and guidance. The results from open air alone are not going to be satisfactory, and then there will be a revulsion of feeling, when the failure should not be laid to the measure, but to the method. The most absurd things are done in the name of open air. The teachings should go forth that open air is only one measure in the cure of this disease and that, to be most successful, it must be used intelligently and combined with other measures which are known to be of value.

As long as activity is present in the chest and as long as there is a rise of temperature, the patient should take very little exercise, especially should he avoid tiring. After these have subsided, then he should exercise by degrees until he is taking an equivalent of a several miles' walk each day.

These patients must have good nourishing food. Eggs, preferably raw, milk, and meat, together with a liberal amount of fat in the form of butter and bacon, should be the basis of the diet. Easily digested vegetables and fruits are also valuable in keeping the appetite from tiring. All indigestible food, pastry, and sweetmeats are to be studiously avoided. A very important measure in all these cases is hydrotherapy. The morning cold rub, the half bath, and the sheet bath are all measures that can be carried out in homes, and they are measures of great importance in treating the disease. They are excellent tonics to the nervous, circulatory, and respiratory systems, and have the effect of increasing the appetite, aiding the power of digestion, and promoting assimilation and excretion.

The tuberculin preparations in careful hands have shown themselves to be of great value. There is no question that they promote healing in tuberculous areas, and they undoubtedly confer a certain immunity upon those so treated.

The chemical rays of the spectrum, whether taken from the sun or an arc light seem also to be of value. The beneficial action is due perhaps

in part to the action of the light upon the blood, partly to its stimulating properties, partly to its germicidal effect. While this is something that cannot be utilized except with special apparatus, yet I wish to draw attention to it as a field of therapy well worthy of investigation.

These measures, just described, must not be used in any careless, haphazard manner, for they are all capable of doing harm as well as good. However, if they are employed with skill, after a careful study of the needs of each individual patient, they will afford either relief or cure to a very large percentage of tuberculous individuals. But it must be remembered that success in this field of therapy depends on a close attention to details. Things must not only be done, but they must be done to the right patient, at the right time, and in the right manner.

If tuberculosis is ever to be mastered, it must come through early diagnosis and immediate, energetic, rational treatment. To attain this end, the earnest cooperation of the entire medical profession is required.

THE ADDITION OF CALCIUM SALTS TO NUTRIENT BROTH. A RELIABLE AND CONVENIENT METHOD FOR GROWING THE PNEU- MOCOCCUS, MENINGO- COCCUS, AND CER- TAIN OTHER BACTERIA.*

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During the course of some work on the pneumococcus carried on at the research laboratory the need was felt for a culture medium which did not contain any animal body fluids (ascitic fluid, blood serum, etc.). Plain broth was found almost worthless for the pneumococcus, for while one or two generations might grow if planted from blood agar, the growth soon died out, making continued transplantations from broth to broth impossible. Nor did careful neutralization of the broth to phenolphthalein nor even slight alkalization yield any better results. The addition of glucose, as is well known, does cause a luxuriant growth of the pneumococcus, but the production of acid in this case is so great that the cultures die very quickly and therefore need transplantation every few days. The writer felt that it might be possible to neutralize most of this acid as it was produced and thus obtain a broth

possessing all of the advantages of glucose broth without its disadvantages. For this purpose calcium carbonate was employed, at first in the form of powder and later, because of several advantages, in the form of pieces of marble.

A number of strains of pneumococcus were subjected to a critical comparative test in a series of about twenty different culture media. On transplanting the cultures every day or two it was soon found that certain of the media, although they yielded a profuse growth, were unreliable; i. e., a growth was not always obtained with each inoculation, even though the culture was still alive. In order to carry such a culture on it was often necessary to reinoculate from the same culture, using, however, a larger amount. Among these unreliable media were glucose broth and glucose broth plus marble. Curiously enough *plain broth with marble, but without glucose*, yielded a moderate growth unfaithfully with each transplantation.

On testing the acidity of the cultures in the various media it was found that large quantities of acid were developed in media containing glucose alone, or glucose and calcium carbonate, while small quantities of acid developed in ascitic broth or even in plain diluted ascitic fluid. The cultures in plain broth plus marble on the other hand were usually neutral, though a very small development of acid has been observed.

When plain broth is inoculated from an ascitic broth culture of pneumococcus, there frequently is not only no increase in organisms, but an actual decrease. When marble is present there is a growth right from the start. This fact cannot be reconciled with the assumption that the marble acts only by neutralizing acids formed. On reviewing these data Dr. Park suggested that the virtue of the marble might reside in the calcium and not merely in its neutralizing power. Two other salts of calcium, the chloride and the sulphate, were therefore tested. The former was used in solution, one part to two thousand of broth, the latter was used in pieces like the marble already mentioned. My experiments with these two salts indicate that *it is the calcium element, in part at least, which favors the growth of the pneumococcus*. Calcium carbonate (marble) and calcium sulphate (gypsum) are ordinarily regarded as insoluble in water. Nevertheless, a small trace of calcium must pass into solution in order to account for this effect on the growth of the pneumococcus. Since marble also serves to neutralize some of the acid formed, it would seem preferable to the other salts of calcium. Further experiments, however, are necessary to determine this point.

* Read before the New York Pathological Society.

As already stated pneumococcus cultures in media containing glucose die off very quickly. It was not found that the viability of such cultures was increased by the presence of the marble. This is not surprising, for our titrations showed that the marble failed to neutralize considerable quantities of acid. On the other hand, in plain broth plus calcium carbonate (marble broth) the cultures lived just about as long as those in ascitic broth. Out of three different strains tested, one was still alive at the end of thirty days. Out of four, three were still alive at the end of seventeen days.

A point of considerable importance is the effect produced by continued growth in a medium on the virulence of the organism. The cultures tested for this purpose had been grown for fourteen consecutive generations in marble broth. None of them seemed to have lost any virulence when compared with an ascitic broth culture made directly from the blood agar stock cultures.

A peculiarity of the marble broth cultures observed several times was the formation of short chains, while a control culture in ascitic broth showed only two's. Besides this, the absence of anything indicative of a capsule makes this medium a poor one for bringing out the characteristic morphology of the pneumococcus. On the other hand, cultures of the so called *Streptococcus mucosus capsulatus* when grown in this medium take on a form practically the same as that of an ordinary pneumococcus.

In preparing this medium, marble is broken up into small pieces in an iron mortar. The finer pieces are removed by screening through an ordinary wire crate. The others, about the size of small dice, are washed in water and one or two pieces placed into each tube. The tubes are then filled in the usual way with plain broth and sterilized in the autoclave.

In applying the results of these experiments to agar plates, it is well to employ calcium chloride (0.1 to 0.5 per cent.). The use of calcium carbonate powder produces an opaque plate on which the colonies can hardly be recognized.

From the foregoing it will be seen that marble broth is an extremely reliable medium for the pneumococcus, and can in very many cases replace ascitic broth. Its use obviates not only the tedious collection of ascitic fluid, but also the careful fractional Pasteurization which ascitic broth requires.

Marble broth can be used also for cultures of the meningococcus. The medium does not produce quite so luxuriant a growth as ascitic broth, but seems to be very reliable.

A CASE OF DIGITALIS POISONING WITH VERY LOW TEMPERATURE WITH-OUT COLLAPSE—RECOVERY.

By WILLIAM N. JOHNSON, M. D.,

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The following case presents the interesting and rather unusual phenomenon of having a very low temperature recorded after an overdose of tincture of digitalis, with no other symptoms of collapse:

Mrs. M., aged 65 years, of feeble sight and rather feeble mind, but yet capable of taking care of herself to a certain extent, has for years been afflicted with a myocardial degeneration, marked by occasional attacks of cardiac weakness and deranged digestion. For these symptoms her sovereign remedy has been aromatic spirits of ammonia, which she was accustomed to take herself, without consultation with the rest of the family, in doses of half a teaspoonful whenever she felt an attack impending. On the day previous to the present occasion she had emptied the contents of one bottle, which she supposed to be ammonia, into another bottle, which had a label of ammonia on it. The former bottle was thrown away, but one containing a highly concentrated tincture of digitalis could not be found, although it had been kept in one place which was supposedly safe. How much digitalis there had been in this bottle could not be ascertained.

On February 28, 1905, at 11 a. m., the patient helped herself to one half a teaspoonful of this mixture, according to her own statement, and again at 1 p. m. A few minutes after the second dose she had a rather violent attack of vomiting and diarrhoea (discharges not saved) and severe pain in the epigastrium, radiating to the back. She called to her daughter, who at once responded, and thought at first that her mother had one of her old attacks. When she was informed about the manœuvring with different bottles, she sent to a neighboring druggist the bottle from which the two doses had been taken, for analysis, but he, either through indifference or ignorance, did not analyze the contents. The vomiting and diarrhoea of the patient did not recur, but the daughter at once made an observation of the temperature and pulse, and found the former 94° and the latter 54. When I reached the house an hour afterwards I found them the same, although there were no other symptoms of collapse, such as air hunger, sweating, or a weak, thready pulse. The face was very pallid, but the pulse of good character, slow, and regular—a regular digitalis pulse. The temperature remained at 94° (axillary) for about an hour after I saw the patient, which was three hours after the second dose was taken. Under the influence of stimulants (ammonia and whisky) and external heat the temperature reacted, and complete recovery ensued.

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American Therapeutical Society.—At the annual meeting of this society in Philadelphia Dr. Carl Beck was elected president.

IMMEDIATE ABDOMINAL SECTION.

By DENSLOW LEWIS, M. D.,

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(Concluded from page 899.)

How shall we recognize obstruction of the bowels, or rather, what symptoms indicate the advisability or necessity of an immediate abdominal section? It may be acknowledged at once that we should operate very much more frequently than we do. The operation is more likely to be of benefit the earlier it is performed. If we wait for stercoraceous vomiting or for evidences of peritonitis we may have waited too long. Be the cause of the obstruction fecal impaction, volvulus, intussusception, constriction of the bowel by bands or adhesions, the strangulation of an internal hernia, occlusion of the calibre of the gut by tumors within or without the intestine, or the slipping of a knuckle of intestine through a slit in the omentum or mesentery, the ultimate result is the same. Expectancy is a poor makeshift for rational treatment, and the danger of delay is infinitely greater than the danger of an aseptic abdominal section which, in many instances, will alone permit the establishment of a positive diagnosis, at the same time that it allows the only proper treatment. In determining the time to operate, I suggest the advisability of operating in every case unless there is good reason why we should not. And then I would also suggest the advisability of operating when in doubt.

Gastric and duodenal ulcer are more frequent than commonly supposed. Fenwick found in 678 autopsies of gastric ulcer that perforation had occurred in 153 cases, or 23 per cent. (15). Premonitory symptoms are usually present—the ordinary symptoms of indigestion more or less pronounced—but in a good proportion of the recorded cases all symptoms are lacking and the patient may suddenly scream, fall to the floor, soon become unconscious, and die in a few hours (16). If the perforation be near the pylorus or in the duodenum the stomach contents may flow into the right kidney pouch and finally into the right iliac fossa, which accounts for the fact, as MacLaren has recently explained (17), that many of these cases are diagnosticated as appendicitis. Moynihan mentions fifty-one perforating duodenal ulcers; in many of these cases a mistaken diagnosis of appendicitis had been made (18). Dangerous hæmorrhage from the stomach may also occur without perforation. There may be vomiting of large quantities of blood, acute anæmia, quick and progressively weak pulse, sighing respiration, and great and increasing pallor. When

these symptoms occur there should be no delay. The certainty of diagnosis in most cases is impossible even by the most experienced, and I heartily applaud the sentiment of C. B. Keetley, who asserts (19) that any physician who in the face of these symptoms wastes valuable time in the attempt to make an accurate diagnosis is almost criminally responsible for the death which is sure to follow.

The abdomen should be opened at once and the source of the bleeding located, even if evisceration is necessary. The incision in the stomach may be made parallel with the greater curvature, about four inches in length, through the anterior wall, but if the ulcer is located on the posterior wall it may be reached through an opening in the mesocolon after lifting up the omentum and transverse colon. The ulcerating surface should be excised and the incision closed with two or three rows of sutures. In this connection no detailed statement can be made which will refer to the management of complications that may be encountered. Much will have been done if the dangerous hæmorrhage is controlled, for, at all events, immediate death is averted. The subsequent treatment will vary, but in many instances the need of drainage will be apparent.

Other conditions require consideration in this connection. The liver, pancreas, or urinary bladder may be ruptured; the spleen, common bile duct, or kidney may be torn, ovarian cysts may become twisted, gallstones or an enterolith may cause obstruction or rupture of the intestine; suppurative of the gall bladder may occur during typhoid fever or following labor. I maintain that the clinical history of many of these cases demonstrates conclusively the value of an early operation. I submit that a reference to medical literature will show to what an extent a mistaken or imperfect diagnosis has contributed to a fatal result in cases that could have been saved by a timely abdominal section.

Polakoff (20) relates a case of rupture of the liver in a man, aged 22 years, who was seized with an epileptic fit, during which he fell out of bed. The convulsions ceased and he fell asleep. On awaking he complained of intense pain about the right side, which was ascribed to the pulmonary inflammation (patient had croupous pneumonia), and accordingly on the next morning he was dry cupped. A few hours later he died, with symptoms of acute anæmia. At the post mortem the abdominal cavity was found to contain about five pints of serum, while the right side was occupied by large blood clots. The right lobe of the liver was torn across, the rent, which measured 6 cm. long by 2 deep, running parallel to and about 5 cm. from the right edge, and involving the peritoneal coat.

Wittauer (21) reports a case of perforated gastric ulcer in a man, aged 47 years, who was subject to epigastric pain for several years. He continued his occupation till six days before coming under observation. He then complained of pain in epigastrium; slight dullness at bases of lungs, with feeble breath sounds; abdomen distended; no tenderness, diagnosis, cancer of stomach. Three days later dyspnoea with rise of temperature; increase in dullness at right base. These signs increased and death ensued three days later. Necropsy showed perforated gastric ulcer, with subdiaphragmatic abscess and right pleural effusion. The same author reports a second case in a woman, aged 25 years, who also suffered from epigastric pain for several years. Finally, she experienced sudden abdominal pain while lifting a heavy weight. Three days later slight rise in temperature; pain increased. Exploration with needle in eleven places gave no result. Fourteen days later stinking pus found in left pleura—too late to operate. Patient died in a few hours. Necropsy showed perforated gastric ulcer with subdiaphragmatic abscess.

N. T. Mentin (22), of Warsaw, reports an intestinal concretion discovered post mortem in the cæcum of a woman who had been suffering from chronic intestinal catarrh, for which she had been treated by the internal administration of bismuth subnitrate. The concentration was 1 cm. long and chemical analysis showed it to be composed of eighty-five per cent. of bismuth subnitrate.

Bezançon (23) reports a fatal case of hepatic abscess, which during life had been diagnosed as cancer. Several ulcerations were found in the cæcum, to which fact probably the hepatic abscess was attributable.

Regaud (24) reports a liver abscess, the diagnosis of which remained doubtful during life, even exploratory puncture giving negative result. Post mortem, it was found that the whole right lobe was transformed into a purulent cavity containing about 1,200 grammes of very thick pus.

J. M. Byron (25) reports a liver abscess in which the diagnosis of empyema was made. An opening was made on the right side at the usual point and some pus withdrawn. The man died, and at the post mortem nothing was found in the pleural cavities, but in the posterior and upper part of the right lobe of the liver there was a very large abscess cavity, which communicated with the operation wound.

J. C. Pegram (26) reports two cases of perforating duodenal ulcer with subphrenic abscess. Case one was diagnosed as intestinal strangulation. Operation disclosed perforated duodenal ulcer admitting the end of the forefinger, and lying on the anterior wall near the pylorus. There was a subphrenic abscess holding at least two quarts of fluid. No attempt was made to close the ulcer, but instead it was walled off with gauze. The man died thirty-six hours later of general peritonitis. The other case, fatal without operation, presented the symptoms of perforative peritonitis. An opening about 1 cm. in diameter occupied the upper anterior part of the duodenum, almost

touching the pyloric orifice. Between the liver and diaphragm was a thick purulent collection.

Mester (27) reports a case of aneurysm of the hepatic artery occurring in a man who had been kicked in the abdomen by a horse. This had been followed by pain in the hypochondrium, intermittent jaundice, vomiting, and the passage of fresh or altered blood by the rectum. The patient died, and at the autopsy a false aneurysm of the right branch of the hepatic artery was found in the liver. It communicated with one of the hepatic ducts. He has collected nineteen cases from literature, which showed that the diagnosis is never made during life, the condition being mistaken for ulcer of the duodenum or for gallstones.

Havas (28) reports a case illustrating the fact that a normal bladder may rupture under the stress of acute complete retention of urine. A previously healthy laborer, aged 55 years, had two rigors on February 13th, since which date he passed neither urine, feces, nor flatus. On the 15th and 16th the patient himself applied hot fomentations to the abdomen; on the 16th three surgeons attempted unsuccessfully to pass the catheter. On the 17th he was admitted to the hospital, with symptoms of peritonitis. There was a prominence in the region of the bladder, but tympanitic resonance over it, except for three finger breadths above the symphysis. A catheter was passed without difficulty, but no urine obtained. Post mortem, urine was found in the peritoneal cavity. The renal pelves and the ureters were normal. On the posterior vesical wall there was a vertical laceration, over an inch in length, extending through the peritoneal coat. On the anterior wall of the prostate there was a gutter-like tear, covered with coagulum, which was directly continuous with a perforation of the membranous urethra, and was evidently a false passage made in the attempts at catheterism. The false passage was not connected with the rupture, since symptoms of peritonitis preceded the catheterism. The hypertrophied prostate appeared to be the cause of the retention.

Högarstedt (29) writes of those rare cases in which symptoms of the wound of the bladder do not develop for several days after the injury. In his case the patient, three days after a fall, suddenly experienced, in endeavoring to urinate, agonizing cutting pain in the region of the bladder, and was unable to micturate. The catheter withdrew a pint of urine containing many red blood corpuscles. After this the patient was absolutely unable to pass urine spontaneously, and seven days from the development of the first bladder symptom the patient died of peritonitis. This shows the importance of examining the urine for blood immediately following traumatism.

Hulke (30) reports difficulty of diagnosis of ruptured bladder in a man, aged 33 years, who was butted sharply in the abdomen, and immediately felt great pain. He had passed urine two hours previously. Resonant abdomen, signs of shock, but micturition impossible. Catheter withdrew urine slightly tinged with blood on several occasions. The shock seemed to have passed off,

and no rent was found by the catheter. The next day pain increased; the withdrawn urine was offensive; some vomiting. The following day symptoms of peritonitis appeared; laparotomy was performed. A rent, two and a half inches long, was found in the posterior wall of the bladder. The operation lasted two hours. The patient succumbed eighteen hours after. Autopsy showed peritonitis, but the suture of the bladder was proved to be water-tight.

Sieur (31) shows that the mortality from traumatic rupture of the bladder for a period of fifteen years (1879-1894) had been reduced from ninety to fifty-four per cent. This decrease was due to early operative interference. The two forms of rupture, the intraperitoneal and the extraperitoneal, have a different death rate. Thus, of 34 patients with intraperitoneal ruptures, 14 recovered and 20 died; of 18 with extraperitoneal ruptures, 10 recovered and 8 died. Sieur regards the following symptoms as the most important signs of intraperitoneal rupture of the bladder: A peculiar pain felt at the time of the injury, chilling of the surface of the body which persists for some time, an urgent desire to urinate which the patient cannot satisfy, the absence of any vesical swelling above the pubes, the absence of urine in the bladder, or its presence in small quantity.

E. Hurry Fenwick (32) says that all successful cases of intraperitoneal rupture of the bladder have been operated in within twenty-seven hours of the injury. The diagnosis is established upon the following data: History of a full bladder before and evidence of an empty bladder after receipt of the injury; the possible jerking passage of the eye of the catheter into the peritonæum through the rent, and the sudden withdrawal of bloody fluid. The point of the catheter being felt with undue distinctness through the abdominal wall. Treat the bladder wound with accurate Lembert sutures of fine carbolized Chinese silk.

Battle (33) records a case in a man, aged 40 years, who walked to the hospital three hours after having fallen fifteen feet. Moderate shock. Fractured tenth left rib. On second day, signs of internal hæmorrhage; four pints of saline infused, with much benefit. Laparotomy; 75 ounces of blood clot removed. Spleen torn and its chief vessels were tied. Peritonæum irrigated; five pints of saline infused, with great benefit. Did well for two days; then localized peritonitis, and death on sixth day.

Leith (34) reports cases of rupture of the pancreas. His first group includes those in which a fatal issue followed early upon injury; the symptoms were shock and collapse, and in no case did they point to the pancreas as the main seat of lesion. The absence of external lesions of the abdomen is important, and not a little surprising. Diagnosis is impossible without laparotomy;

therefore, treatment must be expectant or founded on the exploratory laparotomy. In case the latter operation has been performed, hæmorrhage may be arrested by pressure, and the ruptured ends brought close together by comparatively superficial sutures passing through little more than the peritoneal covering of the gland. The milder cases of pancreatic rupture may recover. Autopsies prove that this result may occur. After injury received in the epigastric region there may follow after a considerable interval of time a cyst in this region. The large proportion of pancreatic cysts are held to be of traumatic origin, and a table of seventeen such is given. The earliest tumor appeared ten days after injury; the latest eight years.

Battle (35) reports the case of a boy, aged 6 months, who had been run over by a cab. At first there were no definite signs of visceral injury; by the seventh day he was deeply jaundiced, with symptoms of acute peritonitis. Abdominal section was done on the eighth day, and a large quantity of almost pure bile evacuated, but no injury to the bile apparatus could be detected. He died on the ninth day, and, post mortem, the liver and gall bladder were found intact, but the common bile duct was found completely torn through.

Archibald Cuff (36) reports intestinal obstruction caused by an enterolith in a woman, aged 59 years. She had symptoms of obstruction. The abdomen was opened and a hard mass was felt within the bowel, about three feet from the ileocecal valve. The bowel was occluded on each side of the obstruction by the fingers of assistants; an incision was made opposite the mesenteric attachment, and a stone removed. The wound in the bowel and the abdominal incision were then closed. The patient died of exhaustion.

Maurice Richardson (37) reports two cases of wound of the kidney. In each of these cases only the liver and kidney were damaged. There was some bleeding into the abdominal cavity from hæmorrhage back of the peritonæum. In each case there had been complete perforation of the kidney, and some of its secreting structure had been destroyed. In each case it was necessary to make an extensive operation before determining what was to be done. In one case the renal vein and the pelvis of the kidney were very badly lacerated. In the other case they were uninjured. In the first case nephrectomy was performed, and death ensued. In the second case drainage was introduced and the patient recovered.

Dolérís (38) attended a woman who was delivered at the eighth month; temperature 102.2°, and on the second day of the puerperium it rose to 105°. Typhoid fever was suspected, but the curette was used. The uterus, however, proved healthy. Next day serum diagnosis seemed to prove that there was typhoid. A few days later a swelling developed over the region of the liver, and suppuration of the gall bladder was diagnosed. Abdominal section was performed, and much pus escaped from the gall bladder. The bacillus of Eberth was detected in the bile which

escaped from the wound during the first days which followed the operation.

Wyeth (39) reported the case of recurrent gallstone obstruction in which the gall bladder was found collapsed and empty at operation. The patient died unrelieved, and a post mortem examination revealed a small concretion in the peritoneal cavity, and a stricture of the hepatic duct where the stone had ulcerated its way through.

These cases show how death occurred because abdominal section was not performed in time. I have a list of other cases which show the advantage of a timely operation. I have instances of rupture of the kidney (40), rupture of the liver (41), intestinal obstruction due to gallstones (42, 43), and to an enterolith (44), where recovery ensued as the result of immediate operation. I refer especially to the 105 cases of gallstone obstruction reported by Kirmisson and Rochard (45), as additional evidence of the value of early surgical interference. I have notes of a case of recovery from suppurating cholecystitis occurring during typhoid fever (46), and another case showing recovery from an early operation for acute suppuration of the pancreas (47). Littlewood reports a successful operation for a traumatic cyst of the pancreas (48), and Nolan describes a recovery from an operation for abscess of the spleen during the puerperium (49). Mayo Robson tells us that in cases of ruptured gall bladder laparotomy is called for, "otherwise a fatal termination is almost inevitable" (50), and Thiersch reports a successful case where over forty pints of bile were removed from the abdominal cavity after the gall bladder had been ruptured by a blow (51). I have also a record of cases of rupture of the urinary bladder (52), rupture of the liver and kidney (53), and Mercadi's two cases of injury to the liver (54). In all of these cases recovery followed an early operation. I note Hochenegg's case of torsion of the omentum (55). Cortiguera's case of twisted pedicle of a cyst containing twenty pints of fluid (56), Winckel's case where fetal bones from an ectopic gestation were removed from a woman's bladder (57), and the case of Richelot and Pauchat where an ovarian cyst ruptured into the rectum (58). All these cases and many others that might be referred to show the advantage of an immediate operation.

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LETTER FROM LONDON.

The Teaching of Hygiene and Temperance in the Schools.—A Deputation to France.—Skin for Grafting to be Had for Money.—A Düsseldorf Experiment.—The Declining Birth Rate in Europe.

LONDON, April 17, 1905.

There was recently held at the Examination Hall, Victoria Embankment, a well attended conference of members of the medical profession to discuss the question of the promotion of the teaching of hygiene and temperance in elementary schools. Sir William Broadbent, who presided, said the movement had been initiated by nearly fifteen thousand medical practitioners, followed by a largely attended deputation to Lord Londonderry, who, while expressing sympathy, showed that the teachers in elementary schools were not as yet qualified to give instruction in hygiene. The training of teachers and the provision of suitable books were, therefore, the first questions to be considered. There was no doubt as to the necessity for the inclusion of such subjects in the curriculum of the schools. To be efficient, education must fit the child to earn its living; for this, health was necessary, and in the matter of health, the parents were for the most part ignorant and careless. Underlying and largely the cause of the physical degeneration was moral degeneration. At the root of both lay ignorance and vice, which must be combated.

Sir Victor Horsley said that continued success had followed the action taken by the medical profession in favor of teaching hygiene and temperance in elementary schools. The petition of the profession to the Board of Education had been

sent to the various educational authorities throughout the United Kingdom, and such a large number of bodies from different parts of the country had returned favorable replies that it was clear the movement was widely appreciated. Dr. Robert Jones drew attention to the report of the Inter-departmental Committee on physical deterioration as showing the intimate relationship which existed between ignorance of the laws of health and the use of alcohol and physical deterioration. People who had not food enough turned to drink to satisfy their cravings. Sir Thomas Barlow referred to the great change of opinion which had taken place during the past fifty years as to the value of alcohol in the treatment of disease. The changed attitude had, he thought, been brought about by increased knowledge coming from a multitude of varied experiences converging along the following lines: 1. Facts showing the widespread and insidious pathological effects of alcoholism. 2. Observations of the great overestimation of the value of alcohol in the treatment of disease. 3. The evidence that alcohol was not a necessity as an article of diet. He would be sorry, however, to be deprived of alcohol in conditions of collapse.

In this connection it is interesting to note that General Lord Methuen recently reported that the membership of the Army Temperance Association now comprised not less than one fourth of the British army, and in contrasting the present condition of the soldier with that of eleven years ago he showed that the change brought about by the influence of the temperance movement was remarkable. He declared that there was a higher tone, far less insubordination, and much less beer sold in the canteens than in former years.

A deputation of English physicians left London recently for Paris with the object of studying the condition of the poor of that city. Many of them are quartered at the Maison Laille in the rue des Ecoles, next to the quarters of the *Association générale des étudiants*. They are in the centre of things scholastic and medical, and if they gain nothing but the experience and the knowledge of French medical informality their visit will not be without advantage.

The skin grafting experiments which have been so successful of recent years have led to a new form of livelihood which is fairly remunerative, according to the British press. Several of the London hospitals have on their books the names of many men and women who have undertaken to sell portions of their skin whenever the necessity arises, and it is said that quite a traffic is now being done in the buying and selling of human skin. The persons who are willing to sacrifice their flesh

for money are by no means confined to the poor and destitute class.

Physicians here are watching with interest the experiment of the city of Düsseldorf, which has built a new public hospital and has made arrangements for an *Akademie für praktische Medizin* to be connected with it. It will have facilities for instruction in internal medicine, surgery, obstetrics, and infectious diseases and a fifth department devoted to pathological anatomy, etc. There will be subdepartments for diseases of the eye, nose, throat, and ear, for children's diseases, for cutaneous and nervous affections, and for the treatment of accidents. Physicians who wish to take up a specialty will be installed as assistants in the special departments, and after serving a certain number of years will be given a certificate as to their proficiency in their specialty. The training of nurses for the sick is also another task of the academy, with the holding of free graduate courses for all physicians and instruction of the public in matters of hygiene, but the principal purpose for which it is organized is to perfect the education of the graduates from the medical colleges, who are not allowed to practise until they have served a year in some hospital or allied official institution.

Whatever England may have to fear in the present, because of her isolated condition, however ominous the situation may appear in view of the difficulty with which she makes alliances and the comparative facility with which her enemies make them, there seems yet to be no dread for the future. The birth rate in England has by no means decreased so much as the birth rate of the other great European powers. France's condition is deplorable, and now Germany is following suit, for there has been a steady decrease in the number of births in Germany during the last few decades. From 1870 to 1880 the number of births was 40.7 for every thousand inhabitants, during the following decade it fell to 38.2, and from 1890 to 1900 it was not more than 37.4.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 909.)

Isophysostigmine is the name given to an alkaloid prepared by E. Merck from the portion of Calabar bean extract which is insoluble in ether. The alkaloid is chemically similar to physostigmine, but pharmacological experiments conducted by Professor Kobert showed it to be superior to physostigmine in promoting peristalsis; the emetic action of its sulphate is said to be quicker, stronger, and of longer duration than that of

physostigmine sulphate. Dr. Ogui, who gave the new alkaloid its name, considers that the proper dosage is three fourths that of physostigmine.

Isson is described as a pleasant, easily borne hæmatinic for children, the chief constituent of which is ferrous saccharate. It is given in doses of from 10 to 25 drops for children, and from one half to one teaspoonful for adults.

Hæminalbuminate Solution, introduced as a succedaneum for hæmalbumin, consists of iron albumin, 30 grammes; water, 652 grammes; tincture of vanilla, 5 grammes; arrak, 10 grammes; sweet spirit of nitre, 2 grammes; oleosaccharate of cumarin, 0.2 gramme; oleosaccharate of bitter almond oil, 0.4 gramme; oleosaccharate of rose oil, 0.4 gramme; alcohol, 100 grammes, and simple syrup, 200 grammes. The iron albumin, which appears to be a proprietary preparation, is dissolved in the water maintained at a lukewarm temperature and the other ingredients are then added.

Lentin is the shorter name adopted by E. Merck for metaphenyldiamine hydrochloride, which has been recommended in the treatment of diarrhœal conditions.

Lofotin is a hydroxyl-free codliver oil containing 0.01 per cent. of phosphorus.

Maceratio Renalina Porci, a remedy which has been recently proposed in the treatment of nephritis, is obtained from the kidney of the pig by the following process: A fresh kidney from a pig is cut into minute pieces, washed with fresh water to remove the residual urine, then hashed and pounded into pulp. This pulp is put into 300 grammes of fresh water, to which the physiological proportion of salt, 7.50 to 1000, has been added. It is then allowed to macerate for three hours, stirred occasionally, and kept in a cool place to avoid fermentation. The red water of the maceration is divided into three parts to be drunk by the patient during the day.

Magnesiumperhydrol is the name given by E. Merck to a magnesium dioxide compound of a nature evidently similar to biogen and hopogan, for it is said to form a white powder insoluble in water and consisting of 15 to 25 per cent. magnesium dioxide, MgO_2 , and 75 to 85 per cent. magnesia, MgO . According to investigations by Gilbert, Jomier, and Bertherand and Gautier, the preparation is recommended for internal use as a disinfectant and oxidizer in abnormal gastric and intestinal fermentative processes, and may be given in doses of from one half to one teaspoonful three to four times daily, half an hour before or after meals.

Maretin is a methyl acetanilide in which the acetyl group is substituted by the group $NH.NH.CONH_2$. In this last group the urea nucleus is so strongly combined that aniline is not liberated as a decomposition product. It forms white, glittering tasteless crystals, soluble to the extent of 1 to 1050 in water. It is given in doses of from 3 grains to 10 grains daily.

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NEW YORK, SATURDAY, MAY 13, 1905.

THE REGULATION OF CHILD LABOR IN PENNSYLVANIA.

There has recently been enacted in Pennsylvania a law raising to fourteen years the age at which children may legally be put to work, and purging the age certificate system of the features hitherto prevailing that greatly favored deception and false swearing. The passage of this law, we understand, has been largely owing to the efforts of an organization known as the Pennsylvania Child Labor Committee. By the enactment of the law Pennsylvania puts herself on a par in this matter with Massachusetts, New York, and Illinois. We have often deprecated unnecessary legislation, but we believe that the new Pennsylvania law is one that was urgently required, and one that, properly executed, cannot fail to prove in the highest degree beneficial to the children of the State, and therefore to its future citizens.

The new law recognizes that there are instances in which a child's age cannot be positively ascertained from records, and in such instances it gives a certain discretionary power to the certifying official, based mainly on the child's length of attendance at school. The establishment of such a criterion points, perhaps, to the purpose on the part of the framers of the law to secure for all children a certain degree of school training. This is a most laudable purpose, one that in itself would

amply have justified the passage of the bill, but it is not the only reason for such a course, and from the physician's point of view it is not the chief one. The physical welfare of a child is the prime object in regulating the age at which it may be set to bodily work, and we must not load children of tender years with tasks that overtax their strength. It is unfortunate that the new Pennsylvania law exempts glass works and foundries to some extent from obedience to the general restrictions that it imposes, but there is good reason to hope that additional legislation remedying this defect will be effected within a comparatively short time.

FORMIC ACID AND FORMIC FEVER.

We are indeed reviving many of the therapeutic notions of the ancients, and in consequence resorting more and more to the animal kingdom for additions to our materia medica. In particular, the injunction "Consider the ant," has been duly followed by some of our French brethren, notably M. Clément, who practically revives the aqua magnanimitatis of the old pharmacopœias. The ant, as we all know, is a prodigy of strength, and the ant also furnishes formic acid. Putting two and two together, M. Clément led himself to the inference that that peculiar constituent of the ant's organism was the source of its strength, and he reasoned, further, that it might give strength to man. He tried it, and the valetudinarian whom the late Mr. Frank R. Stockton depicted as having been marvellously invigorated by an accidental inoculation with a minute portion of the blood of a redoubtable savage, found dried on a dagger with which he had been slain, was little less wonderful for his acquired prowess than, as the French newspapers assure us, have been the men to whom formic acid has been administered. Indeed, the acid and its sodium salt are said to effect the marvels that at one time were somewhat confidently expected of the late M. Brown-Séquard's testicle juice.

All at once, as it were, within a day or two, the weakling who takes formic acid at the rate of about thirty grains a day, well diluted with water or made into a formate by the addition of sodium bicarbonate, finds himself equal to the most un-

wanted exertion. This statement does not rest solely on M. Clément's observation; with proper reserve, it is substantiated by Dr. Raymond Belbèze (*Lyon médical*, April 23rd). M. Belbèze testifies to the invigorating effect of the acid; after the fatigue of a hard day's work, he says, it has carried him through protracted fencing bouts, and those of his friends who have taken it have astonished the fencing masters by their resistance. It had the same effect on a lady who was given to long excursions on the bicycle, and some neurasthenics—not all—upon whom he tried it found their condition decidedly ameliorated.

But this rose is not without its thorn. M. Belbèze describes a febrile reaction—"formic fever," as he calls it—which has shown itself in himself and in others to whom he has administered the acid. There is a transitory fever, accompanied by slight headache and by trifling obscurity of vision. The whole trouble, however, lasts only from half an hour to an hour and a half, and occasionally the blurred sight gives place to visual perception of unusual acuteness, so that outlines are extraordinarily well defined, and objects appear, as it were, less like things apart from the beholder. During the fever, moreover, there is an exaltation of the sensibility in general. The fever is without chills, and M. Belbèze compares it to the gentle febrile reaction that accompanies a small alveolar abscess. Surely there is not much to be dreaded in M. Belbèze's "formic fever," and we shall be much astonished if the fear of it deters anybody from trying formic acid as a restorative of muscular vigor.

MENSTRUATION AND ARTERIAL TENSION.

In a rough way, certain phenomena of cardiovascular erethism have long been observed in menstruating women, such as overaction of the heart, heightened arterial pulsation, flushing of the face, and turgidity of the thyroid gland. Recently M. Sabourin has treated of the connection between menstruation and pulmonary congestion. Still later, at a meeting of the Medical Society of the Paris Hospitals held on April 7th, M. Armand Siredey and Mlle. Marthe Francillon reported upon their systematic observations of the arterial tension during menstruation. Their communica-

tion is published in the society's *Bulletins et mémoires* for April 13th.

Their formal observations, those on which they base their report, were made upon thirty-one hospital patients under treatment for slight pelvic ailments, but menstruating normally or with only the most trifling deviations from the normal phenomena. In all the experiments they made use of Potain's sphygmomanometer. They constantly observed a decided and rather sudden increase of arterial tension at the beginning of a menstrual flow and a fall below the normal point toward the end of the flow. They give several graphic charts illustrative of their observations. In the first one, which may serve as well as any of the others for an example, the woman's normal tension appears to have been 15 cubic centimetres. On the first day of a free flow (preceded by a slight escape of blood) the tension began to rise, and in twenty-four hours it had reached 17; from that point it fell abruptly to 13 and then to 12.4, and with about equal suddenness rose again to the normal figure, 15.

The existence of slight disease of the uterine annexa seemed to have no influence on the tension curve, but it was found that age and temperament did have an effect, the phenomena being exaggerated in women approaching the menopause and in those described as of a neuroarthritic temperament, amounting toward the change of life, in some instances, almost to the symptoms of exophthalmic goitre.

The authors seem to us quite justified in remarking that the matter of menstrual increase of the vascular tension is of sufficient importance to be taken into account in general practice, in view of its probable connection with various congestive conditions, especially in women who are approaching the climacteric.

CEREBROSPINAL MENINGITIS.

This disease is peculiar in that its epidemics are sporadic and its sporadic cases endemic. In other words, it is a disease from which this country is never entirely free, which occurs with special frequency at irregular intervals, and which, nevertheless, fails to show the ready communicability and numerical incidence of most other in-

fectious diseases. For instance, it is commonly treated without quarantine in private houses or in hospital wards, and usually without consequent infection of other persons. The lack of contagiousness is in marked contrast to the severity of the infection when once recognizable, the mortality being from thirty to seventy-five per cent. However, it has lately been noticed that, as with diphtheria, the germs of this disease may be found in the noses of healthy persons or may be represented merely by slight symptoms of rhinitis.

From the practical, clinical standpoint, the ætiology of cerebrospinal meningitis is about the same as for death by lightning. More cases are encountered when a relatively greater number already exist in a community, just as death by lightning is more frequent in the seasons of electric storms. But in cerebrospinal meningitis persons escape after exposure to other cases and succumb without apparently having been exposed in any way, so that the sequence of cause and effect is even more irregular than in the case of lightning strokes.

From the bacteriological standpoint, Weichselbaum's *Diplococcus intracellularis meningitidis* may be accepted as the essential cause. A qualification must be made, however, similar to that which pertains to almost every other specific disease: The symptoms depend upon the anatomical lesion, which may be produced by other germs, among which may be mentioned the pneumococcus, the tubercle bacillus, the gonococcus, probably the Friedländer bacillus, the colon bacillus, *Bacillus capsulatus aerogenes*, and the various bacteria of sepsis. In recent epidemics cases carefully diagnosed clinically have been found to be due to the true specific germ in most instances. There can be no reasonable doubt, however, that sporadic cases are due in many instances to other germs, and, of course, the diagnosis is sometimes recorded without any justification.

A very important and often neglected phase of the ætiology of infectious diseases is the train of circumstances that lead to the implanting of the specific germ. In some diseases, notably the exanthemata, this phase of the ætiology is comparatively unimportant, because, if a susceptible individual is exposed to the germs—that is to say, en-

ters an environment in which they may reasonably be supposed to be present—infection usually occurs. In other cases, with almost universal susceptibility, the propinquity of the germs does not cause infection, on account of the necessity of a direct inoculation, as in the venereal diseases and those introduced by mosquitoes. Again, a considerable group of infections is semelincident—that is to say, one attack confers a lifelong immunity. But semelincident diseases affect almost all members of a community once, like measles and scarlet fever, or, if they do not, some special mode of infection is necessary, as in the case of typhoid fever, or there is a geographical limitation of the disease, as with cholera and Malta fever.

The severity and rarity of cerebrospinal meningitis place it in analogy with hydrophobia, tetanus, malignant cedema, equinia, and anthrax. Tetanus requires an anaerobic inoculation, but this entire group except cerebrospinal meningitis are diseases of lower animals, to which man seems to possess considerable resistance and to which he succumbs only from very direct exposure. Many animal parasites are infectious, at least so far as the deep tissues are concerned, only in certain stages of their life cycle, but exemption from infection on this account can obviously not apply to any bacterial disease.

It will be noted that cerebrospinal meningitis is a very peculiar and exceptional infection. So far as can be judged from negative evidence, its occurrence at seasons when flying insects are scarce, the bacterial nature of the parasite itself, and the finding of the germ in the nose, we may conclude that it is an air borne disease. Such diseases are, almost without exception, quite markedly contagious. Many of them are semelincident. Whether cerebrospinal meningitis is semelincident or not, it is difficult to state. Several apparently authentic cases of second attacks are recorded, but, aside from the loophole of an error in diagnosis, we know that occasional exceptions occur to the law of semelincident in general. Then, too, cerebrospinal meningitis is quite a rare disease, and not much over half of its victims survive, so that in any event we should expect that a second attack would be exceedingly rare, simply as a matter of mathematical chance.

The comparative immunity to this disease, so fatal when established, is also peculiar. Bad sanitation predisposes to the disease only by multiplying the chance of infection. Thus, while it is more common in slums, barracks, and camps, and apparently somewhat favored by fatigue, exposure to damp and cold, etc., such predisposition operates only to a slight degree, and, while an appreciable factor in a statistical study, is scarcely so in the individual case.

The analogy to various diseases indigenous—referring to the habitat of the germs—to the lower animals and rarely extending to man suggests that cerebrospinal meningitis may originate in an animal epidemic. Such a theory has never been promulgated, but in the *New York Medical Journal and Philadelphia Medical Journal*, for April 1, 1905, Paul Shekwana refers to a demonstration by H. Albert of the *Diplococcus intracellularis* in two brains from cattle involved in an epidemic in Iowa. If further evidence of this sort is found, it will readily explain, or rather bring into a well recognized though unexplained analogy, the relative immunity to a disease which is serious when once established.

Another hypothesis may be suggested: While lesions that may be compared approximately to pyæmic metastatic foci occur in cerebrospinal meningitis, the course of infection is in most instances from the nose and throat to the meninges and thence, if at all, to other foci. The local respiratory lesion is almost always insignificant. Hence, it is possible that what may be termed adequate infection depends to a very large and determining degree upon purely anatomical circumstances in the way of communication from the nose to the exterior of the meninges by air chambers, tributary either to the nares themselves or to the middle ear and Eustachian canal.

Cerebrospinal meningitis, like most other acute forms of meningitis, almost inevitably involves the subjacent centres. Thus the nervous symptoms are not the indirect results of pressure and irritation, but due to a localized lesion. It is perfectly possible that many cases of anterior poliomyelitis are due to *Diplococcus intracellularis* infection. In general, a specific disease—that is, one due to a special germ—has a pretty definite set of

symptoms, although atypical cases are frequent and although most specific diseases may be closely imitated by other germs involving the same foci. In a general sense, cerebrospinal meningitis has a fairly typical symptomatology which is the sum of the general infectious symptoms and those due to local involvement of nervous centres. In a definite sense, the only thing typical of the disease is its irregularity, since we may observe almost any conceivable combination of local involvements, and not only may they affect entirely different centres, but the degree of local involvement may alter the function in any way from exaltation to absolute paralysis.

Treatment is along three general lines: 1. The old fashioned meeting of indications largely by alkaloids whose physiological effect is the opposite of the functional changes noted. 2. Antisepsis by external applications and by salicylates, etc., administered by the mouth, subcutaneously, or by direct injection into the subdural space. 3. Specific serum treatment. None of these methods is thoroughly satisfactory, and, indeed, we may go so far as to say that all except the direct injection into the subdural space and the serum treatment have been tried and found wanting. These two methods are by no means established, and the former is somewhat dangerous, yet there is at least the comfort that they promise something for the future.

A. L. BENEDICT.

CONSTIPATION AND UTERINE DISEASE.

At a recent meeting of the Medicochirurgical Society of Paris (*Bulletin médical*, April 26th) M. Marchais very properly insisted on the necessity of a uterine examination in cases of habitual constipation of obscure ætiology in women. If any abnormality of the uterus was found, he said, it need not be very pronounced in order to be looked upon as accounting for the constipation, and its rectification would usually be effective in overcoming the intestinal trouble.

THE CALCUTTA LIBRARY OF SCIENCE.

Mr. H. C. Sarcar, M. B., of Tollygunge, who seems to have undertaken single handed the task of providing a public scientific library for Calcutta, has recently issued a circular showing that he has made encouraging progress in the first year of his enterprise, though he intimates that he has been hampered by lack of publicity and by defec-

tive confidence in the success of the library. We hope that both these impediments will soon be done away with. Mr. Sarcar depends upon authors and publishers to add to the library by contributions of scientific books and periodicals. He gives a list of nineteen gentlemen whom he counts among his supporters. Twelve of these are Americans, and all but one of the twelve are physicians. One is a Cuban physician, three belong to the medical profession of England, one is a German pharmacist, and two are gentlemen of Calcutta.

INFLAMMATION OF THE MESENTERY.

Apart from diseases of its lymphatic glands, it is not probable that much of a chapter on the pathology of the mesentery could be added to a textbook. However, in a recent Kiel thesis, Dr. F. Möller relates a case of ileus dependent on lesions of the lower portion of the ileum that he thinks were secondary to inflammation of the mesentery. It seems to us more probable that a commentator on Möller's thesis, Dr. Müller, of Dresden (*Zentralblatt für Chirurgie*, April 29th), is correct in interpreting the mesenteric lesions as secondary to those of the intestine.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 15th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, May 16th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, May 17th.—New York Society of Dermatology and Genitourinary Surgery (private); New York Academy of Medicine (Section in Genitourinary Diseases); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark).

THURSDAY, May 18th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, May 19th.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynaecological Society.

NEW YORK.

Cerebrospinal Meningitis.—There have been 1,202 deaths from this disease in New York since January 1, 1905.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 6, 1905:

	May 6.		April 29.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	621	13	601	13
Diphtheria and croup.....	334	39	353	49
Scarlet fever.....	256	14	254	13
Smallpox .....	..	..	1	..
Chickenpox	137	..	62	..
Tuberculosis.....	414	181	438	204
Typhoid fever.....	31	10	39	10
Cerebrospinal meningitis.....	178	111	195	87
	1,971	368	1,943	376

The Sydenham Office Building.—The first anniversary of the opening of this office building for physicians, at No. 616 Madison Avenue, New York, was celebrated on Wednesday evening, May 10th.

Lebanon Hospital Training School for Nurses.—There has been already collected for this school some \$12,000. The space now used by the fifty nurses is needed for the use of patients who already number over 200, and a handsome annex is planned to cost \$60,000.

The New York College and Hospital for Women graduated the following on May 9th: Mary M. Benedict, Mary Ethel Broadnax, Ethel Dolinsky, Bertha Florence Johnson, Harriet Eliza Kenney, Gertrude Van de Mark, Adelaide Wallerstein, Jean M. Williams, and Eva Wilensky.

The National Society of Musical Therapeutics will hold the last meeting of the season at the residence of Miss Florence Guernsey, 180 West Fifty-ninth Street, Tuesday, May 16th, at 8.30 p. m. Subject to be discussed: Should Music Have an Acknowledged Place as a Therapeutical Agent? Discussion to be opened by the president, Miss Eva Augusta Vescelius, followed by J. Mount Bleyer, M. D., LL. D., Lacey Baker, M. S. B., Emmet C. Dent, M. D., Miss Jessie A. Fowler, J. Thornton Sibley, A. M., M. D. Ten minutes will be allowed each speaker. Musical illustrations will be rendered by Mr. Wesley Weyman. Our readers are cordially invited to be present.

The New York Academy of Medicine.—The Section in Medicine will meet on Tuesday, May 16, 1905, at 8.15 p. m. Order: Presentation of Cases and Specimens; Clinical Reports: A Case of Infective Cholangitis, by Dr. H. S. Paterson; A Case of Retrohepatic Abscess, by Dr. David Bovaird; papers: General subject, Epidemic Cerebrospinal Meningitis; Brief Statement of the Gross Pathology, by Dr. Harlow Brooks; Modes of Infection, by Dr. Charles Bolduan; The Present Work in the Department of Health, by Dr. John S. Billings, Jr. Discussion by Commissioner Dr. Thomas Darlington, Dr. Dunham, Dr. Nammack, Dr. Hodenpyl, Dr. Conner, Dr. Park, Dr. Huddleston, Dr. Fielder, Dr. Leiser, and others. Charles H. Lewis, M. D., chairman; E. E. Smith, M. D., secretary, 26 East Twenty-ninth Street.

The New Harlem Hospital.—Plans have been completed for the power house and ambulance

station for the grounds of a new Harlem hospital. The main building is at present under construction. It is expected that work upon them will begin at once. When the hospital is finished it will form one of the most complete institutions of its kind in the country. It is located in Lenox Avenue, between One Hundred and Thirty-sixth and One Hundred and Thirty-seventh Streets. The general block plan comprises a plot 410 feet long and 199 feet 10 inches wide. Four ambulances and a delivery wagon will be accommodated in the ambulance station. Provision is to be made for eight horses, with all the appliances for quick hitching. There will be quarters in this building for the male help.

The Additions to Bellevue Hospital.—The Board of Aldermen having concurred in the appropriation of \$850,000 made by the Board of Estimate and Apportionment, in March, for the beginning of work on the new Bellevue Hospital, it is now expected that the actual work of construction will be started toward the end of next month, though it may be deferred until early in July. The present estimate of the total cost is \$8,500,000, to be expended at the rate of about \$1,000,000 a year. Careful restudies of the first plans have been made by Dr. John W. Brannan, president of the board of trustees of Bellevue and Allied Hospitals; by the medical board of Bellevue; and by experienced hospital workers. Dr. Brannan has stated that many valuable suggestions had been obtained from women nurses in the hospital, whose practical experience gave them knowledge on points which others would be likely to neglect or not even to think about. In the new hospital there will be eleven pavilions containing wards for patients, six of these pavilions being for medical cases and the five others for surgical cases. This year's appropriation of \$850,000 is to be devoted to the construction of the southeast wing, containing two of the medical pavilions, and this sum is also intended to cover the fees of the architects and consulting engineers, and to defray the expense of contingencies. A comparatively new feature in hospital plans, and one that is considered very important, will be the observation wards for children on the ground floor of one of the pavilions. There will be six of these rooms, containing from one bed to ten beds each, or about thirty-five to forty beds in all. A convalescent ward, with a sunny exposure, will be on each floor of the southeast wing above the ground floor. These wards are intended for the benefit of patients who are able to move about and see their friends. Those who are acutely ill, through this provision will not be disturbed in their wards by the movements of the convalescents and the conversation of their visitors. A roof garden, occupying the whole top of the structure, will include a considerable space covered over with glass, so that patients able to visit it can have the benefit of the fresh air in rainy weather. If properly clothed, they can visit the roof to advantage in weather of every kind. A high parapet will enclose the roof garden, on which toilet rooms and lavatories will be acces-

sible. In order to get open air, however, the patients will not be obliged to go up in the elevator to the roof, under the care of an attendant. There will be one or more balconies, from six to ten feet wide, opening from each ward in the pavilions, reached through French windows extending to the floor, so that patients can walk out or be wheeled out or be rolled out in their beds. There will be enough space in the balconies (protected by ornamental iron work) to accommodate all the patients of a ward at one time.

PHILADELPHIA.

Personal.—Dr. Lewis H. Adler, Jr., of 1610 Arch Street, Philadelphia, was elected president of the Protological Society of America at its meeting held in Pittsburgh.

Presentation to Dr. W. S. Forbes.—On commencement day, June 2nd, the students of the Jefferson Medical College will present Dr. William S. Forbes with a life size portrait of himself as a testimonial for his efforts toward legalizing dissection in Pennsylvania. This year completes the twenty-sixth year that Dr. Forbes has held the chair of anatomy at Jefferson.

Charitable Bequests.—By the will of Miss Emma Frances Moffitt \$300.00 is bequeathed to the county branch of Rush Hospital at Malvene, Pa., for the benefit of the women patients.

By the will of Mrs. Clement B. Newbold \$5,000 is devised to the Home of the Merciful Saviour for Crippled Children, and \$5,000 to the maternity wards of the Hospital of the University of Pennsylvania.

Scientific Society Meetings for the Week Ending May 20, 1905.—Tuesday, May 16th, Dermatological Society; Academy of Natural Sciences. Wednesday, May 17th, Section in Otology and Laryngology, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, May 18th, Section in Gynecology, College of Physicians. Friday, May 19th, American Philosophical Society.

Marriages.—Dr. Arthur Fernandez Coca and Miss M. A. Clews were married on April 27th. Dr. and Mrs. Coca sailed for Europe on April 29th, where Dr. Coca expects to spend at least a year in postgraduate study.

Dr. William A. Weaver and Miss Irene Coates West were married on April 29th.

Dr. Norman W. Payne and Miss Margery Stadiger were married on April 29th.

Dr. C. Wilfred Powers, of Dubuque, Ia., and Miss Jane Glass were married on April 26th.

Deaths.—Dr. John Howard Pugh died at Burlington, N. J., on April 30th, of old age. Dr. Pugh graduated from the medical department of the University of Pennsylvania in 1852. During the Civil War, Dr. Pugh was on the staff of the United States General Hospital at Beverly; in 1876 he was elected to the House of Representatives. He was a member and president of the Burlington County Medical Society.

Dr. James B. Grady died in Los Angeles, Cal.,

of apoplexy, on May 1st. Dr. Grady graduated from Jefferson Medical College in 1873.

Dr. Elias B. Carey died at his home, 1824 Arch Street, on May 4th, aged 71 years.

Entertainments for Charity.—The New Century Quartette gave a concert at 1420 Chestnut Street, on May 1st, for the benefit of the White League.

A theatrical performance for the benefit of the Home for Aged Couples, at 1723 Francis Street, was given in the New Century Drawing Room on May 1st.

A living picture entertainment was given on April 25th at the Hotel Rudolf, Atlantic City, for the benefit of the Children's Outing Fund.

A musical tea was given at the Roosevelt, for the benefit of the House of the Holy Child for Colored Children on April 26th.

The fiftieth anniversary of the founding of the Jewish Foster Home and Orphan Asylum, Germantown, was celebrated with appropriate exercises on April 30th.

The Health of the City.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending April 29, 1905:

	Cases.	Deaths.
Typhoid fever.....	289	20
Scarlet fever.....	36	0
Chickenpox.....	57	1
Diphtheria.....	55	4
Cerebrospinal meningitis.....	8	1
Measles.....	69	9
Whooping cough.....	5	4
Tuberculosis of the lungs.....	31	70
Pneumonia.....	49	55
Erysipelas.....	3	0
Puerperal fever.....	1	4
Tetanus.....	1	1

The following deaths were reported from other transmissible diseases: Malarial fever, 1; tuberculosis, other than pulmonary tuberculosis, 23; diarrhoea and enteritis under two years, 8. The total deaths were 552, in an estimated population of 1,438,318; corresponding to an annual death rate of 19.96 per 1,000 population. The total infant mortality was 92; under one year, 76; between one and two years, 16. There were 36 still births; 23 males and 13 females. The temperatures and precipitation were about normal. There was a thunderstorm on the 27th.

Governor Vetoes the Osteopathic Bill.—On May 3rd Governor Pennypacker vetoed the bill licensing osteopaths and regulating the practice of osteopathy. The principal reason for the veto was that there is nothing in the bill to indicate what constitutes the science of osteopathy, and an effort to solve the query by an examination of the printed literature of the science is not very successful. In his veto message the Governor says: "The approval of this bill would appear to give the authority of the State to a system of practice in the healing art, which excludes the use of medicine and the use of surgery. Why should there be an attempt so to confine the operations of the mind? If both drugs and surgery are useless they may be rejected, but if they should at times be found to be beneficial why should any science for the enforcement of a theory make the effort to exclude their use? Should the bill be-

come a law, licenses would be issued by the State Board of Osteopathic Examiners and not by the Medical Council of Pennsylvania, which would be an anomaly in our legislation upon the subject." We referred to this bill on page 814 of our issue of April 22nd.

The Annual Report of St. Mary's Hospital, just issued, shows that during the year 1904, 908 patients were admitted to the medical wards, 890 to the surgical wards, and 83 to the gynecological wards. The deaths among the ward patients were 149, a mortality of 7.92 per cent. Three hundred and twenty-one operations were performed. In the out-patient department 8,091 patients made 22,726 visits, and 322 operations on the eye, ear, nose, and throat were done. St. Mary's Hospital is in that part of Philadelphia in which recently the majority of cases of typhoid fever have developed; according to this report, 113 patients suffering from typhoid fever were admitted during 1904, of whom 6 died and 7 were under treatment at the close of the year, a mortality of 5.48 per cent., which is a very good result. The pneumonia statistics are as follows: Pneumonia, 18; alcoholic pneumonia, 2; catarrhal, 29; lobar, 4. Of these, 2 patients died of alcoholic pneumonia, 7 of catarrhal pneumonia, and 2 of lobar pneumonia; a total of 53 cases treated and 11 deaths, a mortality of 20.75 per cent. These statistics show some inaccuracy in classification. The hospital has a very large fracture list, 283 fractures of various bones having been treated in the wards during the year. Of these patients 18 died, a mortality of 6.36 per cent.; of the deaths, 10 were due to fractures of the skull and 3 to fractures of the vertebral column.

GENERAL

Change of Address.—Dr. Charles R. Dickson, to 192 Bloor Street, West, Toronto, Canada.

Boston Society of Medical Improvement.—There will be a meeting of this society at the Medical Library on May 15th. Dr. J. Collins Warren will speak on Epochs in the History of Medicine, illustrated by the stereopticon.

The Linton District, Mo., Medical Society has elected the following officers: President, Dr. J. F. Flint, of Moline; first vice-president, Dr. J. N. Fisher, of Columbia; second vice-president, Dr. J. E. Jordan, of Rowena; secretary, Dr. Paul E. Coll, of Mexico; treasurer, Dr. R. W. Berry, of Mexico.

The Baltimore University Medical School has graduated the following: Edward W. Gardner, A. D. Lindmann, of New York; Max D. Bier, W. A. Dietrich, of New Jersey; M. A. Godfrey, Victor I. Shapiro, of Massachusetts; Thomas I. Kealy, A. J. Thome, John C. Kibler, of Pennsylvania; Z. A. Thompson, J. W. Webb, D. E. Ritter, S. W. Riddel, of West Virginia; Daniel H. Leddy, of Rhode Island.

Cleveland State Hospital.—The following nurses graduated from the training school on April 18th:

Covel Lee Fuller, Florence L. Dredge, Elizabeth M. Cottle, Charles H. Lerch, Elizabeth M. Hostetler, Lisa H. Murry, Charles P. Walsh, Emma L. Hartwell, Edith M. Bosley, Cyrus S. Miller, Charles R. Conway, Mae Hurley, Minnie Bowman, George H. Smith, Walter H. Groff, M. Zorah Starr, Frank F. Foy, Mary G. Vogt, Elizabeth Babcock, and Anna C. Gallagher.

Licensed to Practise Medicine in Minnesota.—The following physicians have been licensed to practise by the Minnesota State Board of Medical Examiners:

C. S. McKee, of Minneapolis; A. M. Cattanach, C. D. Conkey, of Superior, Wis.; H. Cannon, E. H. Bohland, of St. Paul; J. S. White, of Fort Snelling; D. Kalinoff, of Stillwater; F. R. Curney, of Chicago, Ill.; P. H. Sundt, of Pine River, Minn.; W. A. Eachern, of Sandstone, Minn.; J. H. Fowler, of Tower, Minn.; C. H. Wall, of Mellen, Wis.; F. A. Christensen, of Lake Mills, Ia.

The Farrand Training School for Nurses, of Detroit, Mich., has graduated the following young women:

Agnes L. Baetcke, of Brighton, Mich.; Elizabeth H. Heron, of Toledo, O.; Gertrude Barnes, of Ludington, Mich.; Agatha Bennett, of Chatham, Ont.; Laura B. George, of Constantine, Mich.; Laura B. Blanchard, of St. Johns, Mich.; Harriet K. Hunter, of Kalamazoo, Mich.; Lydia James, of Chicago, Ill.; Florence F. Sutton, of Toronto, Ont.; Nellie M. Sauer, of Bay City, Mich.; Grace Snively, of Benson, Ind.; Grace C. Shook, of Mt. Clemens, Mich.; Mary E. Daker, of Detroit, Mich.

St. Louis College of Physicians and Surgeons.—The following graduated from this college on April 14th:

E. C. Alvis, W. H. Alvis, E. W. Buhrmaster, F. Bechtler, J. H. Bridges, W. K. Chattle, A. C. Cautrell, N. Chostner, S. E. Cummings, G. E. Cook, J. F. Dixon, F. K. Doane, S. Donovan, C. R. Essex, J. W. Elders, C. E. Eisle, J. A. Fergus, John Fletcher, G. W. Gore, W. L. Gossage, O. Gilberson, William William, Z. C. Hagan, N. J. Haughton, A. J. Ihne, O. H. Jones, R. E. Jones, J. Kampe, J. A. King, L. N. Lindsey, G. L. McKinney, C. L. McClelland, A. V. Marquardt, R. G. Melinder, W. Mecke, C. D. Nobles, M. C. Pentz, Carl Puckett, G. H. Poos, G. F. Robinson, L. E. Rolens, J. M. Ross, L. Schulke, T. H. Shelton, F. M. Schroeder, W. E. Seba, I. Z. Stalberg, W. J. Shelton, Ed. Von Toll, W. R. Tweedy, J. R. Tweedy, H. A. Vise, M. M. Webster, J. A. Youngman, J. H. Ziegler.

New Swedish-American Hospital for Chicago.

—The new Swedish-American hospital which will be erected at the southeast corner of Sixtieth and Green Streets will be one of the most modern scientifically arranged institutions in the West. The cost will be about \$160,000. It will be located in the centre of a large Swedish residence district, and will fill a demand long existing in that part of the city. The plans provide for a five story and basement fireproof building, 100 by 125 feet, with two wings, a central building, and an open court facing the south and containing accommodation for 160 patients. The medical staff will consist of physicians in the city, independent of nationality, but the corps of nurses and the management of the hospital will be Swedish.

Personal.—Dr. S. H. Durgin has been reappointed a member of the Boston Board of Health, and also chairman of that board. This position Dr. Durgin has held for a number of years, and his strict attention to every detail in connection with the health in the city is abundant reason for the reappointment.

The faculty of the North Carolina Medical

College has been augmented by the following additions: Dr. F. M. Winchester, professor of obstetrics; Dr. R. E. Mason, professor of therapeutics; Dr. B. S. Moore, lecturer on surgery.

Dr. Charles B. Tefft, of Utica, has been elected president of the Alumni Association of Albany Medical College.

Dr. Theodore Schmalzreidt, of Springwells township, Mich., has been unanimously reappointed health officer for the ensuing year.

The following have been appointed as house physicians at the Albany Hospital: William Louis Hacker, of Albany; Thomas Joseph Flynn, of Johnstown; Edward Barnes Wilson, of Hudson; and Harry Stanton Rowe, Jr., of Cohoes.

The nomination of Dr. Carl A. Jackson, of Kansas, for city health officer has been confirmed. Dr. Jackson has had an experience in sanitary work that should especially fit him for the duties of health officer. He was assistant surgeon of the Forty-fourth United States Volunteer Infantry, and served three years in the Philippines.

Dr. E. H. Rorick, superintendent of the Athens Hospital for the Insane, has been chosen to succeed the late Dr. Gustavus A. Doren as superintendent of the institution for feeble minded youth, at Columbus, O., at a meeting of the board of trustees.

Statement of Mortality in Chicago for the Week Ending May 6, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	May 6, 1905.	April 29, 1905.	May 7, 1904.
Total deaths, all causes.....	530	527	539
Annual death rate per 1,000.....	13.88	13.80	14.58
By sexes.....			
Males.....	311	308	317
Females.....	219	219	222
By ages.....			
Under 1 year.....	93	121	73
Between 1 and 5 years.....	68	61	37
Over 60 years.....	88	97	127
Important causes of death.....			
Acute intestinal diseases.....	22	30	18
Apoplexy.....	12	14	20
Bright's disease.....	38	42	31
Bronchitis.....	14	20	19
Consumption.....	74	83	76
Cancer.....	15	30	19
Convulsions.....	15	8	7
Diphtheria.....	9	6	8
Heart diseases.....	45	36	43
Influenza.....	3	0	0
Measles.....	11	9	0
Nervous diseases.....	20	17	21
Pneumonia.....	57	74	120
Scarlet fever.....	1	0	4
Smallpox.....	3	0	0
Suicide.....	11	6	6
Typhoid fever.....	5	3	6
Violence (other than suicide).....	40	21	32
Whooping cough.....	13	7	7
All other causes.....	84	99	109

Despite an unusual number of deaths reported from violence, 11 from suicide and 40 from other forms, the total from all causes during the week is but 3 more than the total for the previous week. Pneumonia has temporarily again assumed the lead, with 85 deaths, while consumption has fallen from the 83 of the week before to 74. No marked changes among other important causes of death are noted, and the generally satisfactory conditions of the previous month still continue, except, of course, as to measles and whooping cough. The deaths of children under five years of age are 21 fewer than during the week of April 29th.

American Gynecological Society.—The thirtieth annual meeting of this society will be held at Niagara Falls on May 25, 26, and 27, 1905, in the Cataract House, the profession being cordially invited to attend. The following papers have been promised:

Accidental Rupture of the Uterus, by Dr. George W. Jarman; Retroversion Uteri—A New Operation for Radical Cure, by Dr. Arthur W. Johnstone; A New Plan of Procedure in Retrouterine Displacement, by Dr. E. E. Montgomery; Arteriosclerosis of the Uterus as a Factor in Uterine Hemorrhage, by Dr. Palmer Findley; Postoperative Vomiting, by Dr. Eugene Boise; Uniformity in Pelvic and Cranial Measurements, report of committee, Dr. King, Dr. Williams, and Dr. Davis; "Symposium," The Relation of the Appendix to Pelvic Disease or to Pregnancy; Relation to Pelvic Disease, by Dr. Reuben Peterson; Relation to Pelvic Disease, by Dr. Hunter Robb; Relation to Pregnancy, by Dr. Henry C. Coe; Relation to Pregnancy, by Dr. A. Laphorne Smith; Relation to Pregnancy, by Dr. J. Clarence Webster; Overlapping of the Fasciae in Closure of Wounds of the Abdominal Wall, by Dr. Charles P. Noble; "Symposium," The Radical Abdominal Operation versus the Vaginal Operation for Carcinoma of the Uterus; The Vaginal Operation, by Dr. Carlton C. Frederick; The Vaginal Operation, by Dr. George Gellhorn; The Vaginal Operation, by Dr. Fernand Henrotin; The President's Address, by Dr. Emelius C. Dudley; The Mortality in Operations for Fibroid Tumors of the Uterus, by Dr. J. Montgomery Baldy; Migratory Uterine Fibroids, by Dr. Reuben Peterson; "Symposium," The Toxæmia of Pregnancy; Clinical Types of Pregnancy Toxæmia, by Dr. J. Clifton Edgar; Renal Insufficiency, by Dr. Henry C. Coe; Pernicious Vomiting of Pregnancy, by Dr. J. Whitridge Williams; Eclampsia and Its Treatment, by Dr. Cyrus A. Kirkley; The Treatment of Eclampsia, by Dr. Franklin Spilman Newell; Vaginal Cesarean Section in Cases of Eclampsia, by Dr. Henry D. Fry; The Mortality of Operations, Other Than Strumectomy, in Cases of Exophthalmic Goitre, with Special Reference to Gynecological Operations, by Dr. Barton Cooke Hirst; Sudden Death During or Immediately After the Termination of Pregnancy or Operation on the Pelvic Organs in Women, by Dr. Edward P. Davis; The Technique of an Operation for Large Rectocele, by Dr. George H. Noble; The Surgical Treatment of Ulcer of the Stomach, by Dr. William H. Wathen; The Present Status of Electricity as a Therapeutic Agent in Gynecology, by Dr. Chauncy D. Palmer; The Third Ovary, by Dr. W. P. Manton; The Repair of Injuries to the Ureter, by Dr. Florian Krug.

Illinois State Medical Society.—The fifty-fifth annual meeting of this society will be held at Rock Island, May 16, 17, and 18, 1905, when the following papers are expected to be heard:

Address, by Dr. J. W. Pettit, What We Must Learn and Unlearn in the Treatment of Tuberculosis; Present Status of Serum Therapy, by Dr. E. R. Larned; Practical Significance of Certain Common Symptoms in the Upper Abdomen, by Dr. J. F. Percy; Indormescent Shock, by Dr. H. T. Patrick; The Consideration of Late Hereditary Syphilis, by Dr. R. R. Campbell; Percentage Modification of Milk in the Home, by Dr. Charles R. Spicer; The Tuberculosis Problem in Illinois, by Dr. Homer M. Thomas; The Importance of Diet in the Treatment of Tuberculosis, by Dr. Adella Sater; Mixed Infection in Tuberculosis, with Some Consideration as to Treatment, by Dr. Ethan A. Gray; Climatic Treatment of Tuberculosis, with Special Reference to Colorado, by Dr. C. L. Wheaton; Typhoid Fever, by Dr. G. G. Craig; Diagnosis of Smallpox (lantern slides), by Dr. Heman Spaulding; The Value of Isnordia Palustris in the Treatment of Erysipelas. Report of Cases, by Dr. H. C. Mitchell; Pericarditis, by Dr. J. H. Bacon; Scrofula, by Dr. H. G. Anthony; The License and Control of the Practice of Medicine in the State of Illinois, by Dr. George W. Webster; Diagnosis of Chronic Nephritis, by Dr. Charles L. Mix; Ocular Manifestations of Chronic Nephritis, by Dr. Leigh E. Schwarz; Medical Treatment of Chronic Nephritis, by Dr. A. R. Elliott; Results of Surgical Treatment of Chronic Nephritis, by Dr. A. H. Ferguson; Report of Three Cases of Intermittent Claudication, by Dr. S. R. Pietrowicz, of Chicago; The

Glycosuria of Hepatic Insufficiency, by Dr. A. C. Crofton; Respiratory Oxidation Stimulants in Nephritis; Pulmonary and Allied Crises, by Dr. George F. Butler; Febrile Symptoms of Hepatic Syphilis, by Dr. Joseph L. Miller; Parenchymatous Keratitis and Subsequent Iridochorioiditis with Loss of Vision, by Dr. Charles H. Brobst; Syphilitic Meningitis in Children, by Dr. W. J. Butler; Educational Treatment of Neurosthenics, by Dr. Charles D. Center; Gastric Fatigue, by Dr. F. B. Turk; Some Phases of Disturbed Metabolism, by Dr. R. W. Webster; Some Eye Problems the General Practitioner is Called Upon to Solve, by Dr. R. J. Tivnen; Variola, by Dr. L. A. McFadden; Poisoning from Oil of Wintergreen, by Dr. F. C. Vandervort; X Ray in Leucæmia, by Dr. J. A. Capps and Dr. J. F. Smith; Pulmonary Edema Following Thoracentesis, with Report of a Case, by Dr. S. W. Miller; Air Examinations: Their Importance and Results, by Dr. A. Gehrman; Intestinal Parasites, by Dr. F. Smith; Address, by Dr. Fernand Henrotin, The Commerce of Surgery; "Symposium" on Surgery of the Upper Abdomen: Surgery of the Stomach, by Dr. Arthur Dean Bevan; Surgery of the Bile Tracts, by Dr. Carl Black; The Emergencies of Pancreatic Surgery, by Dr. Weller Van Hook; Surgery of the Duodenum, by Dr. Emerson W. Sutton; The Surgical Treatment of Injuries to the Spleen, due to Subcutaneous Penetrating Wounds; the Value of Splenectomy in Certain Anæmias Associated with Enlargements of the Spleen, by Dr. M. L. Harris; discussion opened by Dr. D. W. Graham; Surgical Tuberculosis, by Dr. William E. Guthrie; Tuberculous Nephritis. Review of Literature and Report of Case, by Dr. Robert Christie; Some Errors in the Diagnosis of Abdominal Troubles, by Dr. Clifford U. Collins; Congenital Club Foot, by Dr. John Ridlon and Dr. Charles E. Eikenbury; Malignancy in Uterine Myomata, by Dr. Henry F. Lewis; Reports of Cases, by Dr. S. C. Plummer; Strictures of the Esophagus Following Typhoid Fever; Colloid Carcinoma of Cæcum; Penetrating Wound of Liver; Gastroenteroptosis; Practical Remarks Concerning When and How to Treat Septic Pelvic Affections of Women by Vaginal Incision and Drainage, by Dr. Fernand Henrotin; "Symposium" on Surgery of the Nervous System: Diagnosis and Pathology of Neoplasms of the Brain, by Dr. Hugh T. Patrick; Surgery of Cerebral Neoplasms, by Dr. L. L. McArthur; Insanity Following Skull Injuries, by Dr. E. Mammen; Cerebral Infection from Middle Ear Disease, by Dr. Norval H. Pierce; Pathology and Diagnosis of Lesions of the Spinal Cord and Peripheral Nerves, by Dr. Frank P. Norbury; Surgery of the Spinal Cord and Peripheral Nerves, by Dr. J. B. Murphy; discussion opened by Dr. Archibald Church; Plastic Surgery of the Trachea, by Dr. Albert I. Bouffleur; Pelvic Deformity Due to Congenital Dislocation of the Hips and Cesarean Section, by Dr. C. E. Paddock; Infectious Urethritis of the Non-Gonorrhœal Type, by Dr. P. Kreissel; Prophylaxis of Syphilis, by Dr. Alfred Schalek; Perigastric Adhesions After Gallstone Operations: Their Surgical Importance, and a New Operation for Their Relief, by Dr. E. Wyllis Andrews; Are Cases Demanding Removal of the Eye of Interest to the Surgeon and Physician by Dr. J. Brown Loring; Some Considerations Relative to Phlegmon of the Orbit, by Dr. Charles H. Bard; The Indications for Opening the Mastoid Process in Cases of Empyema of the Cells Following Acute Otitis Media, Where There is an Absence of Signs Over the External Surface of the Mastoid, by Dr. George E. Shambaugh; "Symposium" on Lacerations of the Obstetrical Canal, Resulting from Obstetrical Injuries: Pathological Anatomy, by Dr. J. Clarence Webster; Causes and Prevention, by Dr. F. H. Kimball; Diagnosis and Treatment of Rupture of the Uterus, by Dr. George Schmauch; Lacerations of the Vaginal Portions of the Uterus and Fornix Vagina, by Dr. L. H. Nickerson; Diagnosis and Treatment of Lacerations of the Vaginal Body, and of the Peripheral Region, Including the Pelvic Diaphragm, by Dr. C. S. Bacon; discussion opened by Dr. Joseph B. De Lee; The Value and Place of Duodenocolicotomy in Gallstone Surgery, by Dr. John C. Hancock; Postoperative Complications, by Dr. Daniel M. Eisendrath; Pelvic Infections in Women, by Dr. Thomas J. Watkins; Inversion of the Uterus, with Report of Cases, by Dr. P. L. Markley; Bronchoscopy for Removal of Foreign Bodies from the Air Passages, by Dr. E. Fletcher Ingals; Acute Dilatation of the Stomach, by Dr. A. E. Halstead; Tuberculous Subchorial Hematomata of the Decidua, by Dr. S. R. Hopkins; Intussusception in Infancy and Childhood, with Collection of 1,028 Cases, with Statistics, by Dr. J. H. Hess.

Pith of Current Literature

PRESSE MEDICALE.

April 5, 1905.

1. Surgical Intervention in Appendicitis, By J. L. FAURE.
2. Floating Liver, By ALBERT MARTINET.

1. **Appendicitis.**—Faure discusses the objections which have been made to surgical intervention. He considers the different forms of this disease, and presents a strong argument in favor of surgical treatment.

2. **Floating Liver.**—Martinet reproduces briefly the salient points made by Prentiss on this subject in the *American Journal of Obstetrics*, for May, 1904.

April 8, 1905.

General Paralysis and Syphilis, By L. MARCHAND.

General Paralysis and Syphilis.—Marchand gives in tabulated form the opinions of various writers between 1880 and 1902, which shows a wide disagreement as to the frequency with which syphilis is the causes of general paralysis. The table shows the extremes to be 7 per cent. and 94 per cent., the average 52.5 per cent. He then discusses cases from clinical, pathological, and therapeutic standpoints, but after all his conclusion seems to be that most are and some are not syphilitic in their origin, the same as that of all the other writers, and he makes no attempt to settle the only question really mooted, that of the proportion between the syphilitic and non-syphilitic cases.

April 12, 1905.

1. Cytology of Mumps, By J. A. SICARD and CH. DOPTER.
2. Obstetrics and Legal Medicine. Professional Secrecy and Criminal Abortion, By P. A. LOP.

1. **Cytology of Mumps.**—Sicard and Dopter find in the first stage, during the first two hours of the disease, numerous polynucleated cells, lymphocytes, and large mononucleated cells. In the second stage the glandular elements predominate. In the third stage, when glandular tumefaction is diminishing, the cells grow fewer in number. The lymphocytes and the large mononucleated cells are the last to disappear.

2. **Obstetrics and Legal Medicine.**—Lop quotes the French laws which define professional secrecy and impose penalties for its violation and then passes to the subject of criminal abortion. Finally he discusses the question whether a physician is ever justified in violating professional secrecy in order to secure conviction of a person who has been guilty of criminal abortion.

BERLINER KLINISCHE WOCHENSCHRIFT.

March 27, 1905.

1. The Parasitic Theory of the Origin of Cancer, By E. VON LEYDEN.
2. The Biogenetic Theory of Tumors and the Ætiology of Cancer, By O. ISRAEL.
3. Hydrotherapy, By L. BRIEGER.
4. Relations Between Balneology and Surgery, By F. KRAUSE.

5. Chronic Pulmonary Inflammations in Cardiac Disease, By D. ROTHSCHILD.
6. The Origin of Malignant Neoplasms, By VON HANSEMANN.
7. Manual Garcia, By P. HEYMANN.
8. Treatment of Flatfoot, By C. HELBIG.

1. **Parasitic Theory of Cancer.**—Von Leyden reviews the various theories advanced to explain the origin of cancer. He says that Cohnheim's theory is now practically disregarded. He cannot comprehend Ribbert's theory that, on account of some stimulus of unknown origin, normal cells suddenly take on a malignant character. Epidemics of cancer, the manner of its metastases, race disposition, and inoculability all tend to prove the infectious character of the disease. He believes that cancer originates locally always, and it attacks portions of the body which come into contact with the external world—the breasts, the gastrointestinal tract, the genital organs, the lungs, the face, and the lips. From all these considerations he is disposed to regard cancer as an infectious—that is, parasitic disease.

2. **Biogenetic Theory of Cancer.**—Israel contends that the entrance of a parasite into a cell causes a destruction either of the cell or of the organism, but that there is no evidence that it can cause cell proliferation. He inclines to the belief that cancer represents excessive cell production as is shown in the regenerative processes, in which the production of cells is always greater than is essential for the part affected.

5. **Pulmonary Disease in Cardiacs.**—Rothschild calls attention to Rokitsansky's dictum that certain cardiac and pulmonary diseases exclude each other. Difficulty in the venous return from the lungs is prophylactic, in a high degree, of pulmonary disease, as is seen, for instance, in the immunity from tuberculosis of those suffering from mitral stenosis. Tuberculous persons, however, can acquire other diseases which lead to valvular disease, but the latter acts favorably upon the tuberculosis. The good effect of rest in bed upon tuberculous disease of the lungs depends in a measure upon the pulmonary hyperæmia, which is coincident with the recumbent posture. All other forms of pulmonary inflammation are very frequently associated with cardiac, pleural, and pericardial disease.

6. **The Origin of Cancer.**—Von Hansemann declares that we have absolutely no data upon which to base a theory of the origin of cancer that will hold. Heredity has never been shown to have a potent influence. If it had, the teratoid tumors would be most often inherited, and this has not been shown to be so. The traumatic theory is not sufficient to explain all cases, either chemical, mechanical, or thermal. The occasional sequel of a cancer following an injury offers no scientific explanation for the origin of the disease. He says the infectious character of cancer has long been theorized about. There is absolutely no proof for it. Those who adhere to this belief either do not know cancerous tissue when they see it, or they are very vague in their descriptions of the parasites. They do not allege them

to be vegetable, since the bacteria are too well known; animal protozoa are not sufficiently known, so that they still lend themselves to the mysterious. [The paper should be read in the original for its details.—Ed.]

8. **Flatfoot.**—Helbing shows diagrammatically the development of flat foot and recommends Lange's celluloid plates for its treatment. He says that abduction of the ankle is the first and surest sign of beginning flatfoot.

April 3, 1905.

1. Diagnosis and Treatment of Internal Diseases by the Röntgen Rays (*To be concluded*), By R. VON JAKSCH.
2. Experimental Observations on Renal Dropsy, By P. F. RICHTER.
3. Treatment of Tropical Anæmia and the Anæmia of Ankylostomiasis, By O. LIERMBERGER.
4. Relations Between Surgery and Balneology, By F. KRAUSE.
5. Disinfection of the Utensils of the Sick, By G. MEYER.
6. The Newer Hypnotics, By A. MAAS.

2. **Renal Dropsy.**—Richter says that it is not yet proved that the retention of the chlorides is essential for the production of the dropsy of renal disease. His experiments on animals show that the ingestion of fluids plays an important rôle. He induced nephritis with serous dropsy by the injection of uranium nitrate and succeeded in showing that the ingestion of milk or mineral water favored the development of the dropsy. Dropsical effusions could also be influenced by the regulation of the ingestion of sodium chloride.

3. **Tropical Anæmia.**—Liermberger treated five persons in one family suffering from the anæmia of ankylostomiasis, very successfully with Levico—arsenic—iron water. Even before the worms were expelled, a decided improvement was evident in the blood examination and the general condition. He warmly commends this remedy in the treatment of all anæmias, due to tropical diseases, especially malaria.

6. **The New Hypnotics.**—Maas believes chloral fulfils ideally the requisites demanded of a safe and sure hypnotic. He discusses veronal, isopral, and neuronal. The first is a good hypnotic, but sometimes produces exanthemata; among its advantages are its diuretic action and its favorable influence upon the sweating of phthisical patients. Isopral sometimes causes gastrointestinal disturbances, and has some action on the heart. Neuronal contains a high percentage of bromides and has no advantage over many other hypnotics. The ideal remedy to produce sleep has not yet been found.

April 10, 1905.

1. Digestive Diseases and Balneology, By C. A. EWALD.
2. Poisoning by Sulphur Alkalies, By G. STADELMANN.
3. Mistakes in Hydrotherapy, By WINTERNITZ.
4. Experimental Hydræmnios in Nephritis, By E. BIBERGEIL.
5. Aim and Purpose of Balneotherapy, By F. FRANKENHAUSER.
6. Dysentery—Aggressive, By Y. KIKUCHI.

7. Diagnosis and Treatment of Internal Diseases by the Röntgen Rays, By R. VON JAKSCH.
8. The Diagnostic and Therapeutic Use of Exploratory Puncture in Internal Medicine, By O. DE LA CAMP.

1. **Digestive Diseases and Balneology.**—Ewald speaks somewhat discouragingly of the various water cures for the gastrointestinal diseases. The various conditions and the hydrotherapeutic measures employed for them are not yet clearly worked out and such means as are employed are largely empirical.

2. **Poisoning by Sulphur Alkalies.**—Stadelmann calls attention to the fact that poisoning by these chemicals varies from time to time, depending upon what form is most accessible to the public. Lysol is at present the most common form. He describes a severe case of poisoning with calcium sulphate mixed with calcium hydrate. Treatment consists in rapid gastric lavage, purges, and the administration of bismuth.

3. **Errors in Water Cures.**—Winternitz says the most common mistake is made with reference to the temperature. The more different the temperature of the water, under conditions otherwise the same, which comes into contact with the body, the stronger is the resistance of the organism toward the loss or gain of heat. Another mistake lies in the choice of the mechanical stimulant used. When water is used for defervescent purposes, it is wrong to begin with too low a temperature, to use too little mechanical irritation (friction) and to employ the bath for too short a time. In severe acute infectious diseases, the action of the water cannot be judged exclusively by its effect upon the temperature. In cases of collapse with cardiac weakness, the trunk should have cold compresses placed about it, while the extremities must be energetically heated. It is a blunder to use water at too high a temperature in the treatment of the anæmic, the chlorotic, and the convalescent. In giving Sitz baths, loss of heat from that part of the body which is not in the water, can be avoided by thoroughly wrapping it in blankets.

4. **Experimental Hydræmnios.**—Bibergeil succeeded in inducing nephritis in pregnant animals by injecting uranium nitrate and in inducing a condition of hydræmnios. The foetuses even showed dropsical effects.

7. **Röntgen Ray Diagnosis.**—Von Jaksch says that the Röntgen rays are now of use in internal medicine. He places special value in having the rays penetrate the body in every possible direction. He has found this method of especial value in the diagnosis of pulmonary tuberculosis and also in pneumonia. Pleural exudates, cardiac affections, and pulmonary tumors lend themselves readily to this form of examination. For the examination of the heart, he prefers radioscropy to radiography. The author does not think much can be gained by the treatment of internal diseases by the rays.

8. **Exploratory Puncture.**—De la Camp urges conservatism in the use of exploratory puncture in internal medicine. He advises placing the

needle just below the upper border of fluid transudates rather than near the lower border. The inspection of the acquired material offers therapeutic suggestions. It must not be forgotten that infection of the canal can take place in the act of withdrawing the needle. He cautions against the use of the needle for the purpose of diagnosing focal diseases of the lungs and abdominal organs, especially of the spleen.

ZENTRALBLATT FUER CHIRURGIE.

March 18, 1905.

1. An Easier Performance of Vaginal Hysterectomy, with a Thickened Cervix, By C. LAUENSTEIN.

1. **Vaginal Hysterectomy.**—Lauenstein prefers the abdominal method of hysterectomy for cancer, on account of the better view of the operative field which is thus obtained. Sometimes, however, the cervix is enlarged and thickened, and it is desirable to perform the operation by the vaginal route. He first removes the lower part of the uterus, thus providing a great deal more space; he then removes the remainder of the uterus with the adjacent parts of the broad ligament. The vesicouterine fold of peritonæum is not disturbed until toward the end of the operation. Hemorrhage from the branches of the uterine arteries is controlled as the broad ligaments are removed. Usually but one clamp and one ligature are required.

ZENTRALBLATT FUER GYNAEKOLOGIE.

March 25, 1905.

1. The Poison of Eclampsia, By A. DIENST.
2. A New Perforator, By P. ZWEIFEL.

1. **Eclampsia.**—Dienst regards eclampsia as due to a poisoning of the maternal by the fetal blood. He was able to demonstrate in fifteen placentæ a communication between the fetal and maternal circulation. To evoke eclampsia, the blood of mother and child must bear the relation of that of two different species to each other, this necessitating a communication between their respective circulations. In other words, eclampsia is due to a transfusion of the heterogeneous blood of the child into the blood of the mother through a pervious placenta. Hæmoglobinuria in eclampsia is to be referred to a destruction of red cells and the subsequent strong development of hæmagglutinins and later of hæmolysins in the blood of convalescent eclampsics seems to be related to the hæmoglobinuria. The author further says that women with considerable quantities of agglutinins in the blood are especially prone to eclampsia, as those recovering from chlorosis, scarlatina, diphtheria, tuberculosis, and colds. This would also explain the occasional epidemic character of eclampsia.

April 1, 1905.

1. Ovarian Changes in Hydatid and in Normal Pregnancy, By J. WALLART.
2. Ovarian Changes in Syncytial Tumors and Hydatid Pregnancy, By S. PATELLANI.
3. Intrarenal Tension as a Cause of Eclampsia, By A. MYNLIFF.
2. **Ovarian Changes in Syncytial Tumors.**—Patellani examined the ovaries in sixty-eight

cases of tumors arising from the syncytium and of hydatid pregnancies. In sixty-two of the cases he found changes, representing a hyperproduction of lutein tissue with polycystic degeneration of the corpora lutea, and a displacement of the lutein cells by œdema of the ovarian tissue. The germinal epithelium had more or less disappeared and the number of ovarian follicles diminished.

3. **Intrarenal Tension and Eclampsia.**—Mynlieff says that increased pressure in the ureter leads to venous congestion of the kidney; then, on account of urinary retention and the thickness of the kidney capsule, the intrarenal tension is raised. This is of especial significance in pregnant women, because the blood contains many toxins. In sixty-nine eclampsics, he found the ureter and pelvis of the kidney dilated in thirteen, but he also saw the same condition in twenty-nine out of 164 healthy pregnant women. The author ascribes the eclampsia to the combined mechanical and toxic trauma. He advises decapsulation of the kidney for the treatment of eclampsia.

April 8, 1905.

1. The Blood Forming Organs During Pregnancy and the Puerperium, By F. VARALDO.
2. A Carcinoma of the Ovary with Chorioepitheliomatous Formation, By F. MICHEL.

1. **The Blood Forming Organs.**—Varaldo has made histological studies of the bone marrow, the spleen, the blood, the lungs, the thyroid gland, and the periuterine lymph glands of rabbits and guinea pigs which were killed at various stages of pregnancy and the puerperium. He found a leucocytosis and an increase in young red blood cells, a change which corresponds to a reaction of the lymphoid and myeloid blood forming organs. The individual findings must be looked for in the original; the paper does not lend itself to abstraction.

2. **Carcinoma of the Ovary.**—Michel says that in looking for chorioepitheliomatous tumors in women corresponding to similar findings in the testicle, pregnancy must be absolutely excluded. He describes the case of a young virgin who had a tumor of the ovary. Three years later there was a recurrence and death followed. Histologically, the recurrent tumor gave the picture of a pure chorioepithelioma of the ovary, although the primary tumor was a papillary carcinoma.

FORTSCHRITTE DER MEDIZIN.

April 1, 1905.

1. How Can Pneumonia and Bronchitis Be Avoided After Narcosis? By MÜLLER.
2. Pregnancy Reactions in the Fœtal Organs and Their Involution During the Puerperium, By HALBAN.
3. My Method of Rapid Mechanical Dilatation of the Cervix Uteri During Labor, By BOSSI.
4. Röntgen Rays as a Cause of Cancer, By ALLEN.
2. **Pregnancy Reactions in the Fœtal Organs and Their Involution During the Puerperium.**—Halban, proceeding from the assumption that the pregnancy changes which especially concern the genital apparatus, are the effect of chemical sub-

stances produced during pregnancy, sought to determine whether the supposed poisons in the foetal organism produce the same reaction as in the maternal. His investigations, which were made upon twenty-one fetuses, showed that the changes were analogous, hypertrophy and hyperæmia taking place in the uterus, and hypertrophy in the mamma in the female, while in the male there was hypertrophy of the prostate. The poisonous substances caused leucocytosis, increase of fibrin, and œdema the same as in the mother. The substances which are probably the cause of eclampsia are the secretion of the chorionic epithelium. With the disappearance of this secretion puerperal involution of all the hypertrophied organs in both mother and child occurs, and a regeneration of the organs which may have been affected by the poison.

3. **My Method of Rapid Mechanical Dilatation of the Cervix Uteri During Labor.**—Bossi gives a description of the action of a dilator which has been modified from the original. The changes consist in reducing its weight about one half, in enabling one to spread out its branches upon a level surface, in making it more readily sterilizable, in attaching a lateral screw to the lever arms which permits a test of the resistance of the soft parts, and in lowering the price. Bossi cautions against too rapid dilatation except under conditions that are most urgent. An interval, including several pains, should pass between successive dilations, and the stretching should be done between the pains.

4. **Röntgen Rays as a Cause of Cancer.**—Allen reports three cases in which an epithelial cancer upon the arms was caused by x rays. The first case was in an engineer in Edison's laboratory, whose work was to test the x rays. A year after taking his position an erythema, like that of sunburn, appeared on his hands. Then appeared tumors which healed in one place, but developed inwardly in others. They gradually extended up the arm, and amputation was required, but the patient died. Two other cases occurred in physicians, of one of whom one hand was amputated and part of the other. In the other case the disease rapidly extended to axillary glands so that amputation would have been futile.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

March 5, 1905.

1. The Vasomotor Origin of Bronchial Asthma,
By F. GALDI.
 2. Observations on the Blood in a Case of Chronic Dysentery,
By G. GUYOT.
 3. A Case of Very Severe Tuberculosis, Treated with Hæmoantitoxine,
By M. CECI.
 4. Anthrasol in Therapeutics,
By DOMENICO BRUNO.
 5. Parona's Method for Chronic Tumors of the Spleen in Malaria,
By M. E. GRANDE.
 6. The Use of High Frequency Currents in Ozæna,
By RAOUL HAHN.
1. **Vasomotor Origin of Bronchial Asthma.**—Galdi supports the theory of the vasomotor origin of bronchial asthma, citing an interesting case in which a woman had suffered for years from bron-

chial asthma, and in which a distinct connection between the attacks of dyspnoea and other vasomotor phenomena could be traced. Thus this patient was subject to hyperidrosis, to urticaria, to a sense of prickling in the limbs, œdema, ptialism, swelling of the tongue, and diarrhœa. These signs appeared usually in the intervals between the attacks and disappeared when the attacks set in. Another noteworthy feature in this case was the relation of the paroxysms of bronchial asthma to menstruation. When menstruation set in, the paroxysm ceased. On the other hand, in the presence of severe and repeated paroxysms which came on from time to time menstruation became irregular. The treatment consisted in the use of tepid general sulphur baths, and local irritation about the dorsal region of the spine, to stimulate the vasomotor centres. Tonics were also administered.

2. **Hæmoantitoxine in Severe Case of Tuberculosis.**—Ceci reports good results with the use of hæmoantitoxine in treating a severe case of pulmonary tuberculosis in a woman aged 39 years. According to the author's account, this patient was in a desperate condition, extremely emaciated, with high fever, when recourse was had to hæmoantitoxine, after all other remedies had failed. Hæmoantitoxine was given in doses of a tablespoonful three times daily before meals. After seventy-six days, the night sweats had disappeared; the fever was almost gone, and the patient had gained one kilogramme in flesh. Her general condition was greatly improved. He obtained similar results in other cases of tuberculosis.

3. **Parona's Treatment for Enlarged Spleen in Malaria.**—Grande reports a case of malaria with enormously enlarged spleen in which he used Parona's treatment, viz., the injection of a solution of potassium iodide and iodine. Fifteen injections reduced the spleen three fingers' breadths in the long axis of the organ. In three other cases good results were also obtained with this treatment. In two of these, not only did the splenic tumors disappear, but the fever was also gone, and the general condition of the patient was vastly improved, although quinine had done no good in these chronic cases.

4. **High Frequency Currents in Ozæna.**—Hahn used the high frequency currents by means of a special nasal electrode in the treatment of ozæna. Of all the explanations of the origin of ozæna, there is no single theory that is satisfactory. Probably the disease results from a combination of the proper soil with special pathogenic germs. The most rational method of treatment is to apply bactericidal measures, and at the same time to act not only upon the surface of the mucosa, but upon the submucosa. Bordier and Collet in 1902 applied high frequency currents in the treatment of ozæna, and since then the present author has used this method in seven marked cases of the disease. He used an Oudin resonator with an electrode similar to that used by Bordier and Collet—namely, a metallic rod covered with paraffin or wax, and placed in an insulating han-

dle. The electrode may also be enclosed in a tube of glass, which allows only the tip to project. Care must be taken to apply the effluvia to every part of the affected mucosa. The smaller the sparks, the less irritation and reflex action will there be. No cocaine nor adrenalin was needed in any of these cases before applying the high frequency current, but the patient sneezed a few times after the current was turned on, complained of burning, slight pain, and lachrymation. But these symptoms vanished in two or three minutes if the application was continued. After three minutes the electrode was withdrawn and the patient was asked to blow his nose, when all the crusts usually came away at once. The seance was repeated in from seven to forty-eight hours, and lasted usually about fifteen minutes, although it can be made twice as long without harm. No other treatment, not even irrigation, was used. While the author does not allege absolute cures in his seven cases, the improvement was very marked, indeed, and the mucous membrane in some cases assumed a more normal and more succulent aspect. In all cases the crusts disappeared and the odor was removed, while the subjective symptoms, including the headaches, were almost abolished. He believes that high frequency currents have an antiphlogistic and resolvent action upon the mucosa of the nose in ozæna.

RIFORMA MEDICA.

April 1, 1905.

1. Some Points on the Treatment of Pott's Disease (*To be continued*), By ARTURO CAMPANI.
2. On the Ætiology and Pathogenesis of Cancer, By GIUSEPPE MANISCALCO.
3. Researches on the Metabolism in Chronic Leucæmia (*Concluded*), By FRANCESCO DI GRAZIA.

2. **Ætiology and Pathogenesis of Cancer.**—Maniscalco, in concluding a critical review of the latest researches in this field, inclines towards the traumatic theory of the origin of cancer. He thinks that this explanation is the most plausible yet offered, and that traumatism and repeated irritation are the true causes of cancerous growths. The atypical epithelial productions which are effected experimentally as the result of traumatism or irritation confirm this hypothesis, and the author was able to confirm this experimentally by producing incipient tumors in the stomach of animals. He performed gastroenterostomy in dogs which he killed a few days afterwards. In the stomach of these dogs, in the neighborhood of the newly made pylorus, the epithelial coat had suffered partial losses which were partly replaced by regenerated cells. The new epithelium was composed not only of mucous cells, but also of protoplasmic cells. In the affected glands there was hyperplasia and caryocinesis of the epithelium. On scraping the lining of the stomach in other dogs he produced a series of changes which appeared at first to be regenerative in character, but which in reality constituted a pathological proliferation, inasmuch as the process was complicated by inflammatory changes. The author thinks that a change of a regenerative process in glandular epithelium into a morbid proliferation is produced

by the addition of an inflammatory process. It is in this way that the traumatic origin of cancerous growth may be explained. While he does not assert that he has spoken the last word on this subject, he calls attention to the possibility of further studying this question experimentally on the lines indicated, and of further determining the relationship between cancer and regenerative processes complicated by inflammatory changes.

3. **Metabolism in Chronic Leucæmia.**—Di Grazia found that the only feature of note which the urine of his two patients had in common was that the amount of uric acid and of alloxur bases eliminated was slightly increased in both. Otherwise the urines differed in all respects. In the first patient, who was in fairly good condition, the nitrogenous metabolism was not markedly affected. The amount of urea eliminated in proportion to the total nitrogen was normal. In the second patient, whose condition was poor, there was a general lowering of the urea-nitrogen coefficient, and a marked increase in monoamidic nitrogen. The elimination of phosphorus was normal, and parallel to that of nitrogen in the first patient, while in the second it was low, but relatively high as compared to the total nitrogen. The elimination of hydrochloric acid and of sulphuric acid did not present any noteworthy features. The author concludes from his exhaustive study of this subject that the metabolism of a leucæmic may vary within the widest limits. In some cases the nitrogen is found in equilibrium, in others it is eliminated too rapidly; in still others it is partly retained. The uric acid may reach the enormous figure of five grammes per day, or, on the other hand, it may be below the normal. The same is true of the alloxur bases, the ammonium, and the salts. Further researches are necessary to determine whether these variations are connected with any special clinical varieties of the disease.

ROUSSKY VRATCH.

March 26, 1905.

1. A Case of Extrauterine Pregnancy, with Full Term Fœtus, By P. V. MIKHINE.
2. Indications for the Radical Cure of Hernia by Bassini's and Kocher's Methods, By P. A. BARATYNSKI.
3. The Action of Bitters Upon the Secretory Function of the Gastric Glands, By N. D. STARZESKO.
4. A Case of Extrauterine Tubal Pregnancy and Cancer of the Cervix, By N. I. POKROVSKI.
5. First Aid in Accidents (*Concluded*), By D. P. NIKOLSKI.

1. **Extrauterine Fœtus at Term.**—Mikhine reports a case of extrauterine pregnancy, in which the fœtus was carried to term, and the live child was removed by abdominal section. The patient had had three normal labors previously. She developed the usual signs of pregnancy, and in addition complained of an increasing dull pain and sense of weight, of disturbances of urination and defecation. On examination, the uterus was felt pressed against the pubis, and the anterior vaginal wall was pushed forward. The incision in the linea alba corresponded to the edge of the pla-

centa, and the latter bled freely, but the foetus was successfully removed from its membranes and the remainder of the ovum was dried by means of gauze tampons, its edges sewn to the edges of the wound, and its cavity packed loosely with gauze strips. The uterus was found enlarged, to about three and a half months, and its appendages were perfectly normal, not having taken the least part in the formation of the sac. The patient made an uneventful recovery.

2. Methods of Operation in Hernia.—Baratynski says that Kocher's method is best adapted for cases of inguinal hernia with slight anatomical changes in the inguinal canal, *i. e.*, a narrowing. In hernias with moderately marked anatomical changes the choice between Bassini's and Kocher's methods depends on the degree of mobility of the peritonæum and on the separation of the deep layers of the abdominal muscles from Poupart's ligament. If the peritoneal mobility is marked, Kocher's method is indicated, while if the deep muscles are widely separated from Poupart's ligament, it is best to use Bassini's method. Inguinal hernias with marked anatomical changes in the canal—that is to say, with a widely distended straight or oblique inguinal canal—require Bassini's method.

3. Action of Bitters on the Stomach.—Starzhesko found experimentally that bitters increase the psychical stream of gastric secretion. It remains to be decided by further investigations whether this increase is the result of a simple reflex, or of a complicated nervous mechanism, involving the cerebral cortex. The practical deductions from this research are summed up as follows by the author: Small amounts of bitters must always be used, as the administration of large doses has the opposite effect from that desired, and the repeated use of large amounts may produce a permanent hyosecretion in the stomach. Bitters must always be administered in such a form as to excite the nerves of taste, while the drugs are taken. In other words, the use of bitters in the form of pills and wafers or capsules is not rational. Bitters must always be given before eating, and best ten minutes or fifteen minutes before.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 6, 1905.

1. The Curability of Early Paresis,
By CHARLES L. DANA.
2. Pneumatocoele of the Cranium, By L. L. McARTHUR.
3. The Protection of the Röntgen Ray Operator,
By CHARLES LESTER LEONARD.
4. The Significance of Tuberculous Deposits in the Tonsils,
By GEORGE B. WOOD.
5. The Ætiology of Eye Strain from a Phylogenetic and Ontogenetic Standpoint,
By AUGUSTUS GROTE POHLMAN.
6. Some Aspects of Science and Fallacy as They Relate to Medicine,
By F. J. RUNYON.
7. The X Ray Treatment of Malignant Growths,
By ENNION G. WILLIAMS.
8. The Fear of Death. Morbid Manifestations of the Instinct,
By J. LEONARD CORNING.

9. Rheumatism and Other Affections of the Joints,

By CHARLES R. GRANDY.

10. Immunity. Chapter XIV. Concluded.

1. Paresis.—Dana presents what, to him, is convincing evidence that paresis, in its very earliest stages, in that stage which may be called one of "præparesis," is a disease that sometimes can be arrested. This arrest may be permanent, and may be attended with so little mental defect that one may call the patient practically cured. The author's argument is along three lines: (1) Analogy. Paresis like tabes is, in a large proportion of cases, a parasymphilitic disease. Their pathology is essentially similar. It has been established quite clearly that tabes can be arrested in its early stage and that patients may live for twenty or thirty years and exhibit practically no changes in their symptoms. If this is true of locomotor ataxia it should be true of paresis which is essentially the same disease in a different location. (2) There is no reason why paresis should not be curable. We are able to arrest degenerative processes in other parts of the nervous system; we arrest degenerative processes, or we see them arrested, in the kidneys, in the liver and in other organs. Given a vigorous constitution poisoned with disease, it may well be that when it is put under the best possible conditions for fighting this poison, when its known antidote has been administered with heroic thoroughness, we might expect that the tendency of the tissue to die may cease. (3) Clinical evidence. Experience shows that cases which exhibit all the clinical signs and symptoms of early paresis do get well. It is begging the question to say that all those that do get well are not paretics. Seven cases are reported which exhibited the early signs of paresis and which recovered. The author admits that this part of his argument is the weakest, and that the patients he has classed as paretics others will hold were not paretics, but sufferers from brain syphilis.

2. Pneumatocoele of the Cranium.—McArthur reports one personal case of this rare condition and tabulates a synopsis of thirty-three cases he has found in the literature. The conclusions reached by Costes, of Bordeaux, in 1859, regarding this affection hold good to-day. They are (1) Pneumatocoeles are very rare. (2) They always depend on perforations of the bony walls. (3) They are always tympanitic. (4) They are more or less reducible by pressure. (5) They can take their origin from the mastoid or frontal sinuses only. (6) They are of very slow and indolent formation. (7) They are never dangerous except from complications (infections).

4. Tuberculous Deposits in the Tonsils.—Wood, from recorded clinical data and from experiment, has attempted to establish the relationship between the tonsils and tuberculosis. His conclusions are: The tonsillar tissue of the throat, because of its peculiar anatomic construction and its topographical relations, is more liable to become infected by tuberculosis than any other part of the upper respiratory tract. In nearly all cases

of advanced pulmonary phthisis the faucial tonsils become inoculated. In about 5 per cent. of hypertrophied pharyngeal tonsils some form of primary tuberculosis will be found. Primary infection of the faucial tonsil is a rarer condition. Tuberculous adenitis in the cervical lymphatics develops in the majority of cases from infection originating sometimes in the faucial tonsils, but more frequently in the pharyngeal tonsil. The tubercle bacillus is probably unable to pass through the tonsils without having first overcome the vital resistance of the tonsillar tissue. The danger of systemic or pulmonic infection resulting from a tuberculous lesion in the tonsillar tissues of the throat is about equal to that of tuberculosis of the cervical lymphatics. The lesion to be expected as a resultant infection from the broken down glands of the neck is a miliary tuberculosis of the lungs. Further than this possibility, tuberculosis of the lymph glands of the neck is no more dangerous than a localized tuberculous lesion in any other portion of the body. The tonsils are more resistant to the action of bacterial toxins than ordinary lymphoid tissue.

9. Rheumatism.—Grandy reviews a number of affections, articular as well as non-articular, which are often confused with rheumatism and treated as such. This, of course, is not as it should be, and the moral of the paper is that all patients who suffer with pain in or about the joints should not forthwith be put on salicylates and a special diet.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 4, 1905.

1. Certain Aspects of the Differential Diagnosis Between Epilepsy and Hysteria,
By JAMES J. PUTNAM and GEORGE A. WATERMAN.
2. Subacute Perforation of the Stomach, with Report of Three Cases,
By F. B. LUND.
3. Senile Epilepsy,
By G. KIRBY COLLIER.

1. Epilepsy and Hysteria.—Putnam and Waterman call attention to the great difficulty that may occasionally arise in attempting to differentiate epilepsy from hysteria. A number of cases are reported in order to illustrate the methods of investigation by which the authors believe that a correct conclusion may generally be reached. They advise that every neurological staff of dispensary and outpatient services should embrace one or more members skilled in psychopathical researches by whom all doubtful cases should from time to time be reviewed in order that no injustice be done to the patients.

2. Perforation of the Stomach.—Lund concludes: (1) The symptoms of subacute perforation of the stomach are similar to those of acute perforation, with the important exception that they are less violent and are not followed by collapse or by the development of general peritonitis. (2) The location of the pain and tenderness depends upon the location of the ulcer and varies with it. (3) The treatment should be, if possible, posterior gastroenterostomy without breaking up the protective adhesions.

3. Senile Epilepsy.—Collier advances the tentative view that epilepsy may be due to old age. His argument is in two parts: the first concerns itself with the general effects of senility, the second with the frequency of senile epilepsy. At the Craig Colony there have been 21 cases of epilepsy whose first manifestations occurred between the ages of forty-five and ninety. Of these seven were probably due to senility.

MEDICAL RECORD.

May 6, 1905.

1. System and Expedition in Office Practice. Office Plans and Details,
By ROBERT L. DICKINSON.
2. The Present Limitations of Serum Therapy in the Treatment of the Infectious Diseases, By HENRY W. BERG.
3. The Present Status of Röntgen Ray Therapy,
By RUSSELL H. BOGGS.
4. Rectal Abscess Containing Gonococci Without Any Accompanying Gonorrhœa,
By F. R. STURGIS.
5. The Cause of Cerebrospinal Meningitis,
By STEPHEN J. MAHER.
6. Cactus Grandiflorus,
By FINLEY ELLINGWOOD.

1. Office Plans.—Dickinson's paper will be useful mainly to those physicians who own their own house or who have leased for a long term of years. There are many suggestions concerning office routine which are generally applicable. Physicians intending to remodel their offices would do well to look the paper over.

2. Serum Therapy.—Berg deprecates the present tendency to employ sera when they are contraindicated by all known bacteriological facts; such attempts, for instance, as those recently, made to cure epidemic cerebrospinal meningitis by means of injections of diphtheria antitoxine. The present limitations of serum therapy can only be understood by reviewing the properties of the principal pathogenic bacteria. (1) Those bacteria which produce free toxins (diphtheria, tetanus, etc.) can have their effects partly neutralized by suitable antitoxines. (2) Some bacteria secrete little or no free toxine (pneumococcus, typhoid bacillus, etc.), but they contain an endotoxin which is partly liberated on the death of the organism. (3) There is a group of bacteria which produce no toxins and contain endotoxins of only very feeble powers (the tubercle bacillus). From this it will be seen that the problem of producing curative sera is not a simple one, and that to use specific sera in any disease except the one for which it was produced is irrational. The author explains at length why bacteriolytic sera have mostly failed.

4. Rectal Abscess.—Sturgis reports the case of a man who developed a rectal abscess, due to the gonococcus, six or seven years after a cured gonorrhœa. Pederasty was apparently excluded.

5. Cerebrospinal Meningitis.—Maher inoculated some culture tubes with pus from a case of cerebrospinal meningitis. In due course of time he observed apparently different forms of microorganisms in several of the tubes. As a result of these observations he is impelled to make the following observation: "He would be daring who would generalize on so large a subject from his

work on one case, but may I be permitted to conclude by saying that my findings seem to show that the diplococcus of Weichselbaum is only one phase in the life cycle of an organism, which at times is larger and rod shaped, at others small and of the shape of the pneumonia diplococcus, and probably at others of yeast shape."

MEDICAL NEWS.

May 6, 1905

1. Railway Spine, By EDWARD B. ANGELL.
2. Treatment of Non-Malignant Diseases by the Röntgen Ray, By RUSSELL H. BOGGS.
3. To What Extent are Cycloplegics Necessary in Determining the Refraction of the Eye and in the Prescribing of Lenses, By FRANK VAN FLEET.
4. Nasal Conditions Dependent Upon the Generative Organs, By JUSTUS SINEXON.
5. Septic Thrombosis of the Femoral Vein, Following Influenza, By D. F. TALLEY.
6. Sporadic Cretinism. Observations Based on Fourteen Personal Cases, By E. MATHER SILL.

1. **Railway Spine.**—Angell reviews the history of railway spine and reports several cases briefly. He concludes: "Railway Spine" is a convenient and picturesque term which has hypnotized juries, even as the shock has hypnotized the plaintiff. It is dramatic, but not accurate. The damage done is not to the spine or spinal cord, but to the mind. It is a psychical disorder not a physical one, although it has a physical expression in its symptomatology.

2. **The Röntgen Ray.**—Boggs lays much stress on the importance of technics in x ray work. The non-malignant conditions which are most benefited by this mode of treatment are: (1) Acne and many other skin diseases; lupus; certain tuberculous glands; Hodgkin's disease, and selected cases of goitre.

4. **The Nose and the Generative Organs.**—Sinexon concludes: (1) That turgescence of the nasal mucous membrane always occurs during the procreative act. (2) That there also exists a marked degree of hyperæsthesia of the nasal mucous membrane at such time. (3) That a more or less marked periodical engorgement of the nasal mucosa occurs in females coincident with menstruation. (4) That this same engorgement also occurs periodically during pregnancy, demonstrating that it is not dependent upon the menstrual flow. (5) That operations which destroy the functions of the generative organs cause the nares to return to the state which existed prior to the advent of puberty. (6) That in lower animals sexual excitement is always accompanied by occlusion of the nares. (7) That this engorgement in the human family may result in epistaxis or hydrorrhœa. (8) That the continued overstimulation of the nasal mucous membrane from sexual perversion results in a relaxation of the same through vasomotor paresis. (9) That the long-continued hypernutrition from frequent or inordinate congestion will in time produce permanent tissue changes either of hyperplasia or atrophía. (10) That these conditions are in no way dependent upon hysteria or neurasthenia.

5. **Septic Thrombosis.**—Talley reports one personal case of septic thrombosis due to influenza and two cases which he has found in the literature. Aside from the histories of the cases the greater part of the paper consists of a quotation from Finkler's article on the subject in the Twentieth Century Practice of Medicine.

AMERICAN MEDICINE.

May 6, 1905.

1. The Methods of Inducing Labor, By B. C. HIRST.
2. Adulteration of Drugs, By H. W. WILEY.
3. The Combined Operation of Arthrodesis and Transplantation of the Tendon of the Extensor Proprius Hallucis for the Relief of Flatfoot, By H. AUGUSTUS WILSON and ROSS V. PATTERSON.
4. The Diet in Typhoid Fever, By JOHN BENJAMIN NICHOLS.
5. Remarks on the Causation and Diagnosis of Hepatic Cirrhosis, By JAMES K. CROOK.
6. Benign Strictures of the Œsophagus: Report of Cases, By C. D. SPIVAK.
7. The Gynecologist and the General Surgeon: Their Respective Fields, By BROOKS H. WELLS.
8. The Most Eminent American Physician of European Birth, By A. JACOBI.

1. **Induction of Labor.**—Hirst asserts that the method of inducing labor by means of bougies gives the best results. He does not give his total experience, but bases his paper on the statistics of the University of Pennsylvania Hospital. They are: Labor induced by bougies alone, 174; by bags alone, 23; by bougies and bags, 11; by bougies followed by Bossi's dilator, 7; by bougies followed by vaginal hysterotomy (misnamed vaginal Cæsarean section), 2; making a total of 217 patients operated on. These figures are carefully analyzed and bear out the author's contention.

3. **Flatfoot.**—Wilson and Patterson advocate the following method for the treatment of suitable cases of flatfoot. The astragaloscaphoid articulation is destroyed by means of a chisel or bone forceps. A hole is drilled through the scaphoid bone, and through this hole is passed the severed tendon of the extensor proprius hallucis, whose cut proximal end is sutured to the periosteum on the plantar side of the scaphoid. The after treatment is of considerable importance.

4. **The Diet in Typhoid.**—Nichols in a rather elaborate paper advocates a more liberal diet in typhoid fever. The greater part of the paper is taken up with theory. It concludes with a summary of the experiences of various practitioners who have recently advocated feeding typhoid patients more liberally.

LANCET.

April 22, 1905.

1. On the Dissemination of Mammary Carcinoma. (*Hunterian Lectures, III*), By W. S. HANDLEY.
2. Some Considerations on the Nature of Diabetes Mellitus. (*Goulstonian Lectures, III*), By W. C. BOSANQUET.
3. Gallstones and Cancer, By G. R. SLADE.

4. Three Cases Illustrating the Condition of the Small Intestine Some Years After Extensive Enterectomies, By A. E. J. BARKER.
5. A Further Note on the Relation Between Various Atmospheric Conditions and the Occurrence of Cerebral Hæmorrhage, By J. W. RUSSELL.
6. Plague in Cats, By W. HUNTER.
7. Suppurative Periostritis Following Typhoid Fever, By W. H. BATTLE and L. S. DUDGEON.
8. A Cerebrospinal Manometer, By F. C. EVE.

1. **Cancer of the Breast.**—Handley, in his third Hunterian lecture, discusses the origin of metastases of cancer of the breast found in the breast. There are few forms of carcinoma in which visceral deposits are more frequently found. Of 329 cases metastases occurred in 77 per cent. The great frequency of visceral metastases is mainly owing to the extension of cancerous permeation along the five anastomoses, which piercing the parietes, connect the lymphatic plexus of the deep fascia with the subendothelial lymphatic plexuses of the pleura and peritonæum and with the mediastinal and portal glands. The dominant factor is the escape of cancer cells into the serous cavities. In conclusion, the author draws the following practical conclusions: If, when it transgresses the limits of the breast, cancer spreads primarily in the deep fascia, the main operative aim next, of course, to complete removal of the breast and of the axillary glands, should be the removal of as wide an area as possible of the deep fascia. And if the mode of fascial extension is by centrifugal continuous permeation, the area affected is roughly a circle and the area of fascia removed should also be circular with its centre at the point of origin of the original neoplasm. Hitherto too much attention has been paid to the pectoral fascia and axillary glands, with consequent inadequate excision of the deep fascia in a downward direction over the upper part of the abdomen. In order to prevent epigastric invasion the usual incision should be prolonged downwards over the linea alba for about two inches, the flaps undermined, and the fascia excised as far down as two inches below the ensiform cartilage or even lower. This step does not increase the shock of the operation. Excision of the overlying skin and of the underlying muscle must be free, but need not be so extensive as that of the fascia. Removal of the deep fascia is carried out more thoroughly in England than elsewhere, but even there it is deficient in the direction of the epigastrium. Local and intrathoracic recurrence after the operation for cancer of the breast is becoming more and more infrequent, but purely abdominal recurrence is increasing in relative frequency. The author concludes by expressing the firm belief that a recognition of the danger of epigastric invasion and the adoption of precise means for its prevention will bring about a further appreciable reduction in the mortality from mammary carcinoma.

2. **Diabetes.**—Bosanquet, in his third of the Goulstonian lectures, sums up his views regarding the nature of diabetes: 1. Excess of sugar in the blood, the condition precedent of glycosuria,

may be caused by overproduction of sugar in the system or by diminished use or excretion. And the evidence of overproduction is convincing. 2. Overproduction may depend upon some digestive irregularity, or upon manufacture of sugar from the tissues of the body. This last obtains in diabetes mellitus alone—i. e., autolytic formation of sugar is the characteristic feature of diabetes. 3. It is probably present all through the disease, but in the early stages its absence may be due to a certain power of the body of utilizing sugar in its nutritive processes. 4. It is very probable that the pancreas is diseased in all cases of diabetes mellitus. The function of the pancreas which is in abeyance in diabetes is normally performed by certain special groups of cells known as the islands of Langerhans, which are distinct from the ordinary secreting cells of the gland, but which are not unprobably formed from the acini. The special lesion of these islands is hyaline degenerations. 5. The action of the pancreas is probably exerted in the direction of counteracting a poison which in some way causes accumulation of sugar in the blood. 6. It is theoretically possible that sugar may be derived from fat; this is borne out by the fact that a serious disturbance of the adipose tissue exists in diabetes. 7. Glycosuria as opposed to diabetes may be due to mere excess of sugar poured into the blood from the alimentary canal in excess of what the system is capable of assimilating; or it may be due to causes acting analogously to Bernard's diabetic puncture, and leading to a discharge of sugar by the liver from its stores of glycogen. If these views are correct it follows that in its earliest stages the diabetic process may constitute rather a predisposing cause of glycosuria than the actual cause of the phenomenon, since the breaking down of the tissue cells into sugar is at first not more than sufficient to saturate the sugar assimilating powers of the system. At this stage a slight increase of saccharine food will produce glycosuria. Similarly a slight nervous shock, liberating only a comparatively small quantity of glycogen from the liver, may be enough to cause the appearance of sugar in the urine, and so be thought the cause of diabetes. So that diabetes might be defined as an increased internal dissociation of tissue (possibly fat) into sugar, caused by a toxic substance which is produced in the course of normal metabolism and which is normally neutralized by the pancreas. The prognosis of any case depends more upon the degree of acid intoxication existing than upon the percentage of sugar in the blood or urine.

3. **Gallstones and Cancer.**—Slade has studied the relation between gallstones and carcinoma of the gall bladder, and reaches the following conclusions: 1. The association between carcinoma of the gall bladder and gallstones is very close. 2. Gallstones may be looked upon as the terminating cause of cancer of the gall bladder. 3. Thickening of the wall of the gall bladder is presumptive evidence of carcinomatous change. 4. Cholecystectomy should be performed whenever possible if any thickening of the wall of the gall bladder be found at the time of operation.

4. Conditions Following Enterectomy.—Barker reports a group of cases in which enterectomy had been performed for intestinal obstruction. Later the abdomen was opened for another cause, and though the obstruction had occurred some years before, it was interesting to observe that though the communication between the two portions of the bowel was perfect and as wide as possible, the afferent or proximal portion still showed unmistakable signs that it had not yet recovered its former tone as contrasted with the efferent or distal portion which was normal.

5. Cerebral Hæmorrhage.—Russell's observations seem to establish that actual height of barometric pressure, temperature, or wind pressure exercises no influence in determining the onset of attack of cerebral hæmorrhage.

6. Plague in Cats.—W. Hunter's conclusions as to the occurrence of plague in cats, are as follows: 1. Cats suffer from plague. 2. The disease may be acute or chronic. 3. The type of the disease is septicæmic. 4. These animals may occasionally play a part in the dissemination of plague. 5. In plague infected districts possible plague infection in cats is of great importance from a domestic point of view. 6. In plague infected areas cats probably become infected through plague rats and mice which they devour as food.

8. Lumbar Puncture.—Eve describes an apparatus by which the pressure of the cerebrospinal fluid can be measured when lumbar puncture is performed. A summary of his observations is as follows: 1. The therapeutic effect of lumbar puncture is of considerable value, and its effects are produced as follows: (a) excessive tension is reduced; (b) the brain is washed by fresh fluid secreted in place of that withdrawn; (c) a temporary cerebral hyperæmia is produced by the blood vessels dilating to take the room of the fluid withdrawn until a new supply is secreted, or, conversely, a cerebral anæmia due to excessive intracranial pressure may be arrested; and (d) a substantial change of cerebral environment is produced, of which Nature may sometimes be able to take advantage. 2. Lumbar puncture has been performed about sixty times with the author's instrument without any bad effects. 3. Valuable diagnostic information is often afforded: (a) Pink fluid indicates cerebral hæmorrhage, fractured skull (with injury to the dura mater) or severe superficial cerebral laceration (with pia mater); (b) a faint "spider's web" clot after standing several hours points strongly to meningitis; (c) cytological, bacteriological, or inoculation experiments may give the diagnosis; and (d) occlusion of the cerebral from the spinal cavities may be diagnosticated and this may localize a subtentorial tumor. 4. In apoplexy, lumbar puncture is conceivably justifiable when the pressure is found to be very high, provided that the pressure is slowly reduced to half its value, not too soon after the occurrence of the hæmorrhage. But such treatment would certainly be dangerous without a manometer. 5. There may exist a disease of very high pressure in the cerebrospinal cavity analogous to glaucoma in the ocular cavity. 6. Lum-

bar puncture is said to be dangerous in cerebral tumor. 7. Very good results have followed the use of lumbar puncture in cases of fractured base, concussion, posttraumatic cerebral condition, very severe chorea, uræmic coma, optic neuritis, ataxia, and tuberculous meningitis.

BRITISH MEDICAL JOURNAL.

April 22, 1905.

1. Remarks on the Determination of Arterial Blood Pressure in Clinical Practice, By C. J. MARTIN.
2. A Case Simulating Intracranial Tumor in Which Recovery was Associated with Persistent Cerebrospinal Rhinorrhœa, By T. R. GLYNN and E. E. GLYNN.
3. Arthritis Deformans and Its Allies, By B. ABRAHAM'S.
4. The Medical Treatment of Insanity, By R. JONES.
5. An Inquiry Into the Existence of Typhoid Fever in Bermuda, By L. KILROY and F. W. HOOPER.
6. The Corneal Reflex in Anæsthesia, By L. K. THOMAS.

1. Blood Pressure.—Martin discusses the various methods of determining arterial blood pressure, and describes a simple apparatus devised by himself.

3. Arthritis Deformans.—Abrahams discusses the clinical features of the various affections ordinarily grouped under the name of rheumatoid arthritis. These conditions, arranged chronologically according to the age of the patient, are (a) the children's disease, as described by Still; (b) the acute process occurring in young women; (c) the familiar multiarticular affection of middle aged women; and (d) the equally well known chronic malady of the aged. Still's disease is undoubtedly an infective process, and is usually associated with enlargement of the spleen and lymphatic glands. It is essentially chronic, is more prevalent in boys, and attacks the fingers very late. The second disease is acute, occurs only in girls, and usually commences in the fingers. Pathologically each is a synovitis with only secondary changes in the cartilages. The fourth form of the disease, which occurs at the other extreme of the scale of life, is really a senile osteoarthritis. It is primarily a degenerative process, consisting in fibrillation, breaking up and wearing away of the joint cartilage. The affection is so little inflammatory that it can hardly be called osteoarthritis. Further distinctive features are the absence of anæmia and of nervous symptoms, and the fact that it usually attacks the large joints, especially the hip. Having dealt with these affections of the extremes of life, the author considers true arthritis deformans, acute and chronic; while both these forms are distinct from rheumatism, it is not yet certain that they are distinct from each other. The acute disease is often terribly rapid in its course, but not always. Many joints are affected at about the same time, the proximal interphalangeal, and temporomaxillary being conspicuous among these. The brunt of the chronic form falls upon the metacarpophalangeal joints and the knees. But it is possible that this difference in distribution between the acute and chronic conditions may be one of degree only. No importance is attached to the fusiform swellings upon the interphalan-

geal joints in the acute affection. The inflammatory changes in acute arthritis deformans are primarily and mainly in the synovial membrane; the cartilages are only damaged secondarily, and the only change in the bones is the marked thinning of their ends. The chief features in the chronic form are degenerative changes in the cartilage, involving fibrillation, patches of softening, and hyperplasia. The author suggests that these acute and chronic types are the expressions merely of a similar process attacking joints at different ages. In many cases of the chronic form, there is profound involvement of the nervous system, but the author does not regard it as a nervous disease. In the acute form the nervous system is but little affected. Ordinary arthritis deformans may pass into the senile form, but the latter is often due to other ætiological agencies, in particular old age, as the causes of degeneration.

6. Corneal Reflex.—Thomas agrees with Gardner that for safety in the use of anæsthetics, the air way must be kept clear, but not as to the corneal reflex. He holds that there is, other things being equal, a much greater interval of safety between the corneal reflex and the failure of respiration and heart than is generally admitted. Further, the reaction to corneal stimulation varies enormously in different individuals; so that the corneal reflex cannot be depended upon as a guide in the administration of anæsthetics in cases requiring complete muscular relaxation, especially in abdominal and hæmorrhoidal operations, in which moderate secondary dilatation of the pupil, while keeping a careful watch on the respiration and pulse, is the best guide to complete success.

Letters to the Editor.

THE CLINICAL THERMOMETER.

65 FRENCH BROAD AVENUE,
ASHEVILLE, N. C., April 24, 1905.

To the Editor,

Sir: I have recently had a rather interesting experience in regard to the accuracy of clinical thermometers, of which matter you have lately spoken editorially, so I thought it might be of interest to give you the facts.

I have many patients who need to take their temperatures, and I have always been particular that they should use a clinical thermometer which was as accurate as possible and have had them get thermometers of a well known English make, since I felt the results were apt to be more accurate. In the last year, however, I noticed that the maker, instead of supplying Kew certificates with his thermometers, was certifying them himself, and since I also noticed that all the certificates showed perfect thermometers with the zero error at each of the four usual points, I felt that the reliability of the readings was really thrown in question by such, I may say, impossible perfection. I therefore had the druggist who gets these thermometers for me send six dozen, all of which had perfect certificates from the maker, to the Government Bureau of Standards in Washington.

As every one is aware, the bureau rejects as imperfect all thermometers with an error of four tenths of a degree or more. Of the six dozen thermometers, one dozen, the druggist informs me, were rejected for such error. Of the five dozen others, there were none with perfect certificates and only three with an error of minus one tenth of a degree at each of the four readings. Now, I do not blame the maker for not producing an impossibly perfect thermometer, but I do blame him, since he found out the desire of an ignorant public for perfect certificates, for yielding to this want and giving certificates which scientific test has proved to be unreliable. I do not doubt the excellence of his thermometers, and an error of from one to three tenths of a degree, even in incipient tuberculosis, where small variations are of great importance, is not a matter that need have worried us, but the whole affairs bears out your remarks in recent numbers of your journal and shows the necessity of a government, Yale, or Kew certificate with any thermometer on which we are to rely, and when one thinks how important are the conclusions to be drawn, it is evident that the makers must be awakened to their responsibility in this matter.

CHARLES L. MINOR.

OPERATIONS FOR PHIMOSIS.

50 VANSITTART AVENUE,
WOODSTOCK, ONT., April 24, 1905.

To the Editor,

Sir: I have read with much pleasure the article in the April 8th number by Dr. J. M. White, of Mississippi, upon an operation for phimosis and have been much pleased with his explanation of a new procedure for that troublesome little defect.

However, what I wish to protest against is the doctor's tacit admission that an operation of that kind means the loss of a portion of the foreskin. I, for one, strenuously oppose the method employed by surgeons in nearly all cases, i. e., cutting off a portion of the foreskin on general principles, as being wrong in principle, cruel, and quite unnecessary. I have been guilty in the past of the same error, and have been sorry when I beheld later on a permanently denuded glans.

I have, for the last five years, resorted to the following method: With a small forceps inserted into the end of the contracted foreskin, I dilate the part quite forcibly, being careful not to produce a tear, until the skin can be forced back past the glans.

The mucous membrane being usually firmly or partially adherent, I strip this back so as to completely expose the glans. I then draw the foreskin forward and dilate again; then, after cleansing, I anoint freely with vaseline and leave orders for this to be repeated each morning, and if not perfectly satisfactory to report. The daily retraction and anointing prevent adhesions forming again until healing takes place.

The only exception is in very rare cases, in which the foreskin is extremely long, when, of course, a portion will require removal. In the last five years I have not resorted to the knife once, and complete recovery has occurred in every case. No anæsthetic is used, as the operation occupies but two or three minutes.

A. T. RICE.

MERIDIAN, MISS., April 12, 1905.

To the Editor.

Sir: I have received several letters relative to my operation for phimosis, described in your journal for April 8th. The writers wish to try the *opelation*, and a few request me to describe it more plainly. The dorsal cut is made with scissors. Then the prepuce is stretched or held taut laterally with fingers or forceps. Then the small sized continuous catgut suture is inserted, beginning at the dorsal cut and ending at that point. Then the suture is tide in a bowknot (temporarily), now the prepuce is cut in front of the suture all around with scissors. The bowknot is now untied and a surgeon's knot is tied—not too tight—or the suture can be left untied till the prepuce is cut off. I have a compound stearate of zinc powder with lycopodium that I use as a dressing, which I much prefer to iodoform. Any dressing that is applied should be loose.

J. M. WHITE.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, March 2, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

The Induction of Labor.—Dr. HIRST gave the following statistics, mainly from the University Hospital: Though they did not represent his total experience, the number was sufficient to draw conclusions from, and the omitted cases would not materially alter the percentages. Labor induced by bougies alone, 174; by bags alone, 23; by bougies and bags, 11; by bougies followed by Bossi's dilator, 6; by bougies followed by vaginal hysterectomy, 2; making a total of 216 patients operated on. He gave the following statistical review of the cases and the results:

Induced Labor by Bougies Alone, 174.—The child was born in less than six hours after the introduction of the bougies in eight cases; between six and twelve hours in twenty-three; between twelve and eighteen hours in thirty-three; between eighteen and twenty-four hours in fifteen; between twenty-four and thirty hours in eleven; between thirty and thirty-six hours in twenty-three; between thirty-six and forty-two hours in eleven; between forty-two and sixty hours in twelve, and in more than sixty hours in two, the longest time recorded being sixty-two hours. In thirty-six cases the time was not recorded. In 81 per cent. of 133 cases, therefore, the child was born in less than thirty-six hours from the time the bougies were introduced.

Induced Labor by Bags Alone, 23.—The child was born in less than six hours after the insertion of the bags in two cases; between six and twelve hours in three; between twelve and eighteen hours in three; between eighteen and twenty-four hours in seven; between thirty-six and forty-two hours in one; between forty-two and sixty hours in two; over sixty hours in one. The longest time recorded was ninety-one hours. In five cases the time was not noted. The delivery was accom-

plished in less than thirty-six hours in 83 per cent.

In the labors induced by bougies and bags, eleven in number, the time required was considerably over twenty-four hours in all, because much time was allowed the bougies before the bags were used. In one of these cases ninety-six hours were required, and even then, in spite of the fact that the full sized Champetier de Ribes bag passed spontaneously out of the cervix, there were no pains and the fœtus was extracted from the uterus by its foot.

In the cases in which Bossi's dilator was used or vaginal hysterectomy was performed delivery was concluded naturally and promptly.

Dr. Hirst said that the physician desired for the patient the method that would cause the minimum of discomfort and risk, and for himself he desired a method that would give the least trouble and take the least time. The bougie method, in his experience, best met these requirements. In private practice, before leaving his office the physician put two bougies, size, 17 French, into a long glass tube filled with water, into which a mercuric chloride tablet was dropped, and the tube corked. By the time he arrived at the patient's house, the bougies were sterile. Before the bougies were put in, one or two fingers should be inserted through the cervical canal and swept around the lower uterine segment to separate the membranes. A small tampon of iodoform gauze was placed in the vagina after the bougies were inserted. The physician was notified when the pains became strong and active. He made no examination, and did not remove the vaginal packing or the bougies till expulsive pains began. He simply devoted the time and attention required in an ordinary labor case, plus about fifteen minutes or less for the insertion of the bougies. The patient had to endure the usual suffering of an ordinary labor, plus the scrubbing of the vagina. She did not feel the introduction of the bougies. In more than four fifths of the cases she was delivered easily after a labor of average length. He thought any more complicated or active treatment to bring on the labor unnecessary. In many instances patients responded extraordinarily well to this simple plan. In sixty-four out of 138 cases the child was born in less than eighteen hours from the time the bougies were inserted.

In contrasting the bag method with that of the bougies, Dr. Hirst said the bags must be boiled; their insertion was usually painful; and, if a large one was used, preliminary instrumental dilatation of the cervix was required, for which the patient ought to be anesthetized. After the insertion it was customary to have the nurse pull on the tube attached to the bag every ten or fifteen minutes; this, with the pressure of a large foreign body in the lower uterine segment, added to the pains of labor. The physician usually had to make frequent examinations to be sure that the bag had not been expelled from the uterus and to detect the degree of inflation of the os, thus increasing the risk of infection. The bags did not remain sterile; the Voorhees bags, commonly used in America, quickly became foul. In some of his cases the nurse had pulled the bag out prematurely or had pulled the tubing off the bag, necessitat-

ing a reinsertion; and in one case a head presentation had been converted into a shoulder presentation by the largest sized Voorhees bag. In about a fifth of the cases, or in about the same proportion as with the bougies, delivery was not secured in thirty-six hours, and something else had to be done. Thus, the question arose of how to manage an induced labor if the bougies or bags failed. Dr. Hirst's present preference was to insert two bougies and wait twenty-four hours; if there were no labor pains by that time, there was at least always a marked softening and elasticity of the cervix. The patient might then be anesthetized and placed on an operating table. With Bossi's dilator the cervical canal was dilated slowly to 6 or 7 cm. Up to this point there was no danger of injuring the cervix. A forceps was then applied and the child extracted, the whole process taking about thirty-five minutes. He had induced labor by this plan six times. The woman suffered nothing at all in her labor. She did not feel labor pains and knew nothing about the delivery. If there was a moderate laceration of the cervix or pelvic floor, the injuries were repaired in the puerperium, and there were no permanent ill consequences. He thought there was no reason for the prejudice against Bossi's dilator exhibited frequently by those who had had no experience with it. He had used the instrument altogether twenty-five times, nineteen times for accouchement forcé. The only serious lacerations of the cervix had occurred in women delivered in less than twelve minutes. At first the instrument was used in this way for desperate cases of eclampsia, and even in them there was no dangerous laceration. With a slow dilatation, twenty minutes or more, up to 6 or 7 cm., there was not much more danger of lacerated cervix than in the average labor.

If the cervix was not easily dilated with Bossi's dilator after the bougies had been in place twenty-four hours, a slow dilatation with bags, or a rapid delivery by hysterectomy was available. He thought that Dr. Richard C. Norris's proposition deserved careful attention. It was to dilate the cervix up to 7 cm. with an improved and modified Gau's dilator, then to insert bougies and the largest sized Voorhees bag, partially filled with water. But even with this combination of all the plans of inducing labor, an apathetic uterus demanded operative delivery in addition, just as it did with bougies alone, bags alone, or both together, and in four fifths of the cases bougies alone would be enough without the extra trouble and discomfort entailed by the other methods. Nevertheless, Norris's technique was an excellent one, and would often be useful, especially in cases at a distance, where the consultant would be detained until the labor was over.

Dr. W. REYNOLDS WILSON's experience in the induction of labor had been mostly confined to cases of threatened eclampsia and placenta prævia. He had had more or less experience with induction of labor for contracted pelvis. In his opinion, there were two classes of cases to be considered in the induction of labor. One was that which yielded readily, not only to the bougie, but to careful packing of the cervical canal and vagina,

which he considered a very important adjunct to the use of the bougie. In another class of cases the introduction of the bougie would not cause softening of the cervix or promote uterine contraction, and Dr. Norris's remark in reference to the mechanism of contraction suggested the possibility of the condition being one of reflex action. He stated that there was never any dilatation of the cervix without a corresponding degree of contraction in which the whole uterine organ took part; and if this was borne in mind, it would reveal how absolutely unnatural mechanical dilatation was in most cases. There was a set of cases in which the cervix was elongated and the reflexes were absent, where the bougie was absolutely ineffective and the bag also very probably would be ineffective. He thought the only possible way to induce dilatation in these cases was to attempt to soften the cervix by careful packing, then by manual dilatation afterward, making allowance for the fact that time was the most essential element in the procedure. These undilated cases would always remain difficult cases, and it was a mistake to believe that they must be treated by methods of successive mechanical dilatation, because the prolonged treatment and the want of observance of the proper precautions against infection would probably all be against the interest of the patient.

Dr. Wilson had noticed in certain cases where it had been necessary to induce labor that the unyielding quality of the cervix was accompanied with a condition of cervical gonorrhœa. These cases were apt to be followed by symptoms of local infection and by chronic subinvolution. He believes also that it would be well to call attention to the shock which accompanied accouchement forcé in these cases. The eclamptic cases were those which yielded most quickly to dilatation. They were not the cases in which to perform accouchement forcé. When rapid dilatation was spoken of, it might be that that procedure was meant, but where the eclamptic attack had really come on, the chances were that the labor could be carried on rather promptly. He considered the rapid termination of labor in eclampsia conservative treatment. In order to cure an eclamptic patient, she must first be relieved of her pregnancy. He thought the most modern theory of eclampsia rather explained that; the syncytial tissue found its way into the maternal circulation, causing to be created in the serum a corresponding and compensating antidote to the poison which had been described by the Germans as syncytiolysin. If this compensatory or over-coming serum was not sufficiently produced, then the poison was not counteracted. On the other hand, if the antidote was produced in too great an amount to be neutralized, it in turn acted as an irritating toxine. This he regarded as a very ingenious and very interesting theory of the production of eclampsia. He thought that, if it was a sound theory, as soon as the syncytial tissue ceased its activity the patient should be relieved of the poison; and therefore emptying of the uterus rather favored, not the elimination of the poison, but the cessation of its production.

(To be concluded.)

Book Notices.

A Textbook of Pathology. By JOSEPH MCFARLAND, M. D., Professor of Pathology and Bacteriology in the Medicochirurgical College of Philadelphia, etc., With 350 Illustrations, a Number in Colors. Philadelphia: W. B. Saunders & Co., 1904. Pp. 818. (Cloth, \$5.00; sheep or half morocco, \$6.00.)

Textbooks on pathology may in general be classified into two main groups, one group including such complete monographs on the subject as may be best exemplified by that of Ziegler, the second group including such smaller textbooks as are suitable for the student and practitioner, such for example, as the well-known text of Delafield and Prudden. No one has as yet attempted to produce in English a book which can replace Ziegler in its encyclopædic scope and bibliographical completeness. The writer of the volume before us has attempted to follow a middle path, the difficulties of which he acknowledges in his preface. A great deal of matter has been introduced into the text which is not commonly found in works confined strictly to gross and microscopical pathology. Discussions of the clinical phases of disease are not infrequent. Under the pathology of nutrition we find, for example, a discourse on the causes of uræmia and the dietary errors which underlie gout, a paragraph on phosphaturia and oxaluria, a discussion on the composition of the fæces, a classification of diarrhœas, and, finally, some remarks on the fate of the final products of the constituents of the food. It can easily be seen that if the author treats the subject of pathology with any fullness and also includes the clinical symptoms and physiological chemistry of the disease, the extent of the text must be very great. This question of bulk has been met by the use of two sizes of type, of which even the larger is somewhat too small for easy reading.

A thorough review of the subject matter of the volume is impossible in the short space at our disposal, but the volume impresses the reviewer as on the whole clear and full. A few of the discussions, however, are not fully up to date, as an example of which we may take the chapter on the blood. On the first page, the formula for sodium carbonate is incorrectly given. The basophile cell has long been recognized as constantly present in small numbers in the blood of adults, and though Cabot is quoted as saying that it does not occur in normal blood, that author has changed his opinion. Cabot is again misquoted as saying that a myelocyte has a diameter of fifty micra. Such myelocytes, if they existed, would find it difficult to pass through the peripheral capillaries. It is hardly true either that eosinophilia is always present in gout, uræmia, oxaluria, and epilepsy, and that in malignant disease the number of eosinophiles is reduced. Such errors mar an otherwise excellent book, and the author should have taken care to have some specialist in the subject of blood diseases criticise his text for him, for no one person can cover the entire subject of pathology at the present time.

The chapter on the disease of the female genital organs is full and very well illustrated. That on the diseases of the brain and spinal cord is perhaps

the least satisfactory in the volume. The bacterial side of pathological anatomy is excellently presented and very fully given. The illustrations are in general exceedingly good. Some of them are taken from older textbooks, but many have been freshly drawn or are from photographs of cases seen by the writer. All of those which bear the signature of J. D. Z. Chase show the hand of the experienced artist and illustrator.

Though it is to be regretted that all bibliographical references have been omitted, the author of the text may certainly be congratulated on the results of his first edition. In the second we may expect to find the subject matter brought fully up to date.

Diet in Health and Disease. By JULIUS FRIEDENWALD, M. D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore, and JOHN RUHRÄH, M. D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Philadelphia: W. B. Saunders & Co., 1905. Pp. 689. (Cloth, \$4.00.)

The authors state that it has been their aim to prepare a practical work that would give a fairly concise account of the different kinds of foods, their compositions and uses, and of the principles of diet, both in health and in disease. There is a brief account of the chemistry and physiology of digestion, and there is a more lengthy description of the classes of food and their uses. Diet for infants and for children, for the aged, for pregnancy, and for various infectious and organic disease are described in detail. To complete the work the army and navy rations and the dietaries of public institutions are given. It is not too much to say that this is a most satisfactory work of its class.

An Elementary Treatise on the Light Treatment for Nurses. By JAMES H. SEQUEIRA, M. D., Lond., M. R. C. P. Lond., F. R. C. S. Eng., Physician in Charge of the Skin Department and Lecturer on Dermatology at the London Hospital. London: The Scientific Press, 1905. Pp. 83. (Price, 2s. 6d.)

The author has found in his experience at the London Hospital that care in the details is essential to success with the light treatment, so he has prepared this little monograph with particular attention to that elementary consideration of details that will make the method intelligible to the nurse. In the main he has followed the methods of Finsen's Light Institute in Copenhagen, with such modifications as his experience has indicated.

Miscellany.

A Simple Method of Generating Formaldehyde Gas.—Henry V. Walker, of the Brooklyn Department of Health, says in an article on this subject in the *Journal of the American Chemical Society*, for March, 1905: The method of generating formaldehyde gas for fumigating purposes, which I shall describe, has been devised with the object of overcoming certain difficulties which attach to the methods generally in use, and which have prevented the adoption of formaldehyde as a fumigating agent

in municipal work. Formaldehyde generators are complicated and rather expensive machines, very liable to get out of order, and requiring frequent repairs and replacement. The time required to generate sufficient gas by means of these machines to fumigate an apartment, is a further objection. The use of solid polymerized formaldehyde (paraform), which is vaporized by means of a burning charcoal cone, obviates some of the difficulties which are encountered with the machines. Unfortunately, paraform as a fumigating agent leaves much to be desired as to efficiency. This is due to several causes, chief of which are the absence of moisture, the complete combustion of a large part of the paraform, and the volatilization of the paraform as such, instead of its decomposition into simple (gaseous) formaldehyde. The use of burning fuel in a sealed apartment also presents a constant source of danger and frequently causes damage to carpets and furniture.

The method of generating formaldehyde gas from its aqueous solution, which is the subject of this paper, consists in utilizing the property of lime of combining with water, and thus to remove the solvent and liberate the gas. The addition of lime to aqueous formaldehyde, however, is not an efficient means of generating formaldehyde gas for two reasons:

(1) The mere ebullition of such a solution does not suffice to expel the gas.

(2) Calcium hydroxide reacts with aqueous formaldehyde, forming carbonhydrates as acrose, formose, and their decomposition product, methylenetan.

The first of these difficulties is avoided in the process about to be described by using a sufficient quantity of lime to combine with all the water contained in the formaldehyde solution. The lime is used, not as a calorific body but as a dehydrating agent. The second difficulty mentioned is overcome by the addition of a substance such as sulphuric acid or aluminum sulphate, which reacts with lime to form an insoluble compound. It has been found, as was to be anticipated, that the reaction between calcium hydroxide and formaldehyde is dependent upon the hydroxide being present in solution, thus facilitating molecular contact and chemical reaction. The bodies mentioned (sulphuric acid, sulphate of aluminum, etc.), by keeping the reacting mixture free from calcium hydroxide in solution, prevent condensation of the formaldehyde.

When sulphuric acid is used, the fumigating liquid is made by adding to the commercial 40 per cent. formaldehyde solution about one third of its volume of commercial sulphuric acid. Eight fluid ounces of this mixture, with one pound of lime, are required for each one thousand cubic feet of the apartment to be fumigated.

A serious objection to the sulphuric acid mixture is that upon standing the formaldehyde is converted into solid polymerized formaldehyde (paraform), which separates out in the form of a deposit closely adherent to the bottle. The use of this mixture has therefore been abandoned in favor of a mixture containing aluminum sulphate instead of sulphuric acid, as this mixture does not deposit paraform.

The mixture is made by dissolving twenty to twenty-five pounds of commercial aluminum sulphate in five gallons of hot water, and mixing this

solution with fifteen gallons of 40 per cent. formaldehyde solution. Eight fluid ounces of this mixture and one pound of lime are used for one thousand cubic feet. It is necessary to use a lime which slacks rapidly with cold water, as this mixture is not so vigorous in action as the sulphuric acid mixture. The lime should be used in the form of coarse powder or small lumps.

The method has the advantages of not requiring any special form of apparatus, of cheapness, and freedom from danger of fire. In municipal practice it has given most excellent results, over 90 per cent. of successful fumigations, tested by *Bacillus pyocyaneus*, being obtained. This high degree of success is doubtless largely due to the great rapidity with which the gas is evolved, a sufficient quantity to fumigate an ordinary apartment being liberated in from five to ten minutes.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending May 6, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington.	Apr. 22-29.	.....	1
Florida—Jacksonville.	Apr. 22-30.	.....	5
Illinois—Chicago.	Apr. 22-29.	.....	21
Illinois—Danville.	Apr. 22-29.	.....	3
Louisiana—New Orleans.	Apr. 22-29.	.....	16
Five cases imported.			
Missouri—St. Joseph.	Apr. 22-29.	.....	3
Missouri—St. Louis.	Apr. 22-29.	.....	21
Nebraska—South Omaha.	Apr. 22-29.	.....	1
New York—New York.	Apr. 22-29.	.....	1
Ohio—Cincinnati.	Apr. 21-28.	.....	4
Ohio—Toledo.	Apr. 15-22.	.....	1
Pennsylvania—Allentown.	Apr. 22-29.	.....	3
Infection imported.			
Pennsylvania—Lebanon.	Apr. 22-29.	.....	3
Pennsylvania—Steelton.	Apr. 22-29.	.....	1
Pennsylvania—York.	Apr. 22-29.	.....	13
South Carolina—Charleston.	Apr. 22-29.	.....	4
Tennessee—Memphis.	Apr. 22-29.	.....	9
Wisconsin—Lacrosse.	Apr. 15-22.	.....	2
Wisconsin—Milwaukee.	Apr. 15-29.	.....	6

Smallpox—Foreign.

Canada—Hamilton.	Apr. 20-27.	.....	2
Chile—Antofagasta.	Jan. 24-31.	.....	1
France—Marseilles.	Mar. 1-31.	.....	1
France—Paris.	Apr. 4-15.	.....	29
France—St. Etienne.	Mar. 17-31.	.....	1
Great Britain—Hull.	Apr. 1-8.	.....	3
Great Britain—Southampton.	Apr. 8-15.	.....	4
Great Britain—South Shields.	Apr. 8-15.	.....	6
India—Bombay.	Mar. 28-Apr. 4.	.....	118
India—Calcutta.	Mar. 25-Apr. 1.	.....	11
India—Karachi.	Mar. 26-Apr. 2.	.....	8
India—Madras.	Mar. 25-31.	.....	7
Italy—Catania.	Mar. 1-31.	.....	4
Italy—Palermo.	Mar. 25-Apr. 15.	.....	46
Russia—Moscow.	Mar. 25-Apr. 8.	.....	9
Russia—Odessa.	Apr. 8-15.	.....	8
Spain—Cadiz.	Mar. 1-31.	.....	2
Straits Settlements—Singapore.	Mar. 11-18.	.....	2
Turkey—Constantinople.	Apr. 8-16.	6

Yellow Fever.

Mexico—Coatzacoalcas.	Apr. 8-15.	1
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Cholera.

India—Calcutta.	Mar. 25-Apr. 1.	71
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Plague.

Africa—Cape Colony.	Mar. 18-25.	3
Africa—Vien.	Mar. 31-Apr. 7.	11
Chile—Antofagasta.	Mar. 1-28.	1
Chile—Arica.	Mar. 27.	.....	3
Chile—Picaque.	To Mar. 21.	.....	133
Chile—Valparaiso.	Mar. 31.	.....	1
India—Bombay.	Mar. 28-Apr. 3.	.....	681
India—Calcutta.	Mar. 25-Apr. 1.	.....	719
India—Karachi.	Mar. 26-Apr. 2.	.....	155
Peru—Chiclayo.	Mar. 16-Apr. 2.	.....	4
Peru—Eten.	Mar. 26-Apr. 2.	.....	1
Peru—Lambayeque.	Mar. 26-Apr. 2.	.....	1
Peru—Chepin.	Mar. 26-Apr. 2.	.....	3
Peru—San Pablo.	Mar. 26-Apr. 2.	.....	3
Peru—Mollendo.	Mar. 26-Apr. 2.	.....	16
Peru—Lima.	Mar. 26-Apr. 2.	.....	1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 3, 1905:

- ADAMS, F. B., Acting Assistant Surgeon. Granted leave of absence for ten days from April 29th.
- BURKHALTER, J. T., Assistant Surgeon. Bureau telegram of April 24, 1905, granting Assistant Surgeon Burkhalter leave of absence for three days from April 27, 1905, amended to read two days.
- CARMICHAEL, D. A., Surgeon. Granted leave of absence for fourteen days from May 12th.
- CURRIE, D. H., Passed Assistant Surgeon. To report to Medical Officer in Command, marine hospital, San Francisco, Cal., for temporary duty.
- EAGER, J. M., Assistant Surgeon General. Assigned to duty in charge of the Bureau Division of Sanitary Reports and Statistics.
- GAHN, HENRY, Pharmacist. To proceed to Washington, D. C., for special temporary duty.
- GIBSON, F. L., Pharmacist. Granted leave of absence for twelve days from May 6th.
- ROBINSON, D. E., Passed Assistant Surgeon. Detached from the marine hospital, Port Townsend, Wash., and directed to report to Medical Officer in Command, Port Townsend Quarantine, for temporary duty.
- ROSSELLO, M. M., Acting Assistant Surgeon. Granted leave of absence for twenty-three days from May 15th.
- SAFFORD, M. V., Acting Assistant Surgeon. Granted leave of absence for two days from April 30, 1905, under paragraph 210 of the regulations.
- VAUGHAN, G. T., Assistant Surgeon General. Relieved from duty in charge of the Bureau Division of Sanitary Reports and Statistics, and assigned to duty in charge of the Bureau Division of Marine Hospitals and Relief.
- WOODS, C. H., Pharmacist. Granted leave of absence for thirty days from May 15, 1905.
- WOODWARD, R. M., Surgeon. To proceed to Providence, R. I., for special temporary duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 6, 1905:

- BORDEN, W. C., Major and Surgeon. Detailed to represent the Medical Department of the United States Army at the meeting of the Interstate National Guard Association, at St. Paul, Minn., June 19, 1905.
- BRUNS, EARL H., First Lieutenant and Assistant Surgeon. Appointed an assistant surgeon, with the rank of first lieutenant, from May 1, 1905.
- DUNCAN, WILLIAM A., First Lieutenant and Assistant Surgeon. Appointed an assistant surgeon, with the rank of first lieutenant, from May 1, 1905.
- EKWURZEL, GEORGE M., First Lieutenant and Assistant Surgeon. Left West Point, N. Y., with the cadets, en route to Gettysburg, Pa., for field exercise.
- GIBNER, HERBERT C., First Lieutenant and Assistant Surgeon. Appointed an assistant surgeon, with the rank of first lieutenant, from May 1, 1905.
- RAYMOND, H. I., Major and Surgeon. Leave of absence extended two months.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 6, 1905:

- ANGENY, G. L., Passed Assistant Surgeon. Detached from the Naval Station, Culebra, W. I., and ordered home to await orders.
- BRISTER, J. M., Passed Assistant Surgeon. Detached from the Naval Hospital, Philadelphia, Pa., and ordered to the *Atlanta*.
- DUNN, H. A., Assistant Surgeon. Ordered to the *Terror*.
- HAMMER, A., Pharmacist. Detached from the Navy Yard, New York, N. Y., and ordered to the Army General Hospital, Fort Bayard, N. M., for treatment.

HOLCOMB, R. C., Passed Assistant Surgeon. Detached from the *Cleveland* and ordered to the Naval Station, Culebra, W. I.

HUNTINGTON, E. O., Surgeon. Detached from the Naval and Marine Recruiting Stations, Chicago, Ill., and ordered to the *Albatross*.

MOORE, J. M., Passed Assistant Surgeon. Ordered to duty at the Naval and Marine Recruiting Stations, Chicago, Ill.

THOMPSON, J. C., Passed Assistant Surgeon. Detached from the *Albatross* and ordered home to await orders.

WHEELER, W. M., Surgeon. Ordered to the *Cleveland*, sailing from New York about May 10th.

Births, Marriages, and Deaths.*Born.*

SALMON.—In Brooklyn, N. Y., on Thursday, April 27th, to Dr. Thomas W. Salmon, United States Marine Hospital Service, and Mrs. Salmon, a son.

Married.

ALLEN—BROWNING.—In Columbus, Ohio, on Tuesday, April 25th, Dr. Albert Edward Allen and Miss Dora Enola Browning.

COCA—CLEWS.—In Wayne, Pennsylvania, on Thursday, April 27th, Dr. Arthur Fernandez Coca and Miss M. A. Clews.

DRAPER—FORD.—In St. Louis, Missouri, on Wednesday, April 26th, Dr. James Avery Draper, Jr., and Miss Elsie Ford.

HENNING—MEAGHER.—In St. Paul, Minnesota, on Wednesday, April 26th, Dr. A. F. Henning and Miss Mary B. Meagher.

PAYNE—STADIGER.—In Philadelphia, on Saturday, April 29th, Dr. Norman W. Payne and Miss Margery Stadiger.

PILCHER—FINLAY.—In Montclair, New Jersey, on Wednesday, April 26th, Dr. Paul Monroe Pilcher and Miss Mary Finlay.

PRIME—HENDRICKS.—In San Francisco, California, on Wednesday, April 26th, Dr. Thomas Prime and Mrs. Mary D. Hendricks.

ROSS—HINCKLEY.—In Brooklyn, N. Y., on Wednesday, May 3rd, Dr. William Holmes Ross and Miss Grace L. Hinckley.

SANDS—MILLSPAUGH.—In Evanston, Illinois, Dr. Theodore Sands and Miss Elizabeth Millspaugh.

SWANN—JOHNSTON.—In Kansas City, Missouri, on Wednesday, April 26th, Dr. A. T. Swann and Miss Louise C. Johnston.

Died.

HAMMOND.—In San Francisco, California, on Thursday, May 4th, Dr. William Hammond, in the eighty-eighth year of his age.

HILLER.—In San Francisco, California, on Tuesday, April 25th, Dr. D. Albert Hiller, in the sixty-sixth year of his age.

MUCKLE.—In Philadelphia, on Saturday, April 18th, Dr. Alexander Muckle, in the seventy-sixth year of his age.

NEWMAN.—In Lawrence, Kansas, on Saturday, April 29th, Dr. Albert Newman, in the eighty-second year of his age.

PARKER.—In New Orleans, Louisiana, on Thursday, April 27th, Dr. James Porter Parker, in the twenty-ninth year of his age.

POTTER.—In Brighton, Maine, on Tuesday, April 18th, Dr. N. P. Potter, in the sixtieth year of his age.

PUGH.—In Burlington, New Jersey, on Sunday, April 30th, Dr. J. Howard Pugh, in the seventy-ninth year of his age.

SCUDDER.—In Redlands, California, on Wednesday, April 19th, Dr. William Byrd Scudder.

New York Medical Journal AND Philadelphia Medical Journal.

A Weekly Review of Medicine

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SATURDAY, MAY 20, 1905

WHOLE No. 1381.

Original Communications.

METACARPAL FISSURE, A FRACTURE TYPE NOT HERETOFORE DE- SCRIBED, AND SOME POINTS REGARDING TREATMENT OF METACARPAL FRACTURE.

By CARL BECK, M. D.,

NEW YORK,

PROFESSOR OF SURGERY IN THE POSTGRADUATE MEDICAL SCHOOL
AND HOSPITAL, VISITING SURGEON TO THE ST. MARK'S
HOSPITAL AND THE GERMAN POLIKLINIK.

Text-books written before the Röntgen era treat fractures of the metacarpal bones as a *quantité négligeable*, but skiagraphy has now established the undeniable fact that a large number of alleged dislocations and contusions of the metacarpal region are in reality fractures. Moreover, it has not only given us the most reliable means for differentiation, but has also increased our knowledge in regard to the details of metacarpal injuries.

It is, for instance, due to the Röntgen method that I had the privilege to correct the erroneous old dictum that the displacement following fracture of the metacarpal bone is either dorsal or palmar. My Röntgen observations prove that

in the majority of cases the displacement is decidedly lateral, or both lateral and dorsal (see this *Journal*, August 4, 1900).

Fig. 1 illustrates the dorsal type of displacement. It shows union of the fragments in the displaced position, no effort at reduction apparently having been made. When seeing the patient, four weeks after the injury, I made a forcible effort at reduction, but in vain. The deformity being considerable now, reduction after separation with the chisel was suggested.

It is noteworthy that Fig. 1, taken in the lateral position, shows the character of the displacement distinctly, while Fig. 2, taken at the same time in the dorsopalmar position, gives the erroneous impression that the fragments were in proper apposition. Still, for the experienced eye the large amount of callus around the fractured area would cause suspicion. However, it is a further proof of the necessity of always taking



FIG. 1.—Upward displacement in fracture of the metacarpus indicates.



FIG. 2.—Dorsopalmar view of same case, not showing displacement.

two skiagraphs in different positions in order to obtain a correct appreciation of the situation.

After reposition of dorsal or palmar displacement is complete by downward or upward pressure, immobilization by a plaster of Paris dressing or by coaptation splints keeps the fragments in situ. But it is evident that if there is lateral displacement the same method of reduction and immobilization will not influence the fragment. Lateral displacement requires lateral influence. This can be exerted very simply by lightly pressing rubber drainage tubes between the adjoining interosseous spaces, where they are kept in situ by adhesive plaster strips. Thus recurrence of the displacement is absolutely prevented. The hand may then be surrounded by a plaster of Paris dressing or preferably by a moss splint, which, after being dipped in cold water, well adapts itself to the contours of the body.

I had during the period of six years following that observation had frequent opportunities to study cases of metacarpal fractures and have seen neither deformities nor disabilities follow that course of treatment. Since the Röntgen technique has become so greatly improved by the use of the diaphragm, my attention was called to a fracture type not heretofore described, viz., the fissure above the metacarpal epiphysis.

In the majority of cases the line of metacarpal fracture is found in the middle of the bone, where it is thinnest. The direction is generally transverse, but the oblique type is sometimes found. When there is dorsal or palmar displacement the fracture signs are well marked, local pain and tenderness, deformity, abnormal mobility, disturbance of function, and sometimes crepitus being distinctly noticeable. There is often local ecchymosis. Should there be any yielding to the finger as it is thrust against the corresponding metacarpal epiphysis the diagnosis of fracture is established. If so, the pain following the manipulation is considerable. As a rule, therefore, these procedures should not be resorted to for diagnostic purposes, because skiagraphy is much safer and entirely painless.

Skiagraphy is so much the more advisable since it has frequently been proved that when all the signs mentioned, with the exception of swelling and pain, were absent, there still was a fracture, the presence of which was revealed only by the Röntgen method. It should furthermore be considered that not infrequently it happened that during the first few hours after the injury, when there was little effusion in the surrounding tissues, the fracture signs were marked, while a few hours later, when the effusion became

considerable, no more abnormal mobility or deformity could be detected, the latter being masked by the greatly swollen tissues. Finally it should not be lost sight of that in view of the presence of a large amount of tumefaction metacarpal fracture may be feared, while the Röntgen method proves that the bones are intact, an extensive contusion only being present. Now, while such cases are best treated by massage, fractures with no displacement demand immobilization; such as show displacements demand reposition before immobilization. If there is a non-displaced fracture or fissure it is manifestly inappropriate to use massage or similar procedures. Thus it becomes evident that proper therapeutical steps can be taken only on the basis of a correct diagnosis.

As mentioned before, the fracture line is usually found in the middle of the bone, where it is thin-

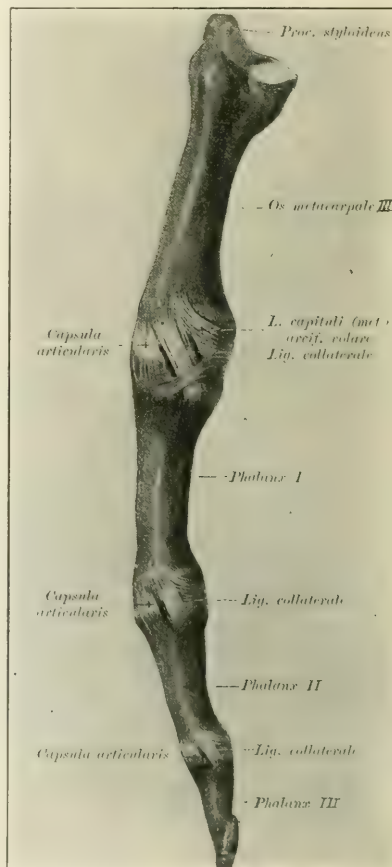


FIG. 3.—Ligaments of the right third finger from the radial side.

nest. Sometimes there is epiphyseal separation, as first recognized by Malgaigne. Cases of oblique and transverse fracture above the epiphysis have been illustrated by me in previous publications (see text-books on fractures and Röntgen diagnosis and therapy). In all these cases there was more or less lateral displacement. The symptoms of this type resemble those of dislocation and were almost always mistaken for such in former years.

Now, at the early era of the Röntgen rays I repeatedly had a chance to see cases which in view of the presence of local pain and swelling made me suspect a fracture. Still skiagraphy showed no evidence of it. I am certain, however, that at times I noticed a thin fracture line above the epiphyseal end, but not distinct enough to impress me. But as I have observed the same lines in cases of alleged contusions from time to time, and especially as I recognized an additional longitudinal fissure line so distinctly that it could be demonstrated without the aid of the diaphragm (Fig. 4), I feel justified in calling the attention of my colleagues to this new observation.

As to the ætiology of the injury, I may say that the nature of the ligamentous arrangement, as is evident from studying Fig. 3 (after Fick), suggests that whenever the middle of the diaphysis is not as thin as usual a fracture will occur above the attachment of the ligaments, that is, in a slightly oblique, if not semilunar, direction (see illustrations). Especially is this so as the result of a moderate degree of indirect violence (a blow of the fist or a fall on the knuckles), when the middle of the diaphysis is as strong as illustrated in Fig. 4. Here the fracture line extends a little further in a more or less longitudinal direction.

It scarcely need be mentioned that the treatment of this injury requires nothing but immobilization. Rough manipulations, made for diagnostic purposes, are apt to increase the extent of the injury and may even produce a displacement, which Nature herself prevented by the coherent periosteum.

In the face of the skiagraphic proof of this injury it appears natural that massage, so commendable in contusions, would be injurious here. All the patient needs is proper protection of the hand for two or three weeks, which may consist in a small plaster of Paris dressing or in a moss board dressing, as already described. A deformity in this region may mean nothing to a bricklayer, but a talented young violinist may by this injury lose his chance of becoming a second Paganini.

Fig. 4 illustrates the oblique and longitudinal



FIG. 4.—Fissure at lower end of fifth metacarpal bone.

fissure above the lower epiphysis of the fifth metacarpus in a man of twenty-five years of age, who struck the face of an assailant with his fist. This was followed by intense pain at the fifth metacarpophalangeal joint. When I saw the patient, on the following day, there was great local pain and tenderness, as it is usually found in fractures. Ecchymosis was absent. Fluoroscopic examination revealed no bone injury, but skiagraphy showed the fissure line distinctly. The hand was surrounded with a bracelet of moss board, extending from the wrist to the second joint of the middle finger. This enabled the patient to do light work with his hand, ultimate recovery being perfect two weeks after the injury.

The Mississippi Medical and Surgical Association, composed of colored graduates in medicine, elected the following officers at their recent meeting at Jackson: President, Dr. J. M. May, of Westside; first vice-president, Dr. C. W. Raines, of Clarksdale; second vice-president, Dr. J. E. Shanks, of Natchez; treasurer, Dr. L. T. Miller, of Yazoo City; secretary, Dr. B. E. Conner, of Brookhaven; delegate to the American Medical Association, Dr. C. W. Raines.

A SUCCESSFUL METHOD OF TREATING FRACTURE OF THE FEMUR IN INFANCY.

By WALTER G. STERN, M. D.,

CLEVELAND,

ORTHOPEDIC SURGEON TO MOUNT SINAI HOSPITAL AND TO THE CHILDREN'S FRESH AIR CAMP.

The majority of fractures of the femur observed in children under the age of 12 months are caused by the various efforts at traction during labor. The usual methods of treating such fractures fail when dealing with so small a subject whose needs and wants are so different from those of the adult; and union with marked deformity, necessitating a painful and tedious correction in the third or fourth year, and considerable shortening with subsequent limp or even inability to walk in due time, have not been infrequent results. Again, the pain from a badly held fracture may cause constant fretting and crying with inability to nurse, worry to the mother and consequent deterioration of the milk, starvation of the child, and the usual train of gastroenteric symptoms.

I shall describe a method of treatment which has proved uniformly successful in my hands in a small number of cases. It is, however, the only completely successful way of treating the newly born and the very best for all children up to the age of two years. The necessary requirements for successful treatment of fractures of the femur in sucklings are:

- 1st. Ability to nurse properly at breast.
- 2nd. Cleanliness.
- 3rd. Ability to hold fragments in apposition without subsequent deformity.
- 4th. Freedom from pain on moving child for necessary changes of clothing, etc.
- 5th. Ability to prevent shortening.

Of the methods in common use, lateral or anterior splints, plaster or glass casts and braces meet only the first requirement, inasmuch as the mother can suckle the child by placing it at the breast in the usual fashion; but they are far from cleanly, the bandages are soon covered with urine and feces, they do not hold the ends of the fracture on account of the smallness of the parts and lack of proper leverage, and permit of deformity and shortening. In my opinion a child is almost as well off untreated. Posterior splints are entirely out of the question. Horizontal extension meets all requirements, except that it is very uncleanly, and all efforts of the child in crying and struggling counteract the extension.

Vertical extension in the manner to be described meets all the requirements in an ideal way. It enables the mother to nurse the child with very little effort and enables the nurse to keep the child scrupulously clean, as it is impossible for it to soil the dressings, and the diaper can be changed without difficulty or without causing pain. It holds the fragments together, allows only a minimum of shortening, and is easily applied.

Before the third day it is wise to refrain from extension, for the safety of the mother demands that she shall lie quietly at rest and nurse the child after the usual fashion. I have been able to secure enough fixation to keep the child quiet by bundling it in a feather pillow (Fig. 1), just as it is prac-



FIG. 1.—Child with fracture quieted by immobilization in a feather pillow.

tised by the peasantry of Continental Europe. After the third day the limb is placed in vertical extension and kept there for at least three weeks. The child rests on a pillow placed on a low stand next to the bed and should not be above the level of the mattress. Its body is parallel to the length of the bed and its head at about the position of the mother's breast. This enables her to nurse it by merely rolling over on her side and placing either nipple in its mouth; a pillow behind her back enables her to suckle the child for the customary fifteen or twenty minutes with perfect comfort. If on the third day the mother has fever, or is otherwise incapacitated from nursing the child, it is not placed beside the bed, but in any desired location, and is nursed from the bottle or by a wetnurse. The adhesive straps for the extension are put on in the usual fashion, after the skin has been thoroughly cleansed with alcohol and ether, and should reach

well up over the trochanter. Zinc oxide plaster should always be used, as it is far less irritating to the delicate skin; I have found that by using sterilized zinc oxide adhesive plaster the extension can be left unchanged for the entire three weeks; an adhesive plaster which lacks at all in "stickiness" and is liable to slip, cannot be used. It is impossible in these small limbs to get the extension straps to stay unless they are bound down by circular turns around the malleolus, the top of the tibia, the condyles of the femur and the groin; care should be exercised not to get the circular turns too tight, as that might lead to venous stasis. The groin and buttocks are next carefully bandaged with a two inch bandage of oiled silk, held in place by adhesive strips; next a flannel bandage is carefully applied from the toes to the groin to keep the leg warm, and this again is protected by an oiled silk bandage reaching from the knee to the groin (Fig. 2). No

can be changed at will by adding or taking out salt. In all cases the weight should be just enough to lift the buttock off the pillow. To change the diapers, the child is taken by both feet and lifted up a little,



FIG. 2.—Dr. Stern's method of securing extension of a fractured femur in a child.

spica turns about the pelvis are to be used. In none of my cases were these bandages soiled either by urine or faeces, except in one case where a boy had an unpleasant habit of urinating in the nurse's face when the diaper was taken off, but here the external bandage of oiled silk saved the dressings. The extension is carried upwards with wire to a hook firmly fastened into the ceiling, then over for three or four feet, so as to get the weight away from the baby, and then down over another hook for a foot or two, where the weight is placed out of reach of either head or hands (Fig. 3). I have found half of a five pound bag of salt the best form of weight; it is cheap, can be easily fastened, and the weight

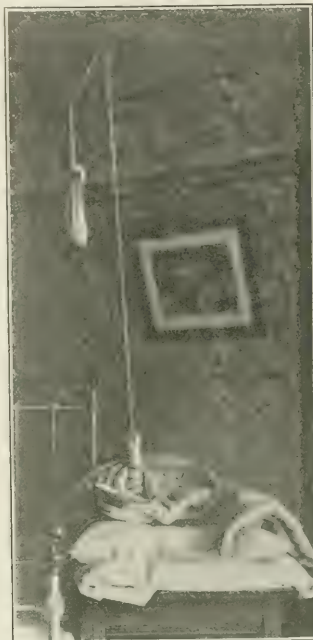


FIG. 3.—Weight, arranged out of reach, to raise buttock from pillow.

and after cleansing and dressing, the legs are let go and a slight pull is given to slack up the extension. With the leg balanced by proper extension, the child may squirm, kick, cry, throw itself about or even, if old enough, try to suck its toes, but it cannot get away from, or neutralize the vertical pull as it could a horizontal one. The relief from pain is almost immediate, the children stop fretting and crying at once, begin to nurse properly, thrive and gain in weight. No pain ought to be caused in washing or clothing them, and with care the sheets and pillows may be changed daily, or a new table or stool substituted for the old one. The only precautions necessary are to have the hooks well fastened into ceiling and to secure the stool or table to the floor, so that no awkward father or inquisitive child shall be able to knock it over. It is impracticable to allow the child to lie in the same bed with the mother.

In most of my cases one or even two weeks had elapsed and one or more of the various fixation methods had already been tried; there was generally a very large callus, the femur bowed into an

anteroposterior arc of about 45°, and marked shortening. It was first necessary to freely break up the callus and apply a rather heavy extension (3½ to 4 pounds). No anæsthetic was given. In all cases the final shortening was so slight as to be negligible, there remained no angular deformity, and good union and a normal callus resulted.

CASE I.—Miriam S., aged 14 days. Referred by Dr. S. Cross presentation, version, extraction, fracture of left femur. Dr. S. immediately applied lateral splints, which soon had to be removed because soiled, a glass cast was next applied, but became soiled, the child cried incessantly and had lost markedly in weight; did not nurse much. Status, January, 1901: Fracture of left femur at junction of middle and upper third, large callus, angular deformity of about 80°, marked shortening, buttocks and groin markedly excoriated and irritated. I broke up the callus, applied vertical extension, and the crying ceased at once, and within three days the child was nursing regularly, and in a week a gain could easily be noticed. The plasters were changed frequently on account of former excoriation of the skin. Child no longer soiled dressings and was discharged cured in February, 1901; no deformity; slight shortening.

CASE II.—William R., aged 1 day, referred by Dr. F. Breech presentation and accoucheur had to pull on legs to get them out. Fracture of left femur. Status, June, 1901: Strong, healthy, crying child, fracture of femur in middle of upper third; no callus; shortening; marked swelling; no suppuration. I bundled the child in a feather pillow for two days so that its mother could nurse it undisturbed. Vertical extension on fourth day; on fifth day adhesive plasters slipped off and weight and limb came down with a thud. I reapplied extension and renewed plasters every seven days; after twenty-five days the child had gained in weight, and did not cry, the fracture had united firmly, with moderate callus, no deformity, no appreciable shortening, no excoriations. Discharged cured.

CASE III.—Eva R., aged 19 days. Delivered by midwife. Had a hard time at breech delivery. Child had cried ever since, and held its leg in a peculiar position so that parents feared dislocation of hip. Status June, 1902: Emaciated, crying child, fracture of left femur, angular deformity of 50°, marked shortening, large amount of callus. I broke up callus without an anæsthetic, and applied vertical extension for four weeks; child ceased to cry almost immediately, gained in weight, was kept remarkably clean (considering parents!), had no deformity, but slight shortening, no pressure sores, and no excoriations. Discharged cured.

CASE IV.—Mamie S., aged 13 days, referred by Dr. S. Difficult labor, version, fracture of right leg; splints applied which would not hold. Child cried incessantly and limb was markedly deformed. Status, July, 1904: Crying child, fracture of right leg at middle of upper third, angular deformity of 30°, marked external rotation of leg, large soft callus. I broke up callus and applied vertical extension; child stopped crying within five minutes after extension was applied; left undisturbed for

twenty-four days; at end of this time no shortening, no deformity, good union, no excoriations, no pressure sores. Discharged cured.

CASE V.—Baby N., aged 9 days, referred by Dr. D. Normal presentation, but a hard case to deliver, child cried incessantly. On second day discovered a fracture of left femur, used a sort of Thomas's splint, which gave the child no relief, and did not hold fragments. Status, July, 1904: Crying child, buttocks and privates red and excoriated, excoriations from adhesive plaster used to hold splint, pressure mark from splint; fracture of left femur at junction of middle with upper third, marked deformity, slight callus. Vertical extension, left unchanged for twenty-one days, at end of which time there was good union, no shortening, normal callus.

CASE VI.—Baby F., aged 9 months, fell out of buggy. Status, August 21, 1904: Fracture of left femur in middle third. Vertical extension, which was changed once in three weeks. Child played and was content, tried to get toes of left foot in mouth. Somewhat neglected by hospital attendants and clothes were always soaked with urine, but dressings were always dry. Status, September 8th: Good union, no deformity, good callus, no shortening. Discharged cured.

CASE VII.—Irma N., aged 6 months, had fall at Wade Day Nursery two days before; had cried ever since. Status, August 15, 1904: Fracture in upper third of right femur. Vertical extension left undisturbed for twenty-two days. Discharged cured, no deformity, no shortening.

Licensed to Practise Medicine in Kansas—The following have passed the necessary examination held in Kansas City, Kas., on April 25th and 26th:

E. P. Harrison, A. R. Holmes, L. M. Hinshaw, J. F. Heath, J. F. Hughes, F. E. Harvey, C. H. Helman, W. S. Hadinburg, R. W. Hull, T. R. Heath, D. G. Jones, P. S. Jones, W. W. Johnston, C. F. Kyser, A. T. Coffman, J. H. Buckles, T. M. Greenwood, T. R. Hyatt, H. M. Lint, James Mahoney, C. C. Kerr, O. J. Casto, J. B. Blades, E. O. Baker, W. I. Huddle, C. M. McConkey, E. A. Lewis, C. E. Phillips, L. R. Carson, O. P. Faires, R. B. Baker, H. M. Mayer, G. D. M. Lambdin, H. A. Leaming, J. L. Mahoney, T. L. Craig, Jr., A. Florian, R. B. Brewster, C. M. Miller, J. L. Lontzenhiser, H. H. Johnson, L. C. Cook, J. H. Donovan, W. L. Hopper, F. J. Moennighoff, N. E. Lake, Albert H. Tribble, H. L. Steele, Norris A. Smith, Temple J. Smith, C. Nelson Smith, Robert H. Smith, Theodore E. Schwarz, John C. Sherrard, William L. Shelton, Wilfred V. Stephenson, Robert B. Stewart, Arthur S. Risser, Charles L. Russell, Levi W. Roller, Franklin H. Redmond, James W. Risdon, John R. Newman, Alva Naylor, F. H. Bell, Coryndon J. Abrams, Frank W. Allin, P. R. Young, J. Odell Williams, Homer M. Walker, Paul V. Woolley, George E. White, Frank H. White, Mary L. Winthrow, F. Earl Tipton, Clifton A. Thomas, Friedrich W. Trebbar, Eber Reeves, Clemens Rucker, Fred H. Rhoades, Clarence Neighbors, Floyd W. Noble, Henry A. Nare, Bert E. Miller, A. A. Meyer, Roscoe B. Mays, William B. Markham, Frank M. Morrow, Charles F. McNaair, Clarence S. Marsh, John W. McGuire, Alney N. Mincar.

Jersey County, Ill., Medical Society.—The forty-ninth annual meeting of the Jersey County Medical Society has elected the following new officers: President, Dr. J. S. Williams; vice-president, Dr. L. T. Waggoner; secretary-treasurer, Dr. A. K. Van Horne. The society is arranging to celebrate its golden anniversary next year.

PUBERTY AND ADOLESCENCE IN THEIR RELATION TO THE ÆTIOLOGY OF EPILEPSY.*

By WILLIAM P. SPRATLING, M. D.,

SONYEA, N. Y.,

MEDICAL SUPERINTENDENT OF THE CRAIG COLONY FOR EPILEPTICS, PRESIDENT OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY, MEMBER OF THE NEW YORK ACADEMY OF MEDICINE, MEMBER OF THE AMERICAN MEDICOPSYCHOLOGICAL ASSOCIATION, ROCHESTER PATHOLOGICAL SOCIETY, ETC.

Puberty is defined as "That period of life at which a person of either sex becomes functionally capable of generation." By the Roman civil law, as well as by the common law, the age of puberty at which capacity to marry was legally presumed to exist, was 14 years in males and 12 in females.

Adolescence is defined as "The process of growing up. The state or period of growth from childhood to manhood, or from puberty to maturity: in law, the period from 14 years in males and 12 in females till 21 years of age." (Wharton in Abbot's *Law Dict.*)

Puberty is more circumscribed in years than adolescence, for while adolescence, which begins at the termination of childhood, includes puberty, it extends several years beyond the period at which puberty is generally held to be over.

While we are most interested just now in the influences that are particularly apt to prevail during the twelfth to the sixteenth year, we may for all practical purposes consider puberty and adolescence as embracing the same period.

Adolescence, in a sense, is a new birth. Important and vital functions never before present arise at that time. The qualities of body, function, and mind that emerge at puberty are new, ill understood, and strange. Development at this time is less steady and more saltatory.

Some individuals linger long in the childish stage and advance late or slowly, while others push on with a sudden outburst of impulsion to early maturity.

The powers of diseases peculiar to childhood abate, and liability to the diseases of maturity begins, so that with the liability to both, it is not strange that the dawn of the ephebic day is marked at the same time by increased morbidity, but by diminished rate of mortality. The entire organism has grown significantly more complex.

The momentum of heredity often seems insufficient to enable the child to achieve this great revolution and come to complete maturity, so that every step of the way to a higher development is

strewn with wreckage of body, mind, and morals. There is not only arrest, but perversion.

One of the gravest dangers is our persistent ignoring of the prime importance of establishing normal periodicity in girls, to the needs of which everything else should for a few years be secondary.

Within the bounds of the epoch of puberty, the functions of every sense undergo reconstruction and their relations to other psychic functions change. New sensations, some of them very intense, arise, and new associations in the sense sphere are formed. Haptic impressions, appetite for food and drink, and smell are most modified. The voice changes, vascular instability, blushing, and flushing are increased. Sex asserts its mastery in field after field, and works its havoc in the form of secret vice, debauch, disease, and enfeebled heredity, and, most deplorable of all, sends many thousand youth a year to quacks, because neither parents, teachers, preachers, nor physicians know how to deal adequately and satisfactorily with its problems.

A youth awakes at puberty to a new world, and standing uneducated, unguided, and untrained, understands neither it nor himself.

Character and personality at this period are rapidly taking form, but everything is plastic. Self feeling and ambition are increased, and every trait and faculty is liable to exaggeration and excess. It is all a marvelous new birth, and those who believe that nothing is so worthy of love, reverence, and service as the body and soul of youth, and who hold that the best test of every human institution is how much it contributes to bring youth to the ever fullest possible development, may well ask how far the educational institutions of to-day are capable of satisfying this supreme test.

The preceding remarks concerning the period of adolescence, the nature and quality in general of the developmental changes that occur at that time to give it especial distinction, and the manifold dangers, including psychic, physical, and moral alike that threaten at its door and during its course, are quoted in part from G. Stanley Hall's most admirable work on *Adolescence and Its Psychology*, etc. From a critical study of Dr. Hall's admirable and exhaustive work, I think it should be read by every person who desires a more intimate familiarity with this important period.

EPILEPSY DURING THE ADOLESCENT PERIOD IN WOMEN.

Before considering the frequency with which epilepsy develops in women at this period, I will briefly review the age at which puberty is ordi-

* Read before the fourth annual meeting of the National Association for the Study of Epilepsy, etc., held in the Medical Library, Boston, November 22, 1904.

narily established, so that we may the better see how closely allied this period is with the increase in epilepsy writers on the subject generally note as occurring at this time, and which some go so far as to characterize as the epileptic age, including males and females in these studies alike.

Most observers give geographical position a conspicuous influence in the establishment of the menstrual flow.

Women who live in warm countries reach the childbearing period earlier than do the women of the North.

Bassell found the average age at first menstruation in 4,815 cases in northern Europe to be sixteen years and four months, while the average age for 1,655 cases in southern and oriental lands was twelve years and one month—a difference of four years due to climatic influences.

Hall presents comprehensive studies to show the comparative periods at which menstruation develops in the well to do classes as compared with the poor, and in city as compared with country girls; and I quote the following from him:

Meyer, Germany. (6,000 Observations.)		Kakuskin, Russia.	
Years.		Years.	
Among the Rich.....	15.51	Among the Rich.....	13.0
Among the Poor.....	16.31	Among the Poor.....	13.0
In the Cities.....	15.98	In the Cities.....	14.9
In the Country.....	14.20	In the Country.....	15.3

Tarnowski gives the average age of 5,000 cases in Russia as 16 years.

At twelve American institutions reporting to the Massachusetts Labor Bureau, and representing 1,290 girls, the average age at menstruation was 13.62. In 6,550 cases studied by Krieger in Berlin, the age was placed at the beginning of the fifteenth year.

Nearly all tables show that large girls menstruate earlier than those of small or average size, and nearly all observers agree that blondes precede brunettes.

One of the most instructive studies of the age of first menstruation is that of Lullies based on 3,000 Prussian girls. Although it shows that more cases occur at fifteen than in any other year, the average age is about sixteen. Lullies differs from most earlier observers in believing that the strong begin this function later than the weak. First of all, come large weak blondes, and last come the middle or small sized brunettes. Lullies thinks country girls are at least six months later than city girls. In eighty-three per cent. of all the cases, the periods were regularly established at once, and in seventeen per cent. they were irregular for a time. The average duration of the flow of those in whom it occurred regularly was 4.79

days. Seven and especially eight days are unusually frequent.

In public institutions, like the Craig Colony for Epileptics, where few patients are received before their disease is chronic, and where the intelligence of many is far too inferior to make their statements acceptable at face value, it is difficult to obtain extended and accurate data on the age at which menstruation first appeared.

But in a careful study of 325 women, 126 were found in whom the age at the onset of this function could be established to the month, these ages being, in round numbers, as follows:

During the 10th year.....	2
During the 11th year.....	4
During the 12th year.....	17
During the 13th year.....	29
During the 14th year.....	39
During the 15th year.....	20
During the 16th year.....	8
During the 17th year.....	2
During the 18th year.....	1
During the 19th year.....	1
During the 20th year.....	1

The average age at which menstruation first appeared in the 126 epileptic women cited above was 13.4 years. It would not appear from this that the function of menstruation is changed in any way, either hastened or retarded in its first appearance, by the presence of epilepsy.

It has been quite conclusively shown that epilepsy is most apt to arise at certain epochs or periods, and it is interesting to refer just here to Table A, which shows the age at onset in 1,215 cases, the first eight years, being omitted, the table beginning with the ninth, and being produced purposely to show the very sharp and decided increase in the number of cases when puberty is reached. It is significant that the increase during the twelfth year was mostly among girls, the increase during the fourteenth year being mostly among boys. As a matter of fact we might, in a sense, call the age period from the twelfth to the sixteenth years inclusive the age of essential idiopathic epilepsy. Epilepsy that commences under ten years is apt to be highly tinged with the elements of bad heredity, or to follow a cerebral palsy, or come as a sequela of one of the infectious fevers. The epilepsies of this period are most apt to be followed by pronounced mental impairment. After passing the tenth year or so, the causes of the disease, and its results in a measure, change. Cures are oftenest obtained in cases that originate between ten and twenty years, though they are by no means confined to this period.

We may next note the influence of the menstrual flow in inciting attacks in cases of pre-

existing epilepsy. A table previously made up and published by me¹ shows this quite clearly:

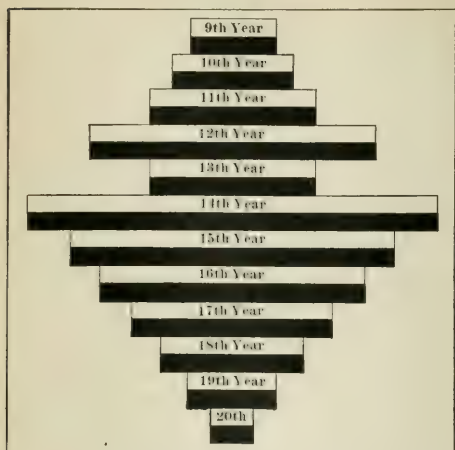


FIG. 1.—Chart showing influence of puberty on epilepsy.

This chart shows how epilepsy increases with the establishment of puberty, the influence of which seems to be most marked in girls during the twelfth year, and in boys during the fourteenth year. After the fourteenth year, a progressive decline sets in that extends to the twentieth year, and the cases of genuine epilepsy that arise after the twentieth year are quite rare. In the diagram the years prior to the ninth are omitted, the sole purpose of the chart being to show the great increase in the number of cases at puberty.

TABLE SHOWING THE INFLUENCE OF THE MENSTRUAL FLOW IN INCREASING THE FREQUENCY OF EPILEPTIC ATTACKS IN PREEXISTING CASES OF THE DISEASE.

- Attacks weekly or oftener in 775 cases.
- Attacks every two weeks in 175 cases.
- Attacks every three weeks in 61 cases.
- Attacks every four weeks in 244 cases.
- Attacks every eight weeks in 42 cases.
- Attacks every twelve weeks in 49 cases.
- Attacks every eight months or over in 30 cases.

The very distinctive rise at the four weeks' period as shown in this table is directly chargeable to the mild excitation caused by the various slightly abnormal influences due to the menstrual flow. No one who has had opportunity for carefully identifying the seemingly trivial causes, as they often appear to be, that are capable of inciting epileptic paroxysms in some individuals, will for a moment doubt the power of the menstrual wave in this respect, especially in neurotic individuals and when the flow is marked by any considerable degree of abnormality and irregularity.

¹ *Epilepsy and Its Treatment*. By W. P. Spratling, M. D., 1904, p. 194.

To further illustrate the possible influence of the menstrual epochs in directly inciting epileptic convulsions in some cases, I reproduce below Engelmann's menstrual curve which shows the rise and fall of the pulse, temperature, blood pressure, muscle force, pulmonary capacity, morbid nervous symptoms, and other abnormal phenomena incident to the menstrual flow.

This curve does not represent the amount or degree, only the time of these undulation; the numbers representing the days from the first to the twenty-eighth; the shaded days, those on which the menstrual flow is in progress, and while every recurrent menstrual period has a close relationship with epileptic convulsions in some—I may even say in many—cases, we will not stop to study this part of the subject now, but pass on to those cases in which the epilepsy seemed originally to appear as a direct and specific result of the establishment of this function.

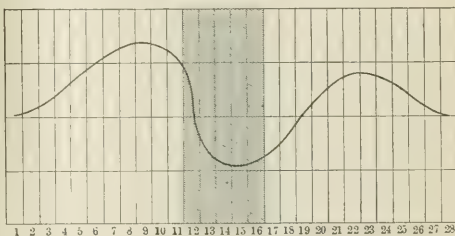


FIG. 2.—Engelmann's menstrual curve.

CASES THAT ILLUSTRATE THE INFLUENCE OF THE MENSTRUAL EPOCH IN THE AETIOLOGY OF EPILEPSY.

CASE I.—M. D. R., age when admitted to the Craig Colony, 18 years; epileptic three years; family history good, except that mother had chorea when she was 6 years old, the ascribed cause being "fright." Patient had no convulsions in infancy and none during the second dentition. She had the usual childhood diseases, recovering from them without bad after-effects of any kinds.

"On the very day on which menstruation first appeared she was attacked with epileptic convulsions. She was 15 years old at the time. The attacks have continued ever since." (This note is from her history given me by the family physician at the time of the patient's admission.) Her attacks at first were mostly petit mal; later changing to grand mal of great severity, and occurring three to six times in twenty-four hours. Her mental impairment three years after the origin of her epilepsy was pronounced.

The aetiological influence of the establishment of the menstrual flow in the immediate excitation of epileptic convulsions in this case cannot be questioned. The patient came under my care

three years after the onset of her epilepsy, which had become firmly established by that time. Had adequate treatment been instituted *promptly* after the disease arose, there is little doubt that she could have been cured. But the long delay was disastrous, just as long delays are destructive of ultimate cure in cases in which epilepsy follows cranial trauma. The time to operate in such cases is at once. The time to have applied relief measures in the case in question was within two or three months at most after the convulsions first appeared. Three years later they had become fixed beyond the possibility of removal. This would not be true in all cases, but it was true in this. Many public hospitals throughout the country are to-day filled with lost opportunities like this. The motto in such cases should be *treat promptly; treat at once*.

CASE II.—C. F. B., age on admission to the colony, 27 years; epileptic since the 13th year. Family history: Grandfather died of apoplexy; mother died of "internal" cancer; "several cousins insane."

Patient a full term child; no convulsions in infancy or childhood, though she was always "very nervous." First epileptic convulsions occurred when she was 13 years old, and it came *coincidentally with the onset of the first menstrual flow*. The attacks from the first were grand and petit mal, remaining so until after she passed her 30th year. After the 27th year, they began to appear independent of the menstrual period, but they were invariably worse during such periods. Up to the 27th year the attacks came along with the menstrual periods.

For nearly fifteen years after the onset of the epilepsy, the attacks remained such a type as to make but little permanent impression on her mental condition. After that she suffered the characteristic effects of the disease, impaired memory, unreasonable irritability, and fits of marked depression. As soon as these effects began to be apparent to her friends, they permitted a double ovariectomy to be performed; but it was without beneficial result. The operation had been put off too long.

Were it essential, I could cite many cases identical with the two reported. It cannot be questioned that the general disturbance in the mental and physical balance of some young women caused by the establishment of the function of menstruation, is a positive factor in the causation of epilepsy. I believe that in all such cases some predisposition must be present before epilepsy can arise, for the establishment of the menstrual flow should be a purely physiological process incapable of inducing deep seated and lasting pathological changes and conditions.

Women who acquire epilepsy of a certain form as a result of an imperforate uterus (such cases

are occasionally encountered) are not included in this study, even though their epilepsy may appear for the first time in close conjunction with what should constitute the first menstruation, and continue to repeat themselves at such periods in the future.

EPILEPSY DURING THE ADOLESCENT PERIOD IN MALES.

When we come to study puberty in males as a cause of epilepsy, contributory or direct, we enter a difficult field, and while the literature on the pernicious effects of masturbation, so common to this period, is copious in the extreme, it is regretably indefinite. In general terms purists charge masturbation with a long list of pathological effects, but generally without specification. To single out this particular vice at a period when important changes little short of revolutionary are being experienced by the entire organism, and lay the gravamen of a specific nervous disorder at its door, is a task requiring great discretion; and one in which mistakes are bound to be made.

Women differ radically from men in the character of the transitional period incident to puberty. In women, it is short, intense, and if the function is properly established, the entire process of passing from girlhood to maturity is quickly over, so if evil is to follow, it usually does so without loss of time. I am speaking now of cases in women in which convulsions appear as the result of some pathological influence incident to the establishment of the menstrual flow.

In males the transitional period is longer drawn out, and it may not reach its maximum of intensity or of completion under several months or even under two or three years. In this single fact we seem to have one reason why the epilepsies incident to the developmental period are often of a graver character, more persistent, more stable, less amenable to treatment, and less likely of cure in males than in females, particularly during the first few years of the disease. After the epilepsy is chronic in either case, the results of treatment show little or no difference.

In discussing the results of onanism we must do so in a calm and discriminative way. Popular literature is full of sensational and drastic statements along this line. As Hall says: "The brain is not literally drained away; dementia, idiocy, and sudden palsy are not imminent, nor is there any peculiarly infallible expression, or attitude, or any other manifestation instantly recognizable by experts."

Being unnatural, the evils of onanism mainly flow from the fact that it requires far greater excitement to produce the same effect as sexual in-

tercourse and, being less dependent on other conditions, it can be practised at will.

In preexisting enfeebled constitutions, the practice, if intensified by excess, brings a train of well defined evils; among them being great mental and physical inertia, palpitation, neurasthenia, spinal neurasthenia, and "a tendency to convulsions." One writer of great repute says: "The onanistic psychosis seems especially to predispose to convulsive disorders like epilepsy, to which it is so akin."

Bachin has described the "masturbatic heart," while Seeley has found a murmur that he thinks is an infallible index of the practice.

Some writers even go so far as to credit excessive masturbation with being a cause of premature senility; early gray hairs, a stooping posture, and baldness being evidences of the practice. Others believe that while its immediate effects may not be disastrous, they may reappear in the offspring in the form of general deterioration and arrest of development.

Gowers thinks masturbation can be properly called a cause of epilepsy only when circumcision relieves the convulsions; but in this I do not agree, for "habit" epilepsy has long been recognized. Spitzka, Clouston, Maudsley, and others speak of "masturbatic insanity," and we at once ask, why not epilepsy as well as insanity?

Among the 1,600 and odd admissions to the Craig Colony up to this time, the assigned cause in scores of the cases coming on in males between the fourteenth and eighteenth years has been set down as due to the effects of masturbation.

I have personally questioned hundreds of boys and young men entering the colony and ascertained that the practice among them is well nigh universal. Only now and then is it denied.

Many young men of fair intelligence assured me that they did not question the fact of some direct relationship between the practice and their epilepsy. But in accepting such statements, I always try to bear in mind that patients who enter the colony do so in the belief that they are taking a final step in the cure of their trouble, and that they are willing to "lay bare" as it were every indiscretion of the past if such revelations seem likely to help them get well.

Under such conditions as these it is easy to let the pendulum of belief in the power of onanism swing too far the other way. Notwithstanding this, I am convinced that cases of epilepsy do arise in males at puberty that are due directly to the effects of excessive masturbation.

I recently saw a young man of 24 years, whose first convulsions came on at 14 years, at which

time and for two years later he practised masturbation to an excessive degree. He quit the practice after three years, but his epileptic attacks have continued. It is only fair to say that he had "some" convulsions when a baby, but they disappeared completely after that to reappear at puberty, apparently under the stress of masturbation.

Briefly summarizing the matter, I believe:

First.—That we can, and must, in many cases of epilepsy, that appear during the twelfth to the sixteenth and eighteenth years, coincident with the establishment of the menstrual flow in women, and with the passing of boyhood into manhood, ascribe to these changes the power of inducing well defined convulsions that may be epileptic.

Second.—That except in the most remote and exceptional instances, these periods alone in normal individuals have no power to induce epilepsy or even epileptoid phenomena.

Third.—That by searching carefully we shall find in most cases of epilepsy at this period, either a previous history of convulsions, usually in infancy, or a family and personal history so tainted with a tendency to disease that epilepsy under the stress of puberty is plainly invited.

SYPHILIS WITH LATE OR ABSENT SECONDARY ERUPTION.*

By ROBERT N. WILLSON, M. D.,

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Frequent conversations with those who concentrate their attention upon the study of venereal disease (syphilographers so called) regarding the picture that may be held as sufficiently conclusive of the presence of syphilis to warrant the beginning of energetic treatment, have led me to report the following three cases. I have been led to this study first by the discordance between the dictum so urgently laid down by some that treatment should be instituted as soon as the chancre is diagnosed (forgetting entirely the fact that occasionally a primary sore is not apparent), and the equally emphatic assertion of others that the diagnosis often cannot be made at this period.

The second inducement has been the constancy with which the assertions are made that the secondary eruption should be awaited, that it may be confidently expected to make its appearance, that when it is not observed it is overlooked, and that no harm is sustained by the patient during the delay.

All of the foregoing statements I find in a recent article published by one of the occupants of a special chair on venereal diseases in one of the prominent medical colleges of the East. Nearly all,

*Read before the University of Pennsylvania Medical Society, January 20, 1905.

if not all, I believe are to be questioned in the light of my experience in a considerable number of cases similar to three cited at this time.

CASE I.—Mr. X. consulted me in October, 1902. He was a young man 20 years old, previously well and strong. Family history absolutely negative for syphilis, but suggestive of tuberculosis. Patient himself had never before suffered from venereal infection. Two weeks prior to my examination he had been exposed to infection in the usual manner, and twelve days subsequently had begun to notice pain at the head of the penis and a slight discharge. The latter was gradually increasing. He was carefully examined from head to foot, and neither on his penis, his skin surface, nor on the mucous membranes of his mouth could any abrasion, eruption, or initial lesion of any description be discovered. The urethra was examined with the urethroscope and no ulcer could be found, the mucous membrane everywhere being swollen and purple and covered with a profuse purulent discharge, which the microscope showed to contain large numbers of intra- and extracellular gonococci. There was slight tenderness of the inguinal glands of the left side only. Under local and internal treatment the gonorrhœa ran a moderately severe course. During the latter part of December he seemed to be completely rid of shreds and gonococci, and was soon after lost sight of until the following September (nine months later). He then stated that he had exposed himself to infection the second time about three months after being pronounced well by me. This occurred either in March or April, 1903. About the middle of the following June a milky discharge appeared, which soon became thick, yellow and profuse. No blood and no pain appeared. During the entire period (since October, 1902) he had been watching his skin and tongue with strict instructions to report to me at once if even a pimple appeared. He did bring several small acne pustules for inspection, but not an erythematous blush or a macule, or any other suspicious lesion made its appearance.

About the middle of September I examined him, and though he had still the profuse creamy discharge, his cervical glands were enlarged on one side only, the enlargement of the inguinal glands being bilateral. The anterior cervical chain was also palpable; the epitrochlears were not enlarged. The patient stated that for three months he had had a sore throat with enlarged tonsils. In July he was given mercury internally for a few days. The glands became smaller and his throat less painful, but the medicine made him sick and gave him a flushed feeling, and it was then discontinued. He began at the same time by prescription of his physician to use cubebs, and almost at once experienced a profuse eruption "like hives," distributed over the entire body, but with an entire absence of itching. This eruption disappeared almost at once on discontinuing the cubebs, and has not recurred. At the time he also experienced two or three tiny, discrete sores on the glans penis.

When examined by me in September (as stated) the pharynx was red, and over the right arch was a small ulcerous area of erosion. The penis showed a small indurated elevation above the corona, and two small scars at the site of the former sores. The

pus from the urethra was examined, but no gonococci were discovered. On October 5th, however, unmistakable gonococci were found in a few of the pus cells, and in epithelial cells scraped from the urethral wall. No eruption was noted at any point over the skin surface. The patient was then sent to Dr. Grayson, who pronounced his throat lesion probably not syphilitic. It had now been "sore" for four months with no abatement. On October 15th I gave him capsules of sandalwood, belladonna, and morphine, and at the same time a solution of zinc sulphocarbonate for urethral injection. Two days later a typical, coppery (pale) papulosquamous eruption appeared on his palms and soles, itching on the soles only, but each papule slightly tender to palpation. Nowhere else over the body was an erythema, or an eruption of any nature discernible. Prior to this time the patient had been warned of the possibility of syphilis. His medicinal treatment was discontinued at once and the patient sent to Dr. Edward Martin in consultation, the latter concurring in the advisability of discontinuing sandalwood for an indefinite period. He inclined toward the theory of a drug eruption. In spite of a thorough eliminative treatment extending over three weeks, and an absolute cessation of all treatment except in the form of saline laxatives, the eruption persisted without change on the palms and soles and there only. The hair now began to fall freely from the scalp. On November 6, 1903 (one month from the appearance of the palmar eruption), the patient was placed on the protiodide of mercury in increasing daily doses. In three days the outlines of the papules on the hands and feet were less distinct. Within ten days both the palms and soles were normal to all appearances, the angina was distinctly less, and the glands both in the cervical and inguinal regions seemed smaller. One posterior cervical gland, which had enlarged to the size of a pigeon's egg, was softer and much smaller than prior to the beginning of the mercurial treatment.

This case has already been referred to in another paper as one in which only a limited amount of the protiodide of mercury could be used without producing distinct signs of a nephritis. Salivation, tenderness of the gums, or fœtor of the breath on the other hand have never been present. Under careful use of the drug the patient has improved until at the present time, fourteen months from the beginning of treatment, he is entirely free from symptoms, and to one who had not had the opportunity of studying the eruption and the pharyngeal inflammation would appear perfectly well. The sore throat has disappeared, the glands are one by one becoming impalpable, and only the tiny localized area of induration on the glans penis is still in evidence.

CASE II.—Mr. Y., also a young man, 19 years old, was sent to me for examination in June, 1903. There was no pertinent family history, and the patient himself had enjoyed an unusually healthy life. There had been no previous history of venereal infection. Three days prior to my examination he had been exposed, and two days subsequently began to notice a slight burning on micturition and considerable purulent discharge.

On examination the latter was found to contain many gonococci. Three days later he was obliged to be in another city on business and went under the care of another physician. From the latter I learned that ten days after consulting me for the last time, and exactly three weeks after sexual contact, a tiny "sore" appeared near the frenum, from which exuded a milky white discharge. The sore persisted for three weeks, and was pronounced a chancre by the attending physician, though no other symptoms were present. He was treated with large internal doses of mercury during a period of three months, and experienced no bowel or skin disturbances. He had been carefully instructed by me regularly to inspect his body from head to foot, morning and evening, and to report even a suspicion of an eruption. In spite of the precaution no skin lesion could at any time be detected.

He then drifted into the hands of a third physician, who told him he had not syphilis, but that a urethral stricture was the cause of the persistent yellow discharge. He incised and enlarged the meatus and passed full sized sounds.

In November, 1903, the patient again consulted me, having at this time no symptoms other than a persistent sore throat, and the constant, fairly profuse urethral discharge. On the penis could be detected a tiny induration at the site of the original sore. There was no eruption to be noted at any point on the body surface, there was no glandular enlargement (except of a usual degree in the inguinal region), and at no time could gonococci be detected in the urethral pus. The urethra admitted a No. 28 and later a No. 30 French sound, though with some difficulty. Certainly there was no marked contraction of the passage. He was advised that syphilis was possible, but that no one could formulate a definite diagnosis at that time. I advised against the use of mercury. In January, 1904, his hair began to fall profusely, and one small pimple appeared on his scalp. There remained now merely a moisture at the urethral orifice. The pharynx was still red and angry and the angina constant. The only palpable glands were in the inguinal region; the epitrochlears and postcervical chains could not be demonstrated.

In consultation with Dr. J. William White it was decided to use mercury experimentally, the urine being absolutely normal and the patient in good condition. The protiodide was given in ascending doses. Within ten days, when taking two thirds of a grain three times a day, the sore throat had almost disappeared, the pharynx was much less congested, and the patient showed no sign of salivation or mercurial intoxication.

Prior to June, 1904, there had been no possibility of an overlooked eruption, excepting the single "pimple" on the scalp six months after the last exposure. Suddenly, and while still under constant mercurial treatment (protiodide, half a grain, thrice daily) he began to feel "mean all over just as last year," the pharynx became red and painful, and a profuse pink, macular eruption appeared over the entire body, excepting the face, the legs being especially affected. This persisted for two days and then disappeared. The patient

attributed the occurrence to the ingestion of strawberries, although he had eaten them in quantity before and has many times since without untoward effect. This occurrence was one year after the last exposure to venereal infection. The patient is still using half grain doses of mercury three times daily, and finds that two thirds of a grain produces intestinal irritation, headache, backache, etc. His skin has remained absolutely clear, the mucous membrane of the pharynx appears normal, hair has ceased falling, and only the indurated scar on the penis remains.

CASE III.—Mr. Z. presents a still more interesting history than the preceding, because not only was the opportunity afforded for a confirmation of the otherwise doubtful diagnosis of latent syphilis, but such a routine and persistent study has been made of the skin as to afford no opportunity for error in the statement that an eruption has never appeared. The patient was infected with syphilis seven years ago. In brief the history was as follows. A young man of 20 years of age was exposed to infection, and ran the usual course of a fairly severe gonorrhœa, gonococci being found in large numbers in the urethral pus. A unilateral epididymitis was followed by a general glandular enlargement, including the inguinal, axillary, epitrochlear, anterior and posterior cervical, and the anterior and posterior aural series. Tiny kernels could also be palpated above the ramus of the jaw, each of these being surrounded by an area of slight tenderness. No lesion other than that of gonorrhœa could be discovered in the urethra, the pharynx, or on the skin surface. The patient became entirely well subjectively, but a slight moisture persisted in the urethral meatus, and the glandular enlargement showed no tendency to subside. It was thought possible that the latter might be due to a general gonococcus infection, though no other sign could be detected to substantiate that view. The discharge disappeared excepting a morning drop of thin mucus, which resisted all treatment, including dilatation of the passage. Up to this time and daily for over one year from the time of the original infection the patient was inspected from head to foot, and no new explanation of the persistent glandular enlargement and the urethral catarrh could be found. The glands were indurated, painless, the pharynx negative, there was no alopecia, and on no occasion could there be detected the slightest erythema or eruption of any nature. From that time until about a year ago he has been well and strong, though his hair has gradually fallen, until he is now decidedly bald. One year ago it was noticed by him that he was having considerable sore throat, was a little husky at times, and his collar began to be uncomfortable where it pressed upon the back of his neck. Later on he had vague pains in the joints which he thought were gouty, and finally he came to me for advice. He stated that during the six years since I had seen him last he had kept constant watch upon his skin surface, and had never had the slightest eruption, excepting an occasional pimple upon his face. About a year ago he had a few "crusty pimples" in his hair, which later en-

tirely disappeared. His sore throat had persisted now, however, for nearly a year. He remembered that once during the last year he had had a few pimples upon his palms, which after a few days "peeled off" and disappeared.

On examination I found merely a red, congested pharynx, no mucous patches, no sign of an indurated scar either on the penis or in the mouth. The glands were still enlarged and indurated, and as far as could be recollected, very similar to those palpated six years previously. On pressure over the postcervical chains the patient felt a dull ache, evidently corresponding to the pressure pain caused by the collar. There was no eruption upon the face or body.

There seemed to be no doubt that mercury should be employed empirically. The prompt and grafting result of a few weeks' treatment with protiodide alone rendered almost certain the conclusion that the original infection had been a double one of gonorrhœa and syphilis. About a month later the wife of the patient gave birth to an unmistakably syphilitic child, which fortunately did not live to fight for health and existence against the odds placed in its way by the father's error. The mother even to-day shows no trace of syphilitic contamination.

In reviewing these cases I cannot believe them to be wholly unusual, even though they controvert, in many respects, the prevailing tenets and teaching with regard to the symptoms and course of the disease. It rather appears to me that a form of syphilis exists in the better classes (and sometimes, though more rarely also in the poorly nourished) which we have been slow to recognize, and which it behooves us to study for the sake of posterity. There is little likelihood, in the first place, that in any of these cases there still exists a doubt as to the accuracy of the diagnosis of syphilis. Cases I and III, eventually gave unmistakable, and Case III the most doleful of all positive signs that can be obtained. Case II presented a possible primary lesion, but at no time a secondary skin eruption, and yet there is little room for doubt as to the condition under treatment.

If we analyze the histories, we have in Case I: Undoubted syphilis, an indefinite primary lesion (chancere), a typical gonorrhœa (gonococci present in large numbers), an entire absence of early secondary syphilitic lesions, a possibly syphilitic eruption synchronous in its appearance with the use of cubebs four months after the last exposure, and disappearing at once on discontinuing the drug, finally a syphilitic palmar and plantar eruption seven months after the latest possible date of infection. The case responded at once to mercurial treatment. Case II: Gonorrhœa, a probable primary lesion of syphilis on the penis, with induration remaining, and wide but atypical distribution of the glandular enlargement. Sore throat, malaise, alopecia lasting for a month and controlled promptly by mercurial treatment; an entire absence of a secondary eruption to date;

occasional exacerbations of throat and systemic symptoms. Case III: Undoubted syphilis with gonorrhœa; general glandular enlargement; entire absence of (or failure to discover) a primary lesion; entire absence of secondary eruption during the first five years of the disease; then sore throat, alopecia, palmar and plantar papulosquamous eruption, and subsequently the birth of a syphilitic child.

In the light of the foregoing what must we say to certain critical and rather cynical friends who scoff at the possibility of syphilis in the absence of an early skin eruption, i. e., such as may be expected within the period during which we can justifiably postpone treatment? First of all we must define for ourselves this word "reasonably." Christian (*Therap. Gaz.*, June, 1904) in describing the different clinical forms of the disease cites two types in which the skin eruptions always appear "at the proper time," i. e., "six or seven weeks" after the primary infection. In his "third type" he also mentions a rash, but gives no time for its appearance. Presumably this is early, however, as it is accompanied (he says) by all the symptoms which are considered the rule rather than the exception in a severe infection. In his discussion of a query with regard to the very point under consideration in this paper he made the statement (*Phila. Co. Med. Soc.*) also that "he cannot conceive of a case of syphilis without a secondary eruption." Other authorities take the same ground or beg the question. All seem to believe that a careful search will be rewarded by the discovery of the eruption soon or later. Evidently, however, if the eruption is late in appearing, each man must set an arbitrary time for the institution of mercurial treatment, and the tendency will be to postpone that time as long as one can be sure, from his own experience and that of others, that he is safe in diagnostic procrastination. Otherwise he is compelled for conscience's sake to disregard the eruption entirely and study his case as if a skin lesion were unlikely rather than probable.

My own feeling upon the question is somewhat as follows: If the poison of syphilis is systemic in its action, as we know it to be, a postponement even of days insures a more radical and thorough infection of the tissues. I do not believe that a case which has remained untreated for six weeks or three months presents as simple a problem (all other things being equal, such as individual susceptibility, etc.) as one that is treated from the first days or weeks, if we must wait weeks, of the disease. I believe, moreover, that the day will come when we shall realize that the earlier syphilis is treated, the more likely its cure; and that

this will lead perhaps to the discovery of a local and general prophylactic treatment instituted invariably immediately after illegitimate intercourse. In any event, there seems to me to be no justification, since cases occur such as are here described, for a delay even in doubtful instances one day longer than the customary six weeks from the time of exposure, provided a suspicious primary sore has been observed or a general glandular enlargement or persistent fever, or an increasing leucocytosis, or any of the signs suggestive of the disease. We have placed before us the choice between an untreated syphilis and a long course of unnecessary treatment, and for me the latter is preferable.

An attempt has recently been made in several of the large institutions of learning of this country, and especially in the University of Pennsylvania, to advise the students of the dangers involved in illicit intercourse. The endeavor has evoked from a small, but energetic number of genitourinary specialists the complaint that "ultrapessimism" regarding venereal disease has become rife among the medical profession, and through them among the laity. The reply might well be made that in spite of their ministrations, and ours, the blind asylums and the rapidly increasing sterility of our race are a portion of the tribute we pay to gonorrhœa, while the price exacted by our indulgence in syphilis is too grave and too various to be reckoned. I am confident that both gonorrhœa and syphilis are on the increase, the latter in a less malignant and repulsive, and, therefore, more dangerous form. This statement cannot be truly made of any other infectious disease in this portion of the world. It may well be that the spread of syphilis is partially due to the unrecognized and untreated cases, many of them in the negro, in which the supposedly invariable skin lesion has appeared very late or not at all. The day will come in which both gonorrhœa and syphilis will be classed and treated as contagious affections, reportable and isolable; and the unfortunate certainty that one of the reliable early signs of the, perhaps, more deeply rooted disease of the two can no longer be regarded as infallible, will serve to point to prevention as a logical and imperative measure.

Ohio Pædiatric Society.—The Ohio Pædiatric Society closed its convention at Columbus, on May 9th, and elected the following officers: President, Dr. William Clark, of Cleveland; first vice-president, Dr. Frank Winders, of Columbus; second vice-president, Dr. Hugh E. Lorimer, of Jamestown; secretary and treasurer, Dr. Gilbert L. Bailey, of Cincinnati.

THE RECOGNITION AND DIFFERENTIATION OF RÂLES IN THE LUNG.*

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I consider a simpler classification of râles, as heard in the lung, of sufficient importance to be the subject of this brief paper. I have been led to this belief by my own inability in the past properly to identify and classify the various râles I have heard in the chest under the names used in the textbooks. I find, since coming in closer contact with practitioners during my connection with this institution, that others have the same difficulty; and it is not infrequent to hear a sharp discussion between men of marked ability as to the name of a râle and the class to which it belongs, though it may have been equally well heard by each. All this, in my judgment, is owing to a great extent to the confusing nomenclature employed by writers in classifying râles.

I wish to say that in my opinion the râles heard in the lung should be divided into but two divisions; dry and moist; and that it is as possible, and easily possible, to differentiate between a dry and a moist râle as it is to tell the difference between the sound of a piano and that of a violin. I appreciate fully the scope of this assertion, and shall not be surprised if it meets with prompt and vigorous denial, but I beg leave to repeat that it is perfectly possible instantly and with certainty to recognize either of the two kinds of râles heard in the lung.

It is true that a dry râle may vary in its size from that produced by the largest bronchus to one having its origin in the tiniest bronchiole; while the size of the moist râle may be that of the finest air vesicle to that of the largest cavity, and the number of râles, each of different size that could possibly exist between these extremes is almost without limit. Then why should we confuse ourselves by picking out two or three of each kind and give these the dignity of a name, dubbing them crepitant, subcrepitant, sibilant, or sonorous? It is enough to know, and it is of the greatest importance from a diagnostic and prognostic standpoint, that a râle is dry or moist; and this can with certainty be known while its size though important can be told with a moderate degree of accuracy by its pitch.

The great point of distinction between a dry and a moist râle is simply this: a dry râle has always some duration, while a moist râle is always *instantaneous*. By looking a little into the causes of these râles, I think I can prove my premises. A

* Read before the Clinical Society of the New York Polyclinic Medical School and Hospital.

dry râle is caused by air going at a given rate of speed through a smaller sized tube than it normally does, thereby raising the pitch of the sound produced, on the same principle that we pucker our lips to whistle, instead of opening our mouths widely. At a glance one can see the commoner causes of dry râles: mucus stuck so tenaciously on the side of the bronchus that the breathing does not move it will lessen the calibre of that bronchus; any condition, acute or chronic, that would thicken the lining membrane of the bronchus; any pressure from without, or any foreign body or growth within that would encroach upon the size of the air passage; and, finally, any nervous phenomenon that would spasmodically cause the bronchi to lessen their calibre would give rise to the same condition. In any case, you will notice that the adventitious sound produced must and *does* possess some prolongation or duration, and its pitch or size may be from the loud, large, stertorous breathing of the dying to the very high, fine, hairlike whistlings heard in the bronchial pneumonia of the infant.

The moist râle, on the other hand, is caused in one of two ways: either by the pulling apart of moist, adhering surfaces, or by air passing through an accumulation of fluid that is sufficiently liquid to allow it to bubble through. Its size may be caused by the breaking apart of the adhering surfaces of the finest air vesicle or to that of the pulling apart of the walls of a collapsible cavity; or the air may break through a collection of thin mucus filling a bronchus; or, again, a cavity may be more or less filled with fluid, and entered below the surface of that fluid by a bronchus. The air entering through the bronchus will bubble up through the liquid, but the sound produced will always be instantaneous, as may be proved by blowing through a rubber tube that is inserted to the bottom of a vessel filled with water. It will be noticed that no matter how steadily the air is forced through the tube, its breaking to the surface of the water will be by a series of bubbles or gurgles, each instantaneous in character. I deem it almost superfluous to state that while the sound produced by the fine air vesicle and that of the cavity whose walls collapse at each expiration, are both instantaneous, yet there is, technically speaking, some apparent difference in their duration; on the same principle that the duration of the sound produced by the discharge of a twelve inch rifle is greater than that produced by a paper cap pistol, yet the brevity of the former is surely infinitely greater than the latter.

I cannot approach the various pathological conditions in which these two râles are pathognomonic, but will only say that, very broadly speaking, the moist râles are of far graver significance than are

the dry. The dry râles, or those with duration, are the whistlings heard perhaps in their greatest profusion and purity in bronchitis, more especially chronic, emphysema, and asthma; while the moist râles, or the clicking, crackling, snapping sounds without duration, are most typical in pneumonia and tuberculosis pulmonalis. To the latter disease, especially, would I most earnestly call attention, for it is here, in its earliest stages, and while there is yet every hope of successful therapy, that we hear on deep inspiration the little, fine, hairlike cracklings, instantaneous in character, which may be so easily overlooked or mistaken for the rubbing of the hair against the examiner's ear, but which tell, as loudly as they can, the beginning invasion of the tubercle bacillus.

76 WEST EIGHTY-FIFTH STREET.

ALKALINE BEVERAGES IN THE TREATMENT OF PNEUMONIA.

By J. B. TODD, M. D.,

SYRACUSE, N. Y.

This is an attempt, first, to interpret the clinical history of pneumonia, viewing the *Micrococcus lanceolatus* as the source of infection, and the clinical phenomena as the expression of the biological life of the germ in the structures involved, and, second, to illustrate the therapeutical value of alkaline beverages when employed from the inception of the disease.

Sternberg (1) has found the pneumococcus in the saliva and nasal secretions in a large percentage of persons in health. To arrive at a proper understanding of the manner of pulmonary infection, it will be necessary to consider the life history of this germ.

Sternberg (2) states also that "the pneumococcus grows at temperature from 60° up, and at 104° growth ceases. It grows best at temperature of from 91° to 98°, and grows very rapidly in a suitable medium. Its growth requires a slightly alkaline medium, but will not develop in a medium which contains the slightest trace of acid. In infusions made of chicken or rabbit it multiplies in the incubating oven with remarkable rapidity. At the end of from six to eight hours after inoculation, the infusion, previously a clear fluid, will be found to present a slight cloudiness, and to be filled throughout with cocci in pairs and short chains. Multiplication ceases at the end of about forty-eight hours, and the liquid medium again becomes transparent, as the result of subsidence of the cocci to the bottom of the receptacle."

It is evident that the alkaline blood serum furnishes an ideal medium for their growth, but that

the normal temperature of the blood is a little too high to favor their development. It is also necessary that the vitality of the body be slightly impaired, as from overexertion, or breathing impure air, or exposure, that the body temperature be temporarily lowered in a slight degree; then the conditions are favorable for the infection. There is a range of from two to three degrees in the temperature of persons in health. I have observed a temperature of 97° in a person who had been working hard for three hours. In this case the fatigue was manifest by pallor and subjective sensations of hunger, but after a rest of half an hour and immediately after a meal it rose to 99° . The body heat being largely produced from the glycogen stored in the muscles, the exhaustion of glycogen, Latimer (3) shows is manifest by the sensations of fatigue. This also explains why alcoholics are more vulnerable to the disease, as they are more liable to have the subnormal temperature necessary for the infection.

Referring to the subnormal temperature in alcoholics, Schaffer (4) states that "various observers have found alcohol taken in ordinary quantities as a beverage caused a slight depression, generally less than half a degree, in the temperature of healthy men; on the other hand, poisonous doses may cause a fall of five or six degrees."

Infection probably occurs prior to the chill, which undoubtedly marks the moment of systemic toxæmia, and may be accompanied by an actual elevation of temperature. Immunity from infection possessed by persons in health is maintained by two factors, first, the normally high temperature of the blood. Flint (5) says "the temperature in the blood of the hepatic . . . ranged from 101° to 107° . In the aorta it ranged from 99° to 105° ." This temperature is necessary to maintain the protective efficiency of the enzyme, variously called by different authors, but which Sajous (6) furnishes good evidence to be trypsin, and, second, by the much lower temperature in which the micrococcus best grows, *i. e.*, from 90° to 98° .

The classic symptoms of a case of pneumonia are, we know, high temperature, characteristic cough, rusty sputum, dyspnoea, right heart more or less engorged, urine scanty and of high specific gravity. Everything points to intense toxæmia and increased cellular metabolism.

The infection occurs in the air cell. Piersol (7) describes an air cell as consisting of epithelium, connective tissue, and capillary net work. The infection having occurred in the epithelium, Foster (8) outlines the sequence of events partly as follows: The white corpuscles congregate in

the area of irritation, each one exhibiting a tendency to stick to the sides of the vessels. The white corpuscles, lying in contact with the walls of the veins or capillaries, are seen to thrust processes through the walls, the process of a corpuscle increasing at the expense of the body of the corpuscles, and making its way through the wall of the vessel into the lymph space outside. Through this migration the lymph spaces around the vessels in the inflamed area become crowded with white corpuscles. At the same time the lymph in the same spaces not only increases in amount, but changes its chemical character, becomes more coaguable, and is spoken of by older writers as coaguable lymph.

This condition probably corresponds to the stage of congestion, but as the process goes on and the lymph spaces and capillaries become more and more crowded, there is an actual giving away of the capillary wall, and the red cells escape forming the stage of red hepatization. In all of this there is probably nothing absolutely peculiar, or specific, to the disease; it represents an effort of the white cells to "wall off" and surround any infection. The histological character of the structure involved determines the result, however, the crowding of the white cells tending only to fill the lymph spaces first and, finally by distention, the air cells.

While these changes are occurring in the air cells, there is an elevation of temperature from 102° to 105° , or even higher. The leucocytes are greatly increased. Anders (9) says in this connection: "Slight leucocytosis may indicate a mild infection; leucopenia occurs in the malignant cases, on the other hand, leucocytosis of high degree, while indicating a severe infection, also shows a good reaction." Again, "the urine is scanty, high colored, and acid. The absence of chlorides is of little diagnostic value."

The high temperature and leucocytosis indicate intense reaction from the infection, but this reaction consists of cell change, *i. e.*, cellular metabolism, which tends to reduce the alkalinity of the blood.

Any theory of heart failure falls short unless it takes into consideration all the existing conditions. To say overdilatation of the right heart, and that retarded pulmonary circulation are the causes, is only a partial statement. We should have a clear conception of the normal blood as a living stream, faintly alkaline, with its life sustaining salts, holding the fibrin in solution, and filled with living cells upon whose functional activity depends the life of the patient. We should thoroughly appreciate that this life blood exists

in a state of unstable equilibrium (10). Toxæmia with its increased cellular activity very rapidly produces changes in the biochemical constituents of the blood and tissue plasma. Increased metabolism means increased oxidation, which means consumption of the alkaline salts. The blood gradually loses its alkaline salts, begins to have a tendency to precipitate its fibrin by reason of its increased specific gravity, and at the same time the toxins accumulate in sufficient amount to entail cardiac arrest. Green (11) says: "Exhaustion as applied to the heart expresses states in which inorganic salts necessary to the contractions of the heart are removed or disturbed, or it expresses states in which the antecedent organic contractile material is consumed or removed."

Sajous (12) referring to experiments *in vitro*, but the results of which he deems applicable to pathogenic elements and their toxins, says: "Another result of the want of normal amount of alkaline salts in the blood plasma is an interference of the function of the leucocytes. Trypsin acts only in the presence of salts, and soon loses its hæmolytic power when relieved of them." Sajous also states: "The relatively enormous excess of leucocytes which invade the lungs during the first stage of this disease necessarily involves the use of a correspondingly great quantity of these salts, the nucleins and trypsin soon appropriating all those available."

Intrinsic metabolism is impaired through deficiency of any of the molecular constituents of the blood. Foster (13) says: "The corpuscles with which the blood is crowded are living structures and consequently are continually acting upon and being acted upon by the plasma," and also that "the blood . . . is in a state of unstable equilibrium."

Now, as stated by Sajous (14), "All the alkaline salts referred to are ingested with foods or beverages. During disease, on the other hand, the restricted or modified diet involves a marked reduction in the amount of alkaline salts ingested." "It becomes evident," adds the author, "that a morbid cycle exists in this connection, pernicious in the extreme to the welfare of the patient because the source of these salts being external to the system, the latter is possessed of no intrinsic reserve. Steadily as the febrile process advances, the alkaline salts are consumed, and being inadequately renewed, the vital and defensive functions are unceasingly hampered until life ceases."

A typical case goes on from four to eight days when there is a fall of temperature and generally a relief of all the distressing symptoms. Can this crisis be satisfactorily explained?

A careful consideration of the biology of the pneumococcus in its environment will account, it seems to me, for all the phenomena.

The pneumococcus grows at a temperature of from 60° to 98°, but especially thrives from 92° to 98°. At 104° it ceases to multiply. It requires an alkaline medium. Sternberg (15) found that at 104° they were all dead in two days. It is plain, therefore, that when the proper specific gravity and alkalinity of the blood are maintained, a temperature of at least 104° for a certain time inhibits the growth of the pneumococci. When these germs cease to multiply the phagocytes are able to destroy the cocci and their toxins, and the case results in a crisis.

Thus it will be seen that when the specific gravity and the alkalinity of the blood are adequately sustained, a relatively high temperature inhibits the growth of the pneumococcus and precipitates the crisis. In cases of recovery by lysis, the leucocytic reaction has probably been sufficient to overcome the pneumococcus before sufficient time has elapsed with a temperature of 104° to inhibit their growth.

With this view of the biology of the pneumococcus in mind the writer has treated all cases of pneumonia for the past two years with salines. At first they were used per rectum, as suggested by Dr. F. P. Henry, of Philadelphia, in 1889. But it seemed unnecessary to give saline solutions by the rectum, when they could be taken by the stomach, so the latter method of administration was adopted.

Various prominent authors recommend subcutaneous or intravenous injections to prevent heart failure. Cohen (16) says: "Pneumotoxine so alters the chemical relations of the blood as to favor coagulation processes," and he also speaks of the "philosophic justification of the modern use of saline solutions." It would seem more philosophical to preserve the molecular constituents of the blood from the very beginning of the disease and not to allow its equilibrium to be disturbed. Broca and Richet, as quoted by Budgett (17), says that the injurious effects of lack of oxygen which they observed were due to the toxic action of unoxidized waste products. In the complete toxæmia and impaired alkalinity of the blood, the phagocyte and patient are both involved in the common ruin, the final death of the phagocytes precipitating saturation toxæmia commonly spoken of as heart failure.

Most authors do not attach any great importance to the character of the urine. If I interpret the matter correctly the urine is almost a complete index to the case.

In the augmented cellular reaction, which is

evidenced by the high temperature, intense thirst, and increased leucocytosis, the salts of the blood plasma are soon exhausted, as is also the intercellular fluid of the body. All this is very evident by the scanty, high colored urine and the absence of chlorides; the blood plasma and cells have their supply exhausted. This condition is all changed when salines are given from the first; six or eight ounces of saline solution every two hours, and all the water the patient wants besides. The urine continues light colored, profuse in amount, three to five pints in twenty-four hours, and is less acid.

A profuse, light colored urine indicates that the blood salts and fluids are being conserved; that the conditions are favorable to the life of the leucocytes, and that cutaneous, pulmonary, and renal excretions are not retained; while a scanty, high colored urine indicates the reverse, the toxic material being retained in the system until the heart cannot work under the burden.

A rational consideration of the various conditions that are grouped together to make up the disease called pneumonia, brings the inevitable conclusion that in the treatment of the disease we should do all in our power to promote leucocytosis through the entire course of the disease, also to preserve the proper alkalinity of the blood, for upon this depend the functional life and activity of its living cells to perform their work of growth, repair, and also of the removal of waste products, and destruction of the bacteria and their toxins. We should also maintain the normal specific gravity of the blood. When the tissue and blood plasma are reduced in amount, that remaining is increased in density by being overloaded with waste products; the movements of the amoeboid cells are hampered, even the integrity of the red cell is impaired. The hæmoglobin change to oxyhæmoglobin is retarded.

All these requirements are accomplished by the administration of alkaline saline drinks from the inception of the disease, and during its entire course. Of a solution of two and one half grains of sodium chloride and one grain of potassium bicarbonate to the ounce of cold water, from six to eight ounces should be given every two hours. The addition of a teaspoonful of lemon juice converts it into a refreshing effervescent drink, which is gratefully accepted by the patient. Besides this drink the patient should be allowed all the pure water desired. A well lighted room at a temperature of 55° to 65°, with an open window, so the patient can have an abundance of oxygen from Nature's storehouse. The patient should be generously fed every three hours, and the best and most nutritious foods are milk, eggs, and bread.

How can we know the alkalinity and specific gravity of the blood are being maintained under this treatment? The alkalinity can be tested by putting a drop of blood on glazed litmus paper that is just neutral in reaction. If the blood drop is brushed off in a moment the color will indicate the reaction. The specific gravity can be ascertained by the benzol-chloroform test, yet we have a more trustworthy and convenient index in the urine. When this treatment is maintained the urine amounts to from forty to eighty ounces in twenty-four hours, is light colored, and has an abundance of chlorides. If the urine becomes scanty and high colored, the alkaline saline draught should be increased in amount or frequency. Scanty, colored urine indicates tissue drought, and increased specific gravity of blood; light colored, profuse urine the reverse.

The administration of alcohol, strychnine, and the so called heart tonics to sustain a heart nourished by blood, altered in its biochemical constituents and by toxins, is analogous to sustaining a starved horse with a whip when he fails to draw his load.

I would, however, not be understood as condemning these valuable remedies when needed, but in my personal experience there has been no occasion for their use.

The following is a report of two cases:

CASE I.—Mrs. C., aged 84 years, widow, previous health good. She was remarkably vigorous and active for one of her age. December 29, 1903, she had a chill. I saw her the next day for the first time, when she had a temperature of 104°, with the characteristic cough of pneumonia, although the physical signs were negative until the fourth day, when the upper right lobe became dull. She was given saline drinks from the beginning, two and one half grains of sodium chloride every hour in from three to six ounces of water. The temperature fluctuated from 102.5° to 103.5° for four days, then gradually declined to normal on the eighth day of the disease; the rusty sputum was first seen on the fourth day. She was troubled with insomnia, which was relieved by giving bromide of potassium. She was fed liberally with milk, eggs, and bread. This case terminated by lysis, and in three weeks the patient had regained her strength sufficiently to be able to get about the house.

CASE II, that of Ada C., aged 8 years, is interesting, because the ætiology can be traced to the breaking down of the ventilating fan in one of the city schools, thus allowing the school room to be filled with body exhalations and carbonic acid. After being exposed to these conditions for two days, she became ill, and the second day, December 21, 1904, I saw her for the first time. Her temperature was 103.5°, pain in arm and body, slight suppressed cough, nausea, and vomiting; the infection was in the lower lobe of the right

lung, and by reflex irritation communicated to the stomach through the diaphragm; the nausea continued until the third day. During this time saline infusions were given per rectum, but were not completely retained; the urine was becoming scanty and high colored. The nausea having passed away, she was put on effervescent saline drinks. This is the formula used:

℞ Sodium chloride.....320 grains;
Potassium bicarbonate.....160 grains;
Aromatic fluid extract (U. S. P.).....30 minims;
Water enough to make.....4 ounces.

M. Teaspoonful in six to eight ounces of water every two hours with a teaspoonful of lemon juice.

For two days she had severe headache, which would be relieved in a short time by the ice cap.

As soon as she began to take the saline drink the urine increased in quantity until on the sixth day, she voided 66 ounces, although her temperature was from 103.5° to 104°. She was given milk, eggs, and milk toast, and all the cold water she wanted, which was a swallow every ten or fifteen minutes, when she was not sleeping. The rooms were kept at a temperature of from 55° to 60°, with a window open all the time. The cough, while persistent, was not troublesome; camphorated oil was applied to chest, which was covered with a cotton jacket. There was no expectation of anything during the entire course of the disease, and her tongue was clean and moist. The crisis occurred on the eighth day, and her recovery was rapid and uneventful from that time.

The micrococcus being the infecting germ, and the maximum temperature favoring its growth being lower than the internal body temperature, predisposing causes become interpreted as conditions which produce subnormal temperature. The infection having occurred, the exudate is due simply to "wall off" efforts of the white cells, while the toxins increase the temperature sufficiently to inhibit the micrococcus. But this temperature reaction tends to alter the specific gravity and alkalinity of the blood, which interferes with the functions of the leucocytes, and also prevents elimination of toxine and tissue waste, thus allowing them to accumulate in the system until they react upon the heart and produce cardiac arrest.

The basis of rational treatment consists in preserving the integrity of the blood from the inception of the disease by administering saline drinks, the proper condition of the blood being approximately indicated by the kidneys secreting a large quantity of urine; and, besides, in maintaining the integrity of the blood as indicated, and symptomatically treating such conditions as may arise in any particular case.

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- 742 SOUTH BEECH STREET.

THE VIRGINIA LAWS REGULATING THE SALE OF POISONS.*

By GEORGE E. BARKSDALE, M. D.,

RICHMOND, VA.

The subject that I present for your consideration is fully worthy of far more time and deliberate thought than it has received during the past; for until we are brought to a consciousness of what harm the careless sale and handling of potent substances are doing, it is hardly likely that we shall give the matter great thought.

For two or three years I have been at great pains to elaborate a bill that would be sufficiently stringent in its provisions to protect the public, yet permitting with the least degree of inconvenience the dispensing of poisonous drugs without unduly making the provisions irksome. I have read the draft of this proposed bill before the Virginia Pharmaceutical Association, where it caused a great stir and precipitated a heated discussion; but no action was taken other than referring the paper to a committee, and my effort, as well as that of others, fell flat; nothing was done.

I did likewise before the Richmond Academy of Medicine and Surgery and had the good fortune to secure that society's approval and indorsement of my bill.

Now I have come to the chief of all medical associations in Virginia to secure its indorsement likewise. When I have fully given my reasons for your approval and support to have my bill become a law, I do not think you will deny it.

The United States Vital Statistics for 1900 give the total number of deaths in Virginia for that year as having been 25,252. Of this number 110 were due to drowning, 57 to murder, 18 to injuries due

* Presented at the meeting of the Medical Society of Virginia at the meeting in Richmond, Va., October 18 to 22, 1904.

to machinery, 14 to lightning, 37 to burns and scalds, 132 to railway accidents, and 59 to poison alone! More than one half as many as were drowned, more than were murdered, more than three times the number that were killed by machinery, and about half the number killed by railway accidents. Of the suicides occurring within the State, which numbered a total of 27, 2 were from throat cutting, 2 from drowning, 3 from hanging, 4 from poisons, and 16 from shooting. Thus we see that 55 persons lost their lives from accidental poisoning in a single year within the State.

When we consider that almost as many persons lose their lives owing to poisons as die from the accidents of pregnancy, including sepsis and eclampsia, upon the latter of which we have a surfeit of papers and discussions annually, it is assuredly time for the law to adopt some means to withhold from a public that is ignorant these dangerous drugs.

Of course, it is not meant to prohibit the sale of poison, that would be well nigh impossible, but rather to limit the sale and to hedge about the innocent user with proper safeguards that will, I ardently hope, lessen this flagrant waste of life. At present there is virtually no poison law upon the statute books. We read of such nonsense as this, I quote from Sec. 1763 of the code:

"It shall not be lawful for any person, having authority to sell or dispense medicines or poisons, to retail, except upon prescriptions of a regularly licensed physician, dentist, or veterinary surgeon, morphine and its preparations, opium and its preparations containing a higher percentum of opium than laudanum, prepared in accordance with the formula of the Pharmacopœia of the United States of America, and the druggist shall take and file and not refill the same; nor such person, or persons, retail any poison enumerated in the following schedules 'A' and 'B' without distinctly labeling the bottle, box, vessel, or paper, in which said poison is contained with the name of the article, the word 'poison,' and the name and place of business of the seller; and in addition thereto at least two of the most readily obtainable effective antidotes to such poisonous article."

This could be construed to mean almost anything. It prohibits the selling of ten grains of morphine except upon a physician's prescription, but allows the wholesaling of a phial containing a drachm! It allows the sale of laudanum and forbids the apothecary to sell opium and extracts of opium. Yet gallons of laudanum are sold to a pound of the crude opium. The accomplished pharmacist who can discriminate is forbidden to fill a prescription which contains extract of opium or morphine, yet the country merchant who is ignorant of medicine can sell as much morphine as he pleases.

For reasons best known to the original author

of the poison law, which, by the way, is virtually a copy of the poison law of some other States, it has been thought necessary to divide poisons into two schedules, namely, "A" and "B." The reason for this has never made itself apparent to me and is as senseless as it is useless.

"Schedule A" embraces the following: Arsenic and its preparations, corrosive sublimate, biniodide of mercury, cyanide of potassium, hydrocyanic acid, strychnine and its salts, and essential oil of bitter almonds."

These poisons are to be registered, but aconite may be sold without registration. Will anybody be so bold as to say that an ounce of tincture of aconite will not produce death as well as one of Fowler's solution? Or is not red precipitate (which it is not necessary to register) quite as potent as biniodide of mercury? Does anybody seek to murder or commit suicide with strychnine, when carbolic acid or opium is readily obtainable? Assuredly *no*. Yet strychnine must be registered and opium need not.

This law further prescribes that no cocaine shall be sold other than by a regularly licensed pharmacist, and his sales are restricted to physicians, surgeons, dentists, and pharmacists. Is cocaine worse than opium? In this brief summary of the poison law of the State we have reason to see that we have grown negligent in the matter and it badly needs attention. Powerful agents that are likely to produce permanent injury or loss of life are easily obtained and with the inevitable result. Ignorant persons deeming themselves immune to large doses take them and death results. Children secure bottles of poisonous tablets and eat them—the same result. Poison bottles being like other kinds, mistakes are made in the dark and the wrong substance taken, causing lasting regret—but again a like result. Then the hapless suicide, perhaps a drunkard after a night of wassail, tottering upon the verge of madness, takes poison and leaves a family dependent upon the State. This may seem funny to some, and I have heard many jeer that it is well to let a suicide die. But, while I possess a supreme sense of the ridiculous, the point of this joke is lost upon me.

Now, since there is no poison law that we can depend upon with confidence, I shall go into a discussion of the one I propose. First, let us suppose that there is not a single regulation governing the sale of poison in the State, or in the Union; it would be necessary to define the term poison or to name the lists of substances so considered. Now, since some poisons are more potent and rarer than others, these have been placed in a separate paragraph, and are positively forbidden to be sold except upon the order of a physician.

The less poisonous substances are placed in another paragraph and are forbidden to be sold in quantities of over a drachm of the drug, or a fluid drachm of the liquid or solid preparation thereof, or more than a quarter of an ounce of croton oil, chloroform, chloral, sulphate of zinc, or carbolic acid to be sold except upon the written order of an officer of the law, a physician, veterinary surgeon, dentist, or analytical chemist.

Why this restriction? This is why: Persons suffering from acute pain can find relief probably by using a drachm of laudanum, but it is hardly likely to produce death, at least there is not the likelihood of its doing so that there would have been had an unlimited amount of poison been obtainable.

The quantity of chloroform, croton oil, etc., is limited for the very same reason. Should the person desire more, it would be necessary to make the facts known to a third person, and to secure his consent in writing.

All of us know how frequently murderers have been trapped by means of the records of poisons kept in stores; and we also know that even the lax surveillance that has been hitherto observed in the sale of poisons has had the tendency to materially lessen the number of murders that have been committed by means of them.

The writer considers it nothing less than criminal to dispense a poison in anything that does not convey at a glance that the contents thereof are poisonous, for several reasons, viz.: the label may become stained or blurred, or perchance come off, or a poison be placed in a beer or soda water bottle, or the bottle may be mistaken in a hurry or during the night, and the poison taken or administered for some innocent remedy, which we are well aware has been done some thousands of times. For this reason I have suggested the use of triangular phials because they are uncommon, and the green color will in, say, twenty-five years, become the color associated with poison. "Poison" is to be blown in the bottle because labels come off. A penalty is attached to using the bottle for any other purpose, because it is my intention that the public be taught that these bottles are for poisons and for nothing else, and whenever one of the bottles is found it is supposed to contain poison. As to the labels, this is, of course, in accordance with the present law.

To neglect so easy and so economical a means of security against the possibility of an accident, and the protection of a public that is ignorant of the potency of poison is criminal. It is as obligatory upon us to provide this precaution as it is for a city government to force sellers of gunpowder to keep their stores beyond the city limits, and for the

national government to maintain lights along the coast for the guidance of mariners.

It would, of course, be detrimental to the physician to label a bottle "poison" without his consent, but as a public safeguard none but he who had no regard for other than his own interests would be likely to object to the bottle, box, or package bearing the words: To be used with caution and kept out of the reach of children.

A BILL TO AMEND THE LAW REGULATING THE PRACTICE OF PHARMACY.

Be it enacted by the General Assembly of Virginia that it shall be unlawful to retail the following:

Arsenic and its preparations; phosphorus and its preparations; bichloride of mercury; white precipitate; biniodide of mercury; cyanide of potassium; hydrocyanic acid; essential oil of bitter almonds. Also the alkaloids of aconite, belladonna, opium, colchicum, conium, nux vomica, coca, digitalis, henbane; or their salts, and such other alkaloids and principles of a poisonous nature, as may be discovered from time to time; or any compound mass, pill, solid, or liquid, containing any of them in sufficient quantity to produce death; except upon the written order of a physician.

It shall be deemed unlawful to retail aconite, belladonna, colchicum, conium, nux vomica, hyoscyamus, savine, ergot, cotton root bark, cantharides, opium, or their pharmaceutical preparations (unless they contain less than two grains of drug to the fluid ounce) in quantity of more than a drachm or a fluid drachm of a preparation, either solid or liquid; or more than one quarter ounce of croton oil, chloroform, chloral hydrate, sulphate of zinc, carbolic acid, or any other poison that may be discovered from time to time, except upon the written order of an officer of the law, a physician, veterinary surgeon, dentist, or analytical chemist.

It shall be unlawful to retail any of the foregoing poisons without first recording in a book, kept for the purpose, the name and address of the purchaser, name and quantity of poison sold, date of sale, the purpose for which it is to be used, and the name of the dispenser. The record thus kept is to be always open for inspection by the proper authorities.

It shall, further, be unlawful to retail or dispense any of the foregoing poisons in any other than a triangular green phial or bottle, with the word "poison" blown in the glass (whether it be a solid, liquid, pills, tablets, or parvules), and the same to be plainly labelled with the name of the seller, his place of business, and the word poison printed in red letters on a white label, or to use these bottles for any other purpose excepting poisons dispensed upon a physician's prescription, in which case the phial or bottle shall bear a label printed in red letters on a white ground as follows: To be used with caution and kept out of the reach of children, and, if a box, envelope, or package, it shall be sealed with a slip bearing the above words.

Any violation of these statutes shall be punishable by a fine of \$25.00 for each separate offense from and after the passage of this act.

THE DIAGNOSIS AND TREATMENT OF
TYPHOID FEVER.

By WILLIS JONES, M. D.,

ATLANTA, GA.,

LATE HOUSE PHYSICIAN, BELLEVUE HOSPITAL, NEW YORK.

I know of no disease in the field of internal medicine which has been so extensively discussed as has typhoid fever, and yet the subject is still inviting and full of scientific interest. Scarcely a medical journal leaves the press that does not treat of the subject in some manner. Very few diseases coming under the jurisdiction of the student of internal medicine call for an earlier diagnosis than does typhoid fever. Upon the earliness with which the diagnosis is made depends much in reference to the prognosis of individual cases and the success with which the medical attendant will handle his charge, for it is a fact well recognized that the so called latent, or ambulatory, cases add very materially to the death percentage of this particular disease.

What is there in the early days of the disease which will aid us in making the diagnosis? A patient may come to you complaining of all the classical symptoms, viz., headache, which has existed for two or three days; pain in the back, a feeling of general languor, loss of appetite, constipation or diarrhoea, bleeding from the nose, and occasionally a slight bronchial cough. These subjective symptoms, reinforced by a close physical examination in which we find the tongue coated, a few rose spots upon the abdomen, the spleen enlarged, and a slight elevation of body temperature, with negative findings in the remaining portion of his or her anatomy, constitute to my mind an ideal early clinical picture of typhoid fever. However, only a very small percentage of the patients will present such a characteristic picture, but will come to you complaining of only one or more of the subjective symptoms above mentioned, and your objective examination may or may not prove completely negative, and yet the patient is suffering from the same kind of infection as the one which presented all the classical subjective and objective manifestations.

It is here that other aids in diagnosis must be employed if we expect to do all possible for our patient. We have at our command several laboratory methods, which are of much value in these doubtful cases:

1. A bacteriological examination of the blood can be made. When this has been done and the typhoid bacillus found, the diagnosis is established beyond doubt. This method of diagnosis is not available to everyone, because of the equipment that is necessary to carry out the examination.

This method, therefore, cannot be used as a routine practice except in hospitals.

2. We can make a careful morphological study of the blood, and in many doubtful cases we gain much valuable information. The chief thing in this study is the total estimation of leucocytes and a differential count of all the leucocytes present. It is well established that the total leucocyte count in an uncomplicated case of typhoid fever is practically normal or slightly below the normal. The diminution is usually in proportion to the severity of the infection. Thus in some very severe cases, counts as low as one thousand per c.m. are recorded. We can thus readily see that any sudden increase in the number of leucocytes should lead us to suspect some complication, since typhoid fever is one of the febrile conditions in which we expect a hypoleucocytosis rather than a hyperleucocytosis. In the early days of the disease is most usually to be found an increase in the number of lymphocytes and a corresponding decrease in the multinuclear neutrophile leucocytes. This condition is usually more marked in the third and fourth week of the disease. In cases where we have complications the multinuclear leucocytes are usually increased if the complication is septic in character.

3. Ehrlich's diazo reaction is quite significant, provided we can exclude pneumonia, scarlet fever, malaria, measles, and tuberculosis. Simon, in his treatise on clinical diagnosis, states that if in doubtful cases the reaction is found between the fifth and thirteenth day of the disease, and not later than the twenty-second day, it is presumptive evidence that the given disease is typhoid. If the reaction is not found in the second or third week of a supposed case of typhoid, it is probable either that the case is very mild or the diagnosis is wrong. This reaction is also very constant in acute miliary tuberculosis, but does not generally appear until after the beginning of the third week.

4. Probably of most importance to the general practitioner is the agglutination test, or Widal's reaction. This reaction is present in from 90 to 95 per cent. of all the cases of typhoid fever in some stage of the disease. By the aid given to us by the health department in the larger cities this method becomes one quite practicable. Ewing, in his recent book on the pathology of the blood, states that the reaction in cases where the dilution is 1 to 60 may be looked upon as *absolutely* certain, where the time limit is from fifteen to thirty minutes, and when the dilution is 1 to 30, must be regarded as *almost* certain evidence that the given case is one of typhoid fever. In other words, the significance of this reaction is directly

proportional to the dilution used and the time required for the agglutination to take place.

In summing up, I shall use Dr. Ewing's exact words in reference to Widal's test in the diagnosis of typhoid fever, which are as follows:

"The combination of an indistinct serum reaction, diminution of fibrin, absence of leucocytosis, and the presence of a relative or absolute lymphocytosis can very rarely be demonstrated in the early stages of any obscure febrile disease other than typhoid fever."

This method of diagnosis has recently been much simplified by the use of the dead or embalmed typhoid bacilli in bringing out the reaction, and in the hands of those who have used it, it has proved quite satisfactory.

The diseases that sometimes give us trouble to distinguish from typhoid fever shall be mentioned only. Those which often simulate typhoid are: Acute malarial tuberculosis, cerebrospinal meningitis, central pneumonia, malarial fever, or some deep seated suppuration. I think that probably the most difficult distinction is that between typhoid and acute miliary tuberculosis. I have seen cases where the very best diagnosticians could not say which condition was present until after they had studied the case daily for several weeks, and then only after many laboratory procedures had been resorted to in trying to exclude the one or the other condition, and in many cases only the autopsy revealed the condition which produced death.

As for treatment, I consider the prophylactic as of a much importance as any. The importance of this procedure I consider cannot be more vividly impressed upon medical attendants, nurse, and family than by calling attention to the great epidemic of typhoid which recently occurred at Ithaca, N. Y., as the result of the city water supply becoming contaminated by the excreta from some Italian laborers who were suffering from the disease. It is quite universally accepted that the germ of typhoid is given off from the body of the patient suffering from the disease in the urine, the feces, and, in a very few cases, the sputum. One authority has estimated that as many as 500,000,000 typhoid germs may be found in 1 c.c. of urine from a typhoid patient. In every instance where there is a case of typhoid in a private family, the actual life saving necessity of thoroughly disinfecting the urine, feces, and sputum before they are dumped into a cesspool, if in country or small village, and into sinks, if in larger villages or cities, should be impressed upon those who are acting in the capacity of nurse. Each time after the patient's bowels move, or urine is voided, the but-

tocks should be wiped off with 1 to 1,000 bichloride solution and, in women, the external genitals should be treated likewise, and here the attendant should be warned as to the necessity of thoroughly cleaning his or her hands after each such procedure. Bedding, or articles of clothing, used by the patient should be handled with care and immediately after being taken from the sick room should be placed in 1 to 20 carbolic acid solution, 1 to 1,000 bichloride solution, or, best of all, into boiling water. All drinking glasses and dishes used by the patient should be placed in boiling water before used by any one else. For the purpose of disinfecting the urine and feces, the best agents are 1 to 20 carbolic acid solution, 1 to 1,000 bichloride of mercury solution, which has been rendered acid by the addition of tartaric or hydrochloric acid in sufficient quantities; otherwise, the mercury would prove inert in the presence of albumin. The time required for these agents to act is from thirty minutes to one hour. The longer the more thorough the action. In each instance the quantity of disinfecting fluid should be equal in volume to the urine or feces to be disinfected, and all fecal masses should be thoroughly broken up to allow each particle to come in contact with the disinfecting agent. As for the internal treatment of individual cases, I think almost every one, other than members of the family, will agree with me that in certain selected cases of typhoid fever, we need no treatment whatsoever other than good nursing and proper and systematic feeding.

There is another type of the disease in which the patient seems to do best by controlling temperature, by proper bathing, feeding, nursing, and the administration of small doses of hydrochloric acid after each feeding, and no other medication save an occasional hypnotic. However, the greater number of cases of typhoid at some time of the disease will require special medication to control one or more disturbing symptoms. Usually one of the most persistent and annoying things to combat is hyperpyrexia, and for this condition I think that the bath treatment should stand at the top of the list. Unless the temperature mounts up higher than 102.5° F., bathing as a routine practice had better not be done; but when the temperature is above 102.5°, the cold bath is indicated and gives results that no other agent can. It is entirely free from the depressing after effects that are so often seen when the coal tar products are used. There are several ways in which the bath can be administered, depending upon the susceptibility of the patient to reaction and the environment in which the patient happens to be

placed. The most satisfactory way of giving the bath is by the use of a tub if this can be done. The next best is the bed bath, and in other cases the sponge bath has to be resorted to. Another method which is most heroic is the sprinkle bath, and personally I do not care to employ it. The temperature of the water in which these baths are given has to be varied; some very nervous patients will not stand the bath temperature below 90° or 85° F., while others do not object when the temperature is reduced to as low as 65°, but such a low temperature is not necessary to accomplish good results, and I consider that just as much benefit is derived from baths with the temperature ranging from 75° to 70° as when the temperature is reduced much lower. The number of baths in twenty-four hours will depend upon the condition of the patient and the reaction following each. Not more than six to eight baths should ever be given in twenty-four hours.

Peabody, in his clinical lectures on hydrotherapy, gives the cold bath treatment for hyperpyrexia credit for the following good features:

"The bath removes heat from the body, stimulates the system at large, stimulates the depressed nervous centre, relieves headache, delirium, and stupor, the heart's action is stimulated, the pulse made stronger and slower, general nutrition improved, and body oxidation diminished."

No such group of beneficial results has ever been attributed to any other agent used to reduce excessive bodily temperature.

While a great advocate of cold water to control temperatures and nervous symptoms in typhoid fever, I believe just as strongly in the internal administration of the same agent in quantities amply sufficient to meet the demands of what would be an ordinary thirst, and especially should this be done when the patient is in a semistuporous condition and does not ask for anything. In such cases, four to six ounces of water should be given every three to four hours. Water taken internally acts as a diuretic, diaphoretic, and laxative, and while it may in no way influence the increased bodily metabolism, it greatly aids in washing the lymph spaces of those products which are accumulated by the increased tissue destruction going on in the organism as the result of continued high fever.

We are oftentimes greatly worried in the attempt to get our patient to take and retain the requisite amount of nourishment. In some cases the stomach is so very irritable that vomiting results whenever anything is taken into the stomach, and it is frequently necessary to cut out all food for ten to twenty-four hours in order to control this dis-

tressing symptom. In well regulated institutions, where the patients are regularly fed and only small quantities used at each feeding, such irritability of the stomach is rarely seen. In one of the largest hospitals in the country, the following diet is used: Four ounces of milk, rendered slightly acid by the addition of hydrochloric acid, is alternated every two hours with four ounces of one of the following foods taken in regular rotation: coffee and milk, albumen water, kumyss or matzoon, beef juice, barley water, and broth. Where such an alternation is made with the milk, the chief diet, the patients do not become so very disgusted with the sameness of food, and where such routine is practised very little nausea and vomiting are seen.

Constipation in most cases of typhoid is present at some stage of the disease, and after the initial cathartic (calomel, one half grain every half hour, for six doses, followed in six to eight hours by one half ounce of Rochelle salts), has been given, I prefer that bowels be moved afterwards once in each twenty-four hours by a simple enema. The so called eliminative or purgative treatment I shall mention only to condemn, since it does not appear rational when we consider the pathological lesions present in the intestinal tract.

Stimulation is a thing greatly overdone in a great many cases of typhoid and, as a result, many patients in the latter part of the third and fourth weeks, when there is real need for stimulation, do not respond because of the abuse of stimulation earlier in the disease when there was no demand. The best agents for this purpose are whiskey and strychnine given singly or combined; however, some patients do just as well when caffeine and camphor are employed. Digitalis is a drug that I personally do not care to use for this purpose, for others are just as efficient and free from irritating effects upon the stomach.

Strychnine had better be cut out of our list when there is present a supersensitiveness of cord reflexes, manifested by increased patella reflex. If given in this class of cases, I think more injury than good is the result.

We meet occasionally a patient much exhausted from continued wakefulness, and these patients seem always to do best if given morphine in quantities sufficiently large to produce sleep, and the dose repeated at a later date if no rest can be had otherwise. Much comfort can be given a patient if his or her mouth is kept thoroughly clean with boric acid solution. I have seen bad cases of parotiditis which I think were the result of not looking after the patient's mouth, and I am

quite sure that in many cases an irritable stomach is much aggravated by the patients, continually swallowing the secretions from a foul mouth, and having all food and drinks which they take contaminated by the same condition. Hæmorrhage should, as soon as recognized, lead us to administer morphine in doses large enough to quiet peristaltic movements of the gut, ice should be applied externally over the abdomen by means of an ice cap or ice coils, all foods stopped for eight to fifteen hours, and the patient kept perfectly quiet.

Perforation, one of the saddest and most serious complications of typhoid, and usually recognized as a hopeless condition, should be met as soon as possible after diagnosis by surgical interference. The results in cases thus treated when the diagnosis was made early have been most gratifying, and since we have no other avenue of hope to offer our patient, when once convinced that his peritoneal cavity is contaminated, we cannot too strongly insist upon giving to the unfortunate subject the only remedy which can lead to perfect recovery, the alternative being a speedy death.

A Medical Class Reunion.—The class of 1895, medical department of New York University, held a class reunion and banquet at the Hotel St. Regis, Tuesday evening, May 9th, to celebrate the tenth anniversary of graduation. Although reunions of medical college classes are unusual, this was a success, and brought together fifty-six of the ninety-seven surviving members of the class. Dr. Eben Foskett, of 314 West Eighteenth Street, presided, and remarks were made by Professor John F. Brady, of Dunwoodie Seminary, Yonkers, N. Y.; and Dr. Carl V. Reynolds, of Asheville, N. C.; Dr. H. L. Borland, of Camden, N. Y.; Dr. L. B. R. Smith, of Jeannette, Pa.; Dr. Edward Day, of Binghamton; Dr. F. C. Adams, of Bridgeport, Conn.; Dr. A. P. Bergman, of New Haven, Conn.; Dr. M. Vance, of Massachusetts; Dr. E. T. Sharpe, of Derby, Conn.; Dr. Charles J. Pflug, of Brooklyn; Dr. J. Feldstein, late of Calcutta, India; Dr. William J. Narey, Dr. J. F. Connors, and Dr. R. Opdyke, of New York; Dr. T. J. Kilmartin, of Waterbury, Conn.; and others. Of the one hundred and one men graduating in this class, ninety-seven are living, and ninety-five of them are engaged in medical work at the present time. It was voted to have another reunion five years hence.

The Dinner to Dr. Emmet.—We again remind our readers that the friends and admirers of Dr. Thomas Addis Emmet propose to give him a dinner on May 29th in celebration of his seventy-seventh birthday. This dinner will be given at Delmonico's and prominent physicians from New York and other cities will be present to do honor to one who has reflected such lustre upon American gynecology.

Correspondence.

LETTER FROM TORONTO.

Resignation of the Superintendent of the Toronto General Hospital.—The Ontario Board of Health.
—The Ontario Hospitals Association.—Dr. Grenfell's Benevolent Work.

TORONTO, May 1, 1905.

Dr. Charles O'Reilly, for twenty-nine years medical superintendent of the Toronto General Hospital, has handed in his resignation, which will be accepted and take effect at the end of June. Dr. O'Reilly was appointed to this office in 1876, coming from the Hamilton, Ontario, Hospital. During the course of his long administration, which has been an exceptionally brilliant and effective one, he has seen the staff increase from twelve to sixty, and has been instrumental in building up this hospital until to-day it is the largest institution of its kind in the Dominion of Canada, capable of accommodating over 400 patients, and having all the time within its walls a floating population of 500 souls. During the long tenure of his office over 100,000 patients have been treated in the institution, and there have occurred over 4,000 births in the maternity department. It has established an eye and ear department, as well as a nose and throat clinic and a skin clinic, in addition to the every day surgical and medical clinics. Several years ago Dr. O'Reilly was instrumental in having established an emergency branch in the centre of the city, a branch which annually attends to over 2,500 emergency cases. He has been on different occasions examiner for Toronto University, Trinity University, and the Ontario College of Physicians and Surgeons, and is vice-president of the Association of Hospital Presidents for the United States and Canada, as well as vice-president of the Ontario Hospitals Association. Popular with his staff and with the physicians of Toronto and Ontario, most of whom have passed through his hands, Dr. O'Reilly and his genial presence will be greatly missed; and the board of directors will find it a difficult matter to secure his equal as a hospital administrator. For the next two years Dr. O'Reilly will travel abroad with his wife and only son, Dr. Breffney O'Reilly.

The regular quarterly meeting of the Ontario Board of Health was held in Toronto on the 27th and 28th of April, when the secretary, Dr. Charles A. Hodgetts, presented the quarterly report of the work done by the board. For the first three months of 1905 there were 500 deaths from tuberculosis, and the continuation of this lamentable and appalling death rate from this disease will

stimulate the board to renewed vigor in endeavoring to stay its ravages. As a measure of relief Dr. Hodgetts suggests that, until such time as there should have been established throughout the Province sanatoria sufficient to grapple with the advances of the plague, the dispensaries should give provisional treatment. Another important subject mentioned and subsequently discussed was that of the disinfection of sleeping cars. Dr. Hodgetts thinks that there ought to be disinfecting stations elsewhere than at divisional points, and advocates having forms for certifying to the last disinfection and to the daily disinfection of all Pullman and sleeping car blankets. The subject of infant mortality was also discussed, and it was suggested that parents should be educated as to how their children should be fed, and that the board should issue circulars giving instructions on infant diet. The advisability of establishing a separate Department of Public Health in the Ontario Government will be discussed at the next regular meeting, and in the mean time the members of the board will have an opportunity to ponder the following notice of a motion regarding the same: "Owing to the constantly increasing attention given to sanitation, and the influence of proper sanitary methods on the public health, it is advisable that the Ontario government do establish a separate Department of Public Health which will be presided over by a responsible minister of the Crown."

The Ontario Hospitals Association held its annual meeting in Toronto on the 12th of April. A deputation from the members waited on the Premier, the Honorable Mr. Whitney, seeking an increase in the annual grant to the Provincial hospitals, from 50 to 75 cents a day, as the former amount is found insufficient. The total annual government grant to the Ontario hospitals now amounts to \$110,000, and as the number of patients is annually increasing, the amount per capita gradually decreases. During 1904 the hospitals throughout Ontario treated 39,223 patients, against 35,912 in 1903. The total revenue for the maintenance of these amounted to \$844,881, which amount included the government grant of \$110,000. This gives about 17 cents per diem for each patient entitled to receive government aid, while the actual cost of each of these patients was 89 cents a day. The total expenditure for 1904 amounted to \$841,829. For 1903 it was \$784,643. Mr. Edward Gurney, of Toronto, was elected president, Dr. Charles O'Reilly vice-president, and Dr. John Ferguson, of Toronto, secretary and treasurer.

Dr. Wilfrid Grenfell, the young Englishman who devotes his medical life to the fisherfolk of

Labrador and the northwestern shores of Newfoundland, is at present in Toronto, and has been delivering a series of lectures upon his work in that remote region of civilization. Since embarking upon this work, thirteen years ago, he has established three hospitals and has had presented to him a hospital ship by Lord Strathcona. That the hospitals are primitive and not of the modern variety can be gathered from the fact that one patient had an ear frozen while lying in bed last winter. Dr. Grenfell is greatly to be commended for his charitable work. He ministers to the sufferings of some 2,000 people each year, sometimes travels over a hundred miles to reach a patient, and has them brought equally long distances to him. He has secured the services of two specialists for the coming summer.

Therapeutical Notes.

Uresin, a Urotropin Compound.—Spasski states in *Roussky Vrach*, for April 2, 1905, that he prepared, in 1898, a dilithium-citric-acid-compound of urotropin, which he called uresin, and which is said to be a solvent for uric acid. (Urosin, a preparation better known and having a similar name, is the quinate of lithium.) Spasski experimented with citric acid, with urotropin, with urotropin citrate, with lithium citrate, and with uresin, and compared the amount of uric acid eliminated, the nitrogenous exchange and the amount of oxalic acid eliminated when these drugs were given. He found that urotropin did not act on nitrogenous metabolism. It was merely a solvent of uric acid. On the other hand, the administration of the other four preparations was followed by a diminution of nitrogenous metabolism and by an increased amount of oxalic acid eliminated. The increase of oxalic acid takes place at the expense of the uric acid. He considers uresin to be the most satisfactory of these remedies, because it is the most stable and the least hygroscopic.

Olans are compounds of petrolatum which have the property of forming permanent emulsions with water in the proportion of one part to five up to one part in two. They are absorbed by the skin. do not soil the clothing, and are said to have no caustic action. Various compounds are prepared, such as iodolan, naphtholan, etc. Iodolan contains free iodine and not iodine combined with fatty acids, as in the case of similar preparations. Naphtholan is prepared with a residue of Russian brown naphtha, and looks like yellow petrolatum, but is easily emulsified, and is specially recommended as a vehicle for ointments with balsam of Peru. The compound is easily applied and readily washed off. The makers do not divulge the method of preparation nor the composition of the olans.

The Kansas City, Mo., Hospital has decided to add an inebriates' ward to that institution to which chronic drug users may be committed by the city magistrates.

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REGULATION OF THE SALE OF POISONS.

It will be seen from the article by Dr. Barksdale which is published in this number of the *Journal* that an agitation for a revision of the State pharmacy law of Virginia in its application to the sale of poisons has been started in that State. Dr. Barksdale proposes a simple method of dealing with a serious situation which has grown out of the indiscriminate sale of common poisons by pharmacists, and the details of this are given in his article.

The sale of poisonous drugs at retail is regulated in nearly every State in the Union according to provisions contained in the several State pharmacy laws. The State of New York is one of the exceptions, for, by a section of the Penal Code, poisons must not be sold at retail except under certain restrictions, such as registering the sale and affixing a cautionary label to the container. This year, however, an effort has been made to strike out certain of the provisions of the Code which conflicted with the poison sections of the State pharmacy law. The necessity of an occasional revision of the pharmacy laws, especially of their poison sections, will be apparent when the advances of chemistry and pharmacy in recent years are taken into consideration.

We are heartily in favor of any movement having for its object the surrounding of the sales of

poison at retail with increased restrictions; we therefore take the liberty of commending Dr. Barksdale's plan to the American Pharmaceutical Association, which through special committees has given considerable study to the subject, going so far as to draft a model poison law and to recommend it for adoption by the several State pharmaceutical associations throughout the country. Nearly every piece of legislation pertaining to the practice of pharmacy in this country has been initiated by pharmacists, and we think it would be well to allow pharmacists, through their representative national associations, to continue to direct such matters. Dr. Barksdale's article is one of timely interest and is likely to prove suggestive and valuable for those who are concerned in the matter of throwing safeguards around the sale of poisons.

But the danger is not confined to sales of recognized drugs. In our issue for December 10, 1904, under the heading of *The Indiscriminate Use of Dangerous Drugs*, we spoke of the dangers resulting from the unrestricted trade in preparations not popularly looked upon as poisonous, but really of a dangerous character. Such are many of the quack preparations. Apropos of that article a distinguished member of the Committee of Revision of the United States Pharmacopœia wrote to us concerning an exceedingly dangerous arsenical preparation advertised and sold to the public indiscriminately as a remedy for asthma.

METADIPHTHERITIC SCARLATINOID.

This name is applied by Marfan (*Presse médicale*, April 29th) to a febrile affection accompanied by a rash indistinguishable from that of scarlet fever, and not with certainty to be distinguished otherwise from that disease, occurring after diphtheria that has been treated with antitoxine. The affection itself has been observed ever since the antitoxine treatment came into vogue, but it has been variously explained, some regarding it as purely the result of the serum used, while others have imputed it to a secondary streptococcus infection.

M. Marfan is inclined to look upon it as a true scarlet fever, modified perhaps by the diphtheria or by the antidiphtheritic serum. It is to be dis-

tinguished, he says, alike from the relapsing desquamative scarlatiniform erythema of the dermatologists and from the ordinary infectious erythemata, which, for that matter, are not exclusively scarlatiniform, but display a more or less decided polymorphism. But, he continues, if the scarlatiniform erythema is due to a secondary infection, if it really represents an abnormal scarlet fever, if, in short, the serum has nothing to do with its development, how are we to explain the fact that it seems to have become more frequent since the adoption of the new treatment of diphtheria? Possibly, he answers, this greater frequency is only apparent. At the present time the serum treatment allows diphtheria in its grave forms to display its full evolution, whereas formerly death cut it short in the early days of its course. Hence we now frequently observe accidents that were rarely seen before 1894. This consideration, which he thinks very important, inclines M. Marfan to the view that diphtheria as modified by the serum treatment is a new disease. If metadiphtheritic scarlatinoid is really a modified form of true scarlet fever, it is almost invariably very mild in its course, but probably it is in no great degree protective against a subsequent attack of scarlet fever.

A REMARKABLE CASE OF FOREIGN BODY IN THE VAGINA.

For purposes of their own, women occasionally introduce foreign bodies into the vagina, but, apart from pessaries, we presume it is rare for such bodies to be inserted by others. Certainly a case recorded by Dr. Placide Dubois in the *Gazette médicale de Nantes* for April 29th exemplifies an extremely rare if not unique occurrence. It came under Dr. Dubois's observation so long ago as in 1893, when he was a medical officer of the French colonial service in Cochin China.

An Annamite woman named Thi-Ly, thirty-one years old, of robust and healthy appearance, though evidently in great pain, presented herself at the native hospital of Phu-My for the purpose of having something made of wood and iron removed from her vagina. She said that it had been introduced on the preceding day by an Annamite doctor, adding the astonishing statements that he

had inserted it as an act of vengeance and that he had done so while she was asleep. In his examination M. Dubois found that the labia minora were very small, and he remarks that in many of the Annamite women the nymphæ are exceedingly small, scarcely amounting to a fold.

The foreign body proved to be an infernal contrivance, and its removal was a matter of considerable difficulty. It was a piece of hard, black wood, whittled into the rough semblance of a penis, the glans being made of some material having the appearance of wax, but much harder. Ranged round the wooden shaft, and held in place each by one end in the sulcus behind the glans by what appeared to be an elastic band, there were nine pieces of stout iron wire sharpened at their free ends. These pieces of wire projected backward and in a radiating direction like the ribs of an umbrella three quarters open, and several of them had penetrated the vaginal wall. The whole thing was about two inches and a half long, and the iron wires varied from half an inch to an inch in length. It was found necessary to incise the vaginal wall slightly to liberate these barbs. Although rest was enjoined after the removal of this savage device, the woman left the hospital on the following day, feeling absolutely no inconvenience, and two days later she was found to have only two minute sinuses as the result of her injuries.

Dr. Dubois justly remarks upon the devilish ingenuity displayed in the fabrication of this instrument of torture, and intimates that it may have been designed for the same purpose as the old *ceintures de chasteté*. It is somewhat difficult to believe the woman's declaration that it was introduced while she was asleep.

SOME POTENT THERAPEUTIC INFLUENCES, PRESENT AND PROSPECTIVE.

It cannot have escaped the observation of any one who may have turned his attention to the subject that the treatment of disease, or perhaps it is more correct to say the method of treatment of many diseases, is undergoing a process of change which is more or less revolutionary. The era of polypharmacy, with its multitude of drugs, the use of many of which is often in the high-

est degree empirical and unsatisfactory, is passing away. Of course the time is far distant, and it may never come, when drugs will be discarded, but it is evident that the utility of many of them as means for the possible cure of disease is less highly regarded than was formerly the case, and in many instances they have given place to one or another of the agencies which form the subject of this article.

These agencies, which will constitute at least an important part of the therapeutic system of the future, rest upon as solid and substantial a basis of scientific fact as almost anything outside the realm of pure mathematics. Whether we are to regard the changes which are taking place in practical therapeutics as evolutionary or merely as phases in psychological activity, it is impossible to say; and the one hypothesis does not necessarily exclude the other.

One of the most important therapeutic agencies is mental influence, it matters not by what name it is called. Physicians, of all men, are in a position to admit its potency for curative ends. It is by no means a recent discovery, for from time immemorial the influence of one mind over the mind and body of others has been recognized and admitted. Its scope is enlarging, for many people are awakening to the fact that they are susceptible to an extraordinary degree to the mental influence of those with whom they are in harmony. The more it enlarges the more useful it will become if properly regulated and systematized.

Hydrotherapy is a means of treatment for which the future is holding out great promises. Much has already been accomplished by it, especially during the past twenty-five years. Further study and elaboration will be sure to amplify its field of usefulness. One need only recall the valuable results which it has yielded in the treatment of typhoid and other fevers, diseases of the heart, liver, and kidneys, and a great number of the eruptive diseases to realize the importance which already belongs to it. Lavish Nature has supplied us with water in almost unlimited quantity, and it is often combined with powerful substances for relieving sickness and disease. It cannot be doubted that in the near future we shall

obtain much additional knowledge as to its practical applicability.

Massage and muscular motion as means for the treatment of disease have a much greater range of usefulness than is ordinarily supposed. When we realize what has been accomplished by this agency in the past, the health and beauty and vigor which it brought to the ancients, especially the Greeks, we do not wonder at the enthusiasm of those who advocate its systematic use. Muscular activity means quickened circulation, nervous energy, improved performance of function, enhanced metabolism, and general well being. The Swedish and other forms of movements, gymnastic exercise, and various forms of rubbing and manipulation are too valuable to be discarded or disregarded, or left in the hands of the half educated or the charlatan.

Treatment by means of serums and animal extracts is one of the most brilliant of the modern contributions to therapeutics. Though we have enjoyed the beneficent effects of vaccination for a century, it yet seems almost incredible that the blood of living animals can be utilized to furnish antidotes to poisons in the human circulation.

What great expectations may we not be justified in holding for the future when deadly diseases like smallpox and diphtheria have yielded to the power of this form of treatment? The opportunities which are being opened in this field are well nigh boundless in their scope and in their capacity for usefulness.

Finally, we are now at the threshold of the great developments which are to come with the more complete understanding and more perfect adaptation of the physical forces, heat, light, and electricity. We have long been familiar with the useful results of moist heat by means of the simple or medicated hot bath, the Turkish bath, etc., but the scientific employment of dry heat is of recent date. It is remarkable that dry air may be used at a temperature a hundred degrees or more beyond that which would be safe or useful with moist air. The relief of surgical shock and the care of many chronic disorders which may be accomplished by dry heat are evidences which we already possess as to its great value. Equally astonishing are the results which are being ac-

complished by means of light. The Röntgen rays, the Finsen rays, and the emanations from radium are opening fields for investigation in practical therapy of which we have as yet but little conception.

It is not improbable that we shall find equally beneficent results from the use of electricity. Though its therapeutic effects have thus far been limited and often disappointing, it is hardly possible that an agent which is so closely allied to nervous energy can be without great utility for the cure of disease. These new therapeutic agencies come to the relief of internal medicine, for in the form of the serums and extracts antidotes to poisons are introduced into the body, the selective affinity for which has been ascertained by patient experimentation and inductive reasoning. In the presence of pestilences and scourges, the cause having been determined and recognized, it becomes a simple matter to apply the appropriate antitoxine.

They come to the relief of surgery in the form of the physical imponderable forces, destroying tissue which is manifestly diseased and going beyond that which is pathological to sight or touch, beyond the limit which is usually reached by the surgeon's knife.

To physical forces or to animal extracts we must look, in all probability, for the cure of malignant disease, which has thus far baffled all other means of treatment. What a vista is opened for the future by these remarkable agencies! Disease is an accompaniment of civilized life to a far greater degree than in more primitive social conditions, but the expanding and developing human intellect is gradually clearing the way for the removal of much of it, and there is every reason to believe that this progress will continue. Who would dare to prophesy what the ideal social condition, in the dim future, will bring in the way of relief and cure?

ANDREW F. CURRIER.

THE COMPARATIVE VIRULENCE OF HUMAN AND BOVINE TUBERCLE BACILLI.

The comparative behavior of human and bovine tubercle bacilli was lately made the subject of a number of experiments upon various large animals by three of the medical officers of the Bureau of Animal Industry, the late Dr. E. A. de Schweini-

nitz, Dr. Marion Dorset, and Dr. E. C. Schroeder. A report of the experiments has recently been issued by the Department of Agriculture in the form of a brochure of 100 pages, very handsomely illustrated, largely in colors. The authors regard some of Koch's experimental requirements as unnecessary and unreasonable, and it is their opinion that the intertransmissibility of human and bovine tuberculous disease is supported by so much indirect evidence of an overwhelming character that we are justified in looking upon it as practically established.

STRAINING PROFESSIONAL COURTESY.

We learn that on May 15th an Italian physician of New York was arraigned on a charge of furnishing a death certificate in the case of a child he had never seen, who had died under the care of an unqualified quack. On the physician's counsel pleading in extenuation that such was the universal practice in the region around Sullivan Street, where the doctor lived, he escaped with a fine of seventy-five dollars instead of a sentence to nine months' imprisonment, which the judge had first thought fit to impose upon him. When we reflect on the chances to conceal crime developed by this amiable custom, it really seems as if the desire to help a needy comrade, qualified by the State or not, might lead to consequences in the highest degree detrimental to that *entente cordiale* that should always prevail between members of the medical profession and the police authorities.

News Items.

Society Meetings for the Coming Week:

MONDAY, May 22nd.—Medical Society of the County of New York; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement; Baltimore Medical Association.

TUESDAY, May 23rd.—New York Medical Union (private); Metropolitan Medical Society, New York (private); Buffalo Academy of Medicine (Section in Obstetrics and Gynecology); Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, May 24th.—New York Academy of Medicine (Section in Laryngology and Rhinology); New York Pathological Society; New York Surgical Society; American Microscopical Society of the City of New York; Philadelphia County Medical Society; New York Dermatological Society (private).

THURSDAY, May 25th.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Orthopedic Society; Brooklyn Pathological Society; Brooklyn Society for Neurology; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.; New York Celtic Medical Society.

FRIDAY, May 26th.—New York Clinical Society (private); New York Society of German Physicians; Yorkville Medical Association, New York (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, May 27th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 13, 1905:

	May 13.		May 6.	
	Cases.	Deaths.	Cases.	Deaths.
Measles.....	712	14	621	13
Diphtheria and croup.....	312	36	334	39
Scarlet fever.....	235	13	256	14
Smallpox.....	6	1	5	..
Chickenpox.....	129	1	137	..
Tuberculosis.....	471	195	414	181
Typhoid fever.....	87	3	81	10
Cerebrospinal meningitis.....	136	88	178	111
	2,071	350	1,971	368

The Women's Health Protective Association of Brooklyn held its annual meeting on May 12th, when the board of directors for the coming year were elected. Dr. Wolff Freudenthal, of the Eastern Medical Society of New York, and John H. Chase, head worker of the Maxwell House, made addresses.

Personal.—Dr. Thomas H. Curtin, physician to Coroner O'Gorman of the Bronx, is an invalid as a result of blood poisoning of the little finger of his left hand, on which he has already performed two operations himself. The poison was received through a small cut, inflicted in an operation on May 7th. The following day the finger began to swell and become discolored, whereupon Dr. Curtin opened the finger, hoping thus to remove the infection. This was not successful, and on May 10th he again opened the finger.

Medical Society of the County of New York.—A stated meeting of this society will be held at the Academy of Medicine, on Monday, May 22nd, at 8.15 p. m., at which the paper of the evening will be The Treatment of Diarrhoea in Children, by Dr. Joseph E. Winters. The discussion will be opened by Dr. Arthur V. Meigs, of Philadelphia, and continued by Dr. William H. Wells, of Philadelphia; Dr. A. D. Blackader, of Montreal; Dr. E. M. Buckingham, of Boston; Dr. Charles W. Townsend, of Boston; Dr. John Lovett Morse, of Boston; Dr. R. C. Newton, of Montclair, N. J.; Dr. Leroy M. Yale, Dr. John Dorning, Dr. William P. Northrup, Dr. Floyd W. Crandall, and Dr. Walter Lester Carr.

Academy of Medicine.—The Section in Laryngology and Rhinology will meet on Wednesday, May 24th, at 8.15 p. m. Order: Presentation of Cases: (a) Case of Unilateral Clonic Spasm of the Superior Constrictor Muscle, by Dr. Ed. B. Coburn; (b) Case of Pachydermia Laryngis, by Dr. Thomas J. Harris; paper: Report of the Garcia Centenary, by Dr. Harmon Smith; Presentation of Specimens and New Instruments, Lewis A. Coffin, M. D., chairman; Lee Maidment Hurd, M. D., secretary, 15 East Forty-eighth Street.

The Section in Obstetrics and Gynecology will meet on Thursday, May 25th, at 8.15 p. m. Order: Presentation of Specimens: Ruptured Ectopic Gestation of Right Horn of Uterus, by Dr. John J. McGrath; paper: A Study of the Results of Abdominal Hysterectomy for Fibroids with or Without Drainage, by Dr. Joseph Brettauer; discussion by members of the section. Charles F. Adams, M. D., chairman; Arnold

Sturmdorf, M. D., secretary, 51 West Seventy-fourth Street.

The Section in Orthopædic Surgery. The next meeting of this section will be held in October. Homer Gibney, M. D., chairman; S. A. Twitch, M. D., secretary, 598 Broad Street, Newark, N. J.

Approval of the Work of Dr. Doty.—The Consulting Board of the Health Officer of the Port of New York, consisting of Dr. J. D. Bryant, Dr. E. G. Janeway, Dr. H. M. Biggs, Dr. G. L. Peabody, Dr. F. P. Kinnicutt, Dr. J. H. Girdner, Dr. J. W. McLane, Dr. R. H. Derby, Dr. William M. Polk, Dr. J. W. Brannan, and Dr. T. M. Prudden, visited the quarantine on Saturday, May 13th, making a careful inspection of the station, hospitals, and laboratory. The board passed a formal resolution of approval of the high standard of efficiency which is maintained by Dr. Doty in the administration of this important agency in the protection of the public health. The consulting board believe that the administration of Dr. Doty is especially noteworthy and admirable in the following features: In the practical recognition of the fact that it is in the infected man and his immediate surroundings that danger lies, and not in the ship or its cargo or its healthy passengers; in the systematic use of the clinical thermometer for the detection of early and obscure phases of infection; in the application of scientific sanitary measures adapted to each special form of infectious disease; in liberal and humane efforts to ameliorate the hardships of necessary quarantine detention; and, finally, in the unwearied efforts, through laboratory research and experiment, to add to the knowledge of useful, practical sanitation. The members of the board who for many years have been conversant with the conduct of the New York quarantine expressed their cordial appreciation of the effective way in which each advance in the science and practice of modern sanitation has been at once applied to the complex problems of this great port. So that year by year, through new measures which Dr. Doty has himself devised and tested, or has made available from other sources, the country is more effectively protected against the entrance of communicable and other infectious diseases, while at the same time there is a steady reduction of the annoyances to individuals and damage to commerce in which earlier quarantine systems were constantly involved.

PHILADELPHIA.

Entertainment for Charity.—A vaudeville entertainment was given on Saturday evening, May 13th, at Kenderton Hall, Tioga, for the benefit of the Samaritan Hospital.

The Philadelphia Polyclinic.—During April the following cases were treated in the Polyclinic Hospital: Patients admitted to house, 117; patients discharged, 116; new patients treated in dispensary, 1,768; total visits to dispensary, 8,185; accident ward, 637. From May 1st to May 20th, inclusive, a special course in medicine was given with clinical lectures and laboratory demonstrations, which was well attended. From May 22nd

to June 10th a similar course in general surgery will be given.

Municipal Hospital Census.—The following is the census of the Municipal Hospital for April:

	Remaining April 1.	Received.	Discharged.	Died.	Remaining.
Diphtheria	37	91	65	12	71
Scarlet fever	95	40	47	2	86
Smallpox	2	0	1	0	1
Other diseases	3	7	2	4	4

Scientific Society Meetings for the Week Ending May 27, 1905.—Monday, May 22nd, Mineralogical and Geological Section, Academy of Natural Sciences. Tuesday, May 23rd, Northwest Medical Society; Philadelphia Neurological Society. Wednesday, May 24th, Philadelphia County Medical Society. Thursday, May 25th, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, May 26th, South Branch, Philadelphia County Medical Society; Northern Medical Association.

Physician Restrained from Practising.—On May 8th Judge Johnson in Media continued an injunction restraining Dr. David M. McMasters from practising medicine in the borough of Ridley Park. Dr. Howard Furness Taylor, the plaintiff, asserted that he had bought Dr. McMasters's practice in April, 1904, for \$300.00, with the understanding that the defendant should leave Ridley Park and not return. The plaintiff stated that the defendant after having lived in Pittsburgh for a year returned to Ridley Park in April of this year and opened an office, hence a breach of verbal contract.

The Health of the City.—During the week ending May 6, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever	1	1
Typhoid fever	256	20
Scarlet fever	32	1
Chickpox	61	0
Diphtheria	54	11
Cerebrospinal meningitis	4	4
Measles	72	0
Whooping cough	14	0
Tuberculosis of the lungs	26	49
Pneumonia	57	62
Erysipelas	8	0
Puerperal fever	1	4

The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 11; tetanus, 1; dysentery, 1; diarrhoea and enteritis, under two years, 21. The total deaths were 481, in an estimated population of 1,438,318, corresponding to an annual death rate of 17.39 per 1,000 population. The total infant mortality was 112; under one year, 90; between one and two years, 22. There were 37 still births; male, 26; females, 11. There was one quite warm day, May 4th, in which the maximum temperature was 81° and the humidity was 92°. No other unusual phenomena were recorded by the weather bureau.

Bureau of Health Statistics.—During April the division of medical inspection made 2,894 examinations, exclusive of schools; 591 fumigations were ordered; 68 cases were submitted to special diagnosis; 4,915 visits were made to schools and 715 children were excluded. One hundred and nine cultures were taken, 115 injections of anti-

toxine were given and 519 individuals were vaccinated. In the division of milk inspection 4,643 inspections were made of 117,030 quarts of milk, of which 1,315 quarts were condemned. One hundred and thirteen samples were tested chemically and 670 microscopically. In the division of disinfection one fumigation was made for smallpox, 165 for scarlet fever, 221 for diphtheria, 318 for typhoid fever, 66 for tuberculosis, 89 for miscellaneous complaints, and 44 schools were treated. In the bacteriological laboratory 1,789 cultures were examined for diphtheria, 527 specimens of blood for the serum diagnosis of typhoid fever, 684 specimens of milk, and 146 of sputum were examined. One thousand three hundred and seventy-two bottles of antitoxine were supplied. In the chemical laboratory 165 analyses were made.

GENERAL.

The Cattaraugus County, N. Y., Medical Society has elected these officers: President, Dr. Clarence King, of Machias; vice-president, Dr. C. M. Coss, of Cattaraugus; secretary and treasurer, Dr. Carl Tompkins, of Randolph.

The Southwestern Kentucky Medical Association has elected officers as follows: President, Dr. S. Z. Hilland, of Grahamville; first vice-president, Dr. W. L. Mosby, of Bardwell; second vice-president, Dr. A. E. Prather, of Hickman; secretary, Dr. V. A. Stille, of Benton; treasurer, Dr. C. H. Brothers, of Paducah. The next meeting will be at Arlington in October.

Samaritan Hospital, Chicago.—The Samaritan Hospital is to take possession of the Hotel Normandie property at 339 to 341 Michigan Avenue, 50 by 171, and thirty feet adjoining on the north. Dr. L. Blake Baldwin has purchased from the Bordeaux Company the hotel building and lease hold interest and from Edward D. Thayer, Jr., the property on the north.

The Connecticut State Board of Health reports the following cases of infectious diseases for the month of April: Smallpox, 1; measles, 314; scarlet fever, 178; cerebrospinal fever, 53; diphtheria, 104; whooping cough, 18; typhoid fever, 30; consumption, 34. The deaths reported from infectious diseases are 163, being 12.1 per cent. of the total mortality, viz., 1,347.

Physicians Revert to Primitive Profession.—Dr. L. P. Jones, Dr. William L. Griswold, Dr. Virgil C. Piatti, Dr. Charles J. Klien, Dr. Charles H. Brooks, and Dr. Charles H. Clark, physicians, of Greenwich, Conn., dug the first earth for the excavation for the new general hospital building on the grounds of the Greenwich Emergency and Isolation plant on May 10th. The emergency and isolation plant was erected by a gift of Robert M. Bruce about three years ago.

Ophthalmic Hospital in Paris, France.—It is reported that the first ophthalmic hospital in Paris was opened without ceremony during the week ending May 6th. The institute has been founded by Baron Adolph de Rothschild, and has been fitted with every modern appliance. Two hundred patients were admitted the first day.

The building is a handsome stone and brick edifice constructed partly with old stones brought from Normandy and is designed generally to imitate the old Norman chateau. It will rank as one of the architectural beauties of the city.

The Wisconsin College of Physicians and Surgeons graduated the following on May 9th:

Anton Daniel Beier, William Wallace Brown, Francis Donahue, William Fox, Jacob Gomer, Alexander George Hough, Oscar Knutson, Bernard Krueger, George Alden Lewis, James Edward O'Connell, Arthur Reitman, Daniel Bernard Riley, William Louis Rohrer, Louis George Rupp, Charles Edgar Secor, Eugene Ford Smith, Charles Robert Stanhope, Charles Everette Stevens, Henry Charles Werner.

Larger Medical Corps for the Michigan National Guard.—The Minnesota State military board has promulgated orders increasing the hospital corps of the Michigan National Guard from 40 to 70 men and officers. Directions for instruction and inspection are given, which indicates that the importance of this branch of the service will be emphasized.

Medical Society of the County of Orange, N. Y.—At the ninety-sixth annual meeting of this society, held at Middletown on May 9th, the following officers were elected: President, Dr. E. Ross Elliott, of Montgomery; vice-president, Dr. A. C. Santee, of Scotchtown; secretary, Dr. M. A. Stivers, of Middletown; treasurer, Dr. W. I. Purdy, of Middletown.

Louisville National Medical College.—The eighteenth annual commencement of the Louisville National Medical College for colored students was held on May 5th. A large audience was present. Degrees were conferred upon W. H. Witherspoon, of Alabama, salutatorian; J. T. Bonner, John H. Frye, W. E. Cary, valedictorian; R. L. Silver, of Kentucky; and Esther A. Brown, of Indiana.

Franklin District, Mass., Medical Society.—The following officers were elected on May 9th: President, Dr. C. C. Messier, of Turners Falls; vice-president, Dr. V. P. Craft, of Greenfield; secretary and treasurer, Dr. C. F. Canedy, of Greenfield; censors, Dr. Norman P. Wood, of Northfield; Dr. J. W. Cramm, of Colrain; Dr. George R. Fessenden, of Ashfield; Dr. Enoch G. Best, of Greenfield; and Dr. C. G. Trow, of Sunderland; committee on trials, Dr. J. D. Seymour, of Whately.

The McGill-Bishops Consolidation.—The terms proposed by McGill University regarding the consolidation of its medical faculty with that of Bishops College seem to have been approved by the latter. It is understood, in regard to the draft agreement that the terms will provide for the students of Bishops entering McGill with an ad eundem standing. The names of the graduates of the two universities will appear in the same volume, but in separate lists, as long as there is no faculty of medicine attached to Bishops College. It is also understood that for the present no members of the medical faculty of Bishops will assume positions on the staff of the McGill medical faculty, although in the course of time

the former may be assimilated with the latter. It is also likely that the medals and prizes of the Bishops medical faculty will be transferred to McGill, subject to the consent of the university and the donors. If the agreement is finally ratified it will go into force at once.

Albany Hospital Training School.—The Albany Hospital Training School for Nurses held its commencement exercises on Wednesday evening, May 17th, in the study hall of the female academy. The members of the class are:

Miss Percy Loveday, of Albany; Miss Susan James Sullender, of Eagle Rock, Va.; Miss Effie Anne Nettleton, of Little Falls; Miss Florence Cornelia Heidle, of Ohio; Miss Marietta Frost Fitchett, of Poughkeepsie; Miss Edna Grace Bridgeford, of Albany; Miss Margaret Isabel Black, of Fergus, Canada; Miss Irene Rosemary Barrett, of Oneonta; Miss Irene Sarah Williams, of Fort Plain; Miss Grace Maud Wells, of Fort Plain; Miss Harriet Stark, of Albany; Miss Mabel Stephens Diack, of Rensselaer; Miss Elizabeth Ulrich, of Albany; Miss Anne Hervey Strong, B. A., of Albany; Miss Emily Anne Fraser, of Prince Edward's Island, Canada; Miss Margaret Gertrude McClellan, of Gananoque, Canada; Miss Sarah Ingalls, of Fonda; Miss Lulu Florence Schrader, of New Haven, Conn.; Miss Mary Walker, of Schenectady; Miss Edith Alma Loomis, of Canandaigua; Miss Mabel King Hill, of Walden; Miss Florence Bochlovitz, of Albany.

The Starling Medical College, of Columbus, O., graduated the following on May 5th:

Charles H. Hoffhine, of Columbus; William R. Bebout, of Wheeling, W. Va.; Lewis H. Britton, of Gambier; Allen Coburn, of Becketts; Ernest L. Crum, of Tiffin; Ralph W. Dawson, of East Liverpool; Charles A. Finefrock, of Prospect; Felix C. Harman, of Glandorf; Carl W. Cooper, of Marysville; Jasper W. Jolley, of Richwood; Benjamin R. Kirkendall, of Derby; Carl R. Noble, of Galion; Charles H. Kramer, of Pickerington; H. Burr Larimore, of Danville; Clarence S. Latham, of Hilliards; Charles P. McKee, of St. Marys; Robert B. McLaughlin and John M. Morse, of Resaca; Guy E. Noble and Clarence E. Northrup, of McConnelville; Ewing D. Piper, of Bethesda; Charles L. Reasoner, of Hartford City, Ind.; Edward B. Roller, of Green Castle; Joseph S. Shinn, of Christiansburg; Harry A. Shisser, of Dayton; Ralph H. Smith, of Lancaster; J. Omar Stout, of Lithopolis; Vogt G. Wolfe, of DeGraff.

Tulane University, New Orleans, has graduated the following in medicine:

F. F. Blair, W. A. Blair, P. W. Bohne, A. H. Borey, W. A. Boyce, Jr., W. H. Brent, R. E. Chalker, F. Champenois, A. L. Chapman, J. S. Chisolm, L. O. Clark, H. Clarke, H. C. Cole, E. D. Craft, L. B. Crawford, N. B. Dean, F. M. Douglass, J. W. DuVal, J. M. Ehler, J. B. Farrior, J. W. Linley, W. D. Fonville, Jr., J. P. Frellsen, F. Z. Goss, W. P. Gray, G. L. Gresham, R. A. Grigsby, R. B. Hagood, F. Hamilton, C. B. Harrington, M. D. Haspel, C. H. Herbert, R. A. Herring, S. L. Hollingsworth, G. Holmes, C. E. Hutchinson, W. B. Johnson, S. E. Jordan, S. N. Jordan, P. J. Kahle, O. E. J. Kauffmann, R. A. Kearny, H. L. Lazar, V. A. Lea, E. L. Leckert, L. F. Magruder, E. W. Mahler, Jr., J. R. Mahone, Jr., L. E. Martin, J. L. Mitchell, J. S. Muller, M. L. Nance, Jr., A. K. Naugle, J. H. Norman, Jr., J. T. Palmer, S. J. Pate, W. E. Pelham, Jr., J. H. Petty, J. W. Plauché, J. F. Pou, Jr., J. O. Pratt, R. B. Pryor, M. E. Quina, E. J. Riche, C. H. Rulfs, G. O. Sanders, T. E. Sanders, T. R. Sartor, J. A. Sewell, H. R. Shands, J. A. Slack, J. A. Sperry, C. W. Sutton, J. B. Thigpen, P. B. Salatch, C. A. Thomas, R. D. Tompkins, P. W. Toombs, R. W. Vincent, C. A. Wallbillich, M. Williams, J. W. Wilson, O. P. Wise.

Detroit College of Medicine.—The following graduated from this college on May 4th:

Frank E. Allison, Hugh H. Angle, Norman Balfour, Ernest G. Bellinger, William H. Betteys, Lewis E. Bracey, Julian Branch, Clark D. Brooks, Eugene S. Browning, A. Ernest Bruce, Frederick G. Buesser, George C. Chene, Floyd W. Clements, secretary; William F. Clute, Berten M.

Davey, Herbert L. Eastman, Eugene F. Fontaine, Robert C. Fraser, Philip I. Froude, Dugald A. Galbraith, Samuel S. Hackwell, George B. Henderson, Neal L. Hoskine, Guy D. Houghton, John S. Jackson, Byron H. Jenne, treasurer; Azariah K. Jewell, Hubert H. Johnson, Oren G. Johnson, Herman C. Kiehl, David J. Lackie, Ingol M. Law, president; Harold P. Lawrence, Henry A. Luce, Charles D. Mohler, Vaughan G. Morris, Joseph S. Morrison, Archibald D. McAlpine, Nelson McArthur, Gustave L. McClellan, Joseph A. McCarvah, Zachariah T. Nairn, George O. Pratt, George Wilford Robinson, Clyde C. Simons, Victor H. de Somokeyo, valedictorian; Charles R. W. Southwick, Clarence T. Starker, John D. Stewart, Maitland N. Stewart, L. A. Traphagen, George W. Trumble, Joseph E. Wellman, Harmon C. Wolie.

An Appeal for the Poor of Labrador.—We have received the following letter, which tells its own story:

NEW YORK, April 27, 1905.

DEAR SIR:

That Dr. Wilfred T. Grenfell, who is engaged in a mercurial work for the deep sea fishermen of Labrador, has won the interest of a large number of Americans, is evident from the prominence given in the press to reports that amounts varying from \$60,000 to \$100,000 have been contributed to the Labrador Medical Mission as a result of his lectures in this country this spring. All friends of Dr. Grenfell wish these reports were true. As a matter of fact, the response to Dr. Grenfell's stories of these fishermen's life has indeed been both kind and prompt; but the amount which has been raised this year is in round numbers only about \$12,000. There is immediate need for noble that sum.

The fact that Dr. Grenfell cannot at the same time be setting broken bones, amputating frozen feet, curing diseases, directing cooperative stores, driving dog teams, and competing generally with grog boats, unscrupulous traders, and Arctic weather in Labrador, and raising funds in the United States, has led a number of his friends to form The Grenfell Association. On the Board of Directors are the following gentlemen: Henry Van Dyke, D. D., LL. D., D. Bryson Delavan, M. D., Eugene Delano, Stephen Baker, S. Edgar Briggs, William Adams Brown, D. D., William Adams Delano, Richard Henry Derby, M. D., Arthur Curtiss James, Frederic S. Lee, Hamilton W. Mabie, LL. D., Leighton Parks, D. D., Herbert L. Satterlee, Francis Lynde Stetson, A. Alexander Smith, M. D.

Membership in the association, for one year, is open to any one who will send, with name and address, two dollars to Eugene Delano, treasurer, 59 Wall Street, New York. To the treasurer also may be sent any additional contributions for the work of Dr. Grenfell. An accounting of the money thus raised will be rendered in an annual report.

Inasmuch as Dr. Grenfell receives contributions from a variety of sources, it has been decided, with Dr. Grenfell's hearty approval, to devote the money raised by The Grenfell Association preferentially to the hospital and allied enterprises at Battle Harbor. This will enable Dr. Grenfell not only to increase greatly the facilities in that place, but also to deflect money from other sources to the improvement of hospital service elsewhere in Labrador.

Very truly yours,

ERNEST HAMLIN ABBOTT,

Secretary of The Grenfell Association.

287 Fourth Avenue, New York city.

Personal.—Dr. C. E. Caldwell, of Cincinnati, was severely injured on May 5th by colliding with a steel post while he was standing on the step of a trolley car.

The board of trustees of the Ohio Medical University have elected officers and members of the faculty. There were a number of changes, either by retirement or addition, and by promotion. Dr. William Laurens Dick, professor of orthopaedic surgery, retired because of removal from the city. Dr. McKendree Smith retired because of his inability to give his chair the required attention. Dr. James W. Wellons, clinical assistant to chair of ophthalmology, retired because of the press of other matters that required his at-

tention. There were added to the corps of teachers, Dr. W. A. Dodd, instructor in orthopaedic surgery; Dr. J. J. Coons, assistant to chair of practice; and Dr. C. D. Shepard, instructor in dermatology. There were a number of promotions. Dr. Charles W. McGavran, from instructor, was made professor in physical diagnosis; Dr. William D. Inglis, from assistant, was promoted to professor of obstetrics; Dr. John A. Reibel was made professor of genitourinary diseases, a promotion from assistant; Dr. Ira Jacob Mizer was promoted to instructor in dietetics, a promotion from assistant to the chair of the practice of medicine. Dr. George H. Matson, professor of materia medica, was also made assistant to the chair of therapeutics.

Dr. G. C. Chene, of Windsor, and Dr. G. W. Robinson, of Scarboro, Ont., have been appointed to the staff of house physicians of St. Mary's Hospital, Detroit, succeeding Dr. L. L. Zimmer and Dr. William J. Seymour, whose terms have expired. Dr. C. H. McLean is head surgeon.

The faculty of the Maryland Medical College has appointed as resident physician at the Franklin Square Hospital for the ensuing year Dr. Walter Alva Weed, of Alabama. Dr. Newton I. Parr has been appointed first assistant and Dr. Cirilo L. Rodriguez second assistant. The new residents are members of this year's graduating class.

West Virginia State Medical Association.—At the thirty-eighth annual meeting of this association, to be held at Wheeling, May 24th, 25th, and 26th, it is expected that the following papers will be read:

The Teachings of Failures, by Dr. F. L. Hupp, of Wheeling; The Palliative Treatment of Prostatic Hypertrophy, by Dr. H. E. Sloan, of Clarksburg; Preoperative and Post-operative Treatment of Surgical Cases, by Dr. J. E. Cannaday, of Paint Creek; Appendiceal Abscess—Pathology and Treatment—Report of Cases, by Dr. S. M. Mason, of Clarksburg; Injuries of the Head—Report of Cases, by Dr. Henry P. Linsz, of Wheeling; Anatomical and Physiological Principles Involved in the Symptomatology of Brain Traumatism, by Dr. J. Schwinn, of Wheeling; Office Treatment of Rectal Diseases, by Dr. William M. Beach, of Pittsburgh; "Symposium" on Pneumonia: Aetiology, by Dr. S. S. Wade, of Morgantown; Pathology, by Dr. L. O. Rose, of Parkersburg; Symptoms and Signs, by Dr. W. W. Tompkins, of Charleston; Treatment, by Dr. L. D. Wilson, of Wheeling; Tuberculosis, by Dr. J. W. Preston, of Keystone; Pseudomembranous Croup, by Dr. S. W. Bush, of Parkersburg; Cases and Experiences of Interest, by Dr. W. H. Sharp, of Parkersburg; Diseases of the Kidneys, by Dr. M. McNeilan, of Parkersburg; Rupture of the Bladder, by Dr. J. R. Cook, of Fairmont; The Importance of Early Diagnosis of Intraocular Lesions, by Dr. H. R. Johnson, of Fairmont; Fikker's Diagnosticum, by Dr. L. O. Rose, of Parkersburg; Drugs and the Diazo Reaction—A Communication, by Dr. William W. Golden, of Elkins.

In addition to the papers, the titles of which are published, a number of valuable contributions have been promised and will be read under the head of "voluntary papers." The exhibition of interesting cases and pathological specimens, and the demonstration of new methods of diagnosis and treatment are always welcome at the annual meeting. As a special feature of this meeting arrangements are being made for daily clinics, medical and surgical, to be held at the City and the North Wheeling Hospitals.

A Special Party Organizing to Attend the Next Meeting of the American Medical Association.—

In order that the trip to the meeting of the American Medical Association at Portland, Ore., this year, may be enjoyed by the largest possible number of physicians and surgeons, and particularly by those whose professional duties make it necessary that the journey be performed in an expeditious manner, a special overland limited train has been arranged for, and a special party is being organized to leave Chicago via the Chicago, Union Pacific and Northwestern Line the evening of July 6th, to make the trip to Portland surrounded by every luxury that modern travel can provide, upon schedules occupying a little less than seventy hours en route. It is not often that so congenial a party is possible, traveling under such highly favorable surroundings for comfort and enjoyment of the trip. Our readers are most cordially invited to become members of the party. Arrangements have been made with the railways for the movement of this special overland limited train without any extra charge for the unusual service thus secured. The round trip rate Chicago to Portland and return is \$56.50, and proportionately low rates from other points will be in effect. Ask your ticket agent for your tickets via the Chicago and Northwestern and Union Pacific lines. Return trip may be made via Oregon Short Line, Salt Lake City, and through Colorado without extra charge, or via the Northern Pacific, Great Northern, or Canadian Pacific without extra charge, or via San Francisco and Los Angeles on the payment of \$11.00 additional at time of purchase. Sleeping car rate Chicago to Portland for double berth in special train, \$14.00; drawing room, \$53.00. Stop overs will be permitted at and west of Colorado common points, Cheyenne, or Trinidad, inclusive, or St. Paul and Minneapolis and a tour of the Yellowstone Park may be made either via Monida or Livingston at a rate of \$49.50 additional, covering the usual tour through the park, including stage transportation and hotel accommodations. Our readers will please advise Mr. H. A. Gross, General Agent Passenger Department, Chicago and Northwestern Railway, 212 Clark Street, Chicago, Ill., whether they desire to be included in the party, and how much sleeping car space they desire reserved. Further information in regard to the trip will be cheerfully furnished on application by Dr. S. C. Stanton, room 1609, 59 State Street, Chicago; Dr. Heinrich Stern, 56 East Seventy-sixth Street, New York; Dr. Lewis S. McMurtry, Louisville, Ky.; Dr. William Warren Potter, Buffalo; Dr. Florus F. Lawrence, Columbus, O.; Dr. Simon P. Scherer, Indianapolis, Ind.; or Dr. Charles A. L. Reed, Cincinnati, O.

Connecticut Medical Society.—At the one hundred and thirteenth annual meeting of this society, to be held at Hartford, May 24th and 25th, it is expected that the following papers will be read:

Report on the Progress of Medicine, by Dr. D. C. Brown, of Danbury, and Dr. J. C. Lynch, of Bridgeport; Report on the Progress of Surgery, by Dr. C. C. Godfrey, of Bridgeport, and Dr. B. Austin Cheney, of New Haven; Report of the Committee on Matters of Professional Interest in the State—Cerebrospinal Meningitis, by Dr. F. A. Morrell,

of Putnam; Dissertation—The Use of Laboratory Aids in Diagnosis, by Dr. C. J. Bartlett, of New Haven; Gastric Ulcer, by Dr. H. M. Lee, of New London; Carcinoma of the Stomach, by Dr. E. F. McIntosh, of New Haven; The Diagnosis of Surgical Diseases of the Kidney and Ureter, by Dr. Oliver C. Smith, of Hartford; Report of a Case of Adenoma of Kidney, Nephrectomy, Recovery, by Dr. J. B. Boucher, of Hartford; The Bossi Dilator for Rapid Dilatation of the Cervix, by Dr. Otto G. Ramsay, of New Haven; Pregnancy in Malformations of the Uterus, with Report of Cases, by Dr. C. E. Taft, of Hartford; Some of the Newer, Non-Surgical Forms of Treatment of Female Pelvic Disorders, by Dr. Kate C. Mead, of Middletown; The Prevention of Venereal Diseases, by Dr. R. A. McDonnell, of New Haven; Notes on Surgery of the Brain, by Dr. H. G. Howe, of Hartford; The Faucial Tonsil, by Dr. F. S. Crossfield, of Hartford; Some Remarks on Adenoid Hypertrophy Occurring in Children, by Dr. E. T. Smith, of Hartford; Alcohol as a Remedy in Disease, by Dr. T. D. Crothers, of Hartford; Chloroform Anæsthesia, by Dr. T. G. Sloan, of South Manchester; The Use of Cocaine in Surgery, by Dr. Richard F. Rand, of New Haven; An Easy, Efficient and Rational Method of Reducing Recent Dislocations of the Shoulder Joint, by Dr. E. C. Chipman, of New London; The Diagnosis and Treatment of Pronated Feet, by Dr. Allen H. Williams, of Hartford; Skin Grafting, by Dr. A. A. Crane, of Waterbury; The President's Address, *Résumé* of the Development and Present Status of Gastric Surgery, by Dr. William H. Carmalt, of New Haven; A Contribution to the Study of Dysentery, by Dr. A. R. Diefendorf, of Middletown; Acute Intestinal Obstruction; Resection of Four Feet of Intestine; Recovery, by Dr. Daniel F. Sullivan, of Hartford; Radical Operation for Mammary Carcinoma, by Dr. W. F. Verdi, of New Haven; The Treatment of Malignant Disease, Including a Report of Over One Hundred Cases Permanently Cured by Surgical Operation, by Dr. F. S. Dennis, of Norfolk; The Purpose of the Gaylord Farm Sanatorium and Its Relation to the State, by Dr. J. P. C. Foster, of New Haven; The Need of Popular Education in the Tuberculosis Problem, by Dr. F. T. Simpson, of Hartford; Prophylaxis in Tuberculosis, by Dr. C. D. Alton, of Hartford; Tuberculous Diseases of the Spine, by Dr. E. H. Arnold, of New Haven; The Treatment in Tuberculous Joint Disease, by Dr. Joseph E. Root, of Hartford; Infant Feeding with Cow's Milk, by Dr. H. Merriman Steele, of New Haven; On the Medical Treatment of Gallstones, by Dr. E. M. Goodenough, of Waterbury; Pathological Variations and Diagnosis of Diseases of the Gall Bladder, by Dr. N. R. Hotchkiss, of New Haven; Medical Treatment of Diseases of the Gall Bladder, by Dr. F. G. Graves, of Waterbury; Surgical Treatment of Diseases of the Gall Bladder, by Dr. E. W. Smith, of Meriden; A Question in Gall Bladder Surgery, by Dr. H. F. Brownlee, of Danbury; Hemorrhoids: Anatomy and Pathology, by Dr. A. J. Wolff, of Hartford; *Ætiology*, Diagnosis, and Prognosis, by Dr. A. S. Brackett, of Bristol; Medical Treatment, by Dr. A. E. Abrams, of Hartford; Surgical Treatment, by Dr. E. P. Swasey, of New Britain; Appendicitis, by Dr. W. J. Tracey, of Norwalk; A *Résumé* of a Few Operations in Regional Surgery, by Dr. J. Reed Topping, of Bridgeport; Dangers of Delay in Abdominal Lesions, by Dr. O. C. Smith, of Hartford; The Significance of Albuminuria, by Dr. F. C. Hyde, of Greenwich; Some Severe Forms of Stomach Disease, with Selected Cases, by Dr. E. F. McIntosh, of New Haven; Preventive Medicine from the Standpoint of Water Purification, by Dr. W. S. Randall, of Shelton; Post Partum Hemorrhage, by Dr. J. F. Hayes, of Waterbury; Parotiditis as a Complication in Typhoid Fever, by Dr. C. J. Foote, of New Haven; Local Treatment of Neuroses of the Respiratory Organs, by Dr. H. L. Swain, of New Haven; Tuberculous Laryngitis, by Dr. F. S. Crossfield, of Hartford; Eye Injuries, by Dr. H. S. Miles, of Bridgeport; Local Anæsthesia by Injections of Sterile Water, by Dr. F. W. Stevens, of Bridgeport; The Doctor Without Covers, by Dr. F. Schavoir, of Stamford; The Influence of the Medical Practitioner in the Prevention of Defective Children, by Dr. George H. Knight, of Lakeville; Empyema, by Dr. E. J. McKnight, of Hartford; Pneumonia, by Dr. J. F. Dowling, of Hartford; Diagnosis of Joint Affections, by Dr. A. H. Williams, of Hartford; The Care of the Genitalia of the Young Man, by Dr. E. J. McKnight, of Hartford; Our Physical Reserve, by Dr. J. B. McCook, of Hartford; Infant Mortality, by Dr. C. A. Goodrich, of Hartford.

Path of Current Literature.

LYON MEDICAL.

April 9, 1905.

1. Intermittent Dropsy of the Gall Bladder from Calculus in the Cystic Duct, By EUGENE VILLARD.
2. Protection of Infants, By HORAND.
3. Purulent Pleurisy Complicating Pneumonia; Empyema; Abscess of the Wall; Recovery, By L. CADET.

1. Intermittent Distention of the Gall Bladder.—Villard reports a case of this nature met with in a woman 36 years of age, who suffered severely from biliary colic. A laparotomy was performed and the gall bladder found of normal size, not distended, and not adherent to the surrounding tissues. No calculus could be felt within the viscus, and the abdominal wound was accordingly closed. There were no attacks of colic for several days, but they then recurred with as great severity as ever. A second laparotomy was performed six weeks after the first, when the gall bladder was found to be much distended. After cholecystotomy a very small calculus was found in the cystic duct.

2. Care of Infants.—Horand continues his paper on this subject with an account of the provisions adopted by various cities to check the ravages of gastroenteritis, including the establishment of societies at Lyons with regard to infant feeding.

3. Purulent Pleurisy.—Cadet reports a case of pneumonia of the left lung in a man 26 years old, followed by pleurisy, empyema, and the formation of an abscess in the chest wall. The patient recovered.

April 16, 1905.

1. The Use of Plates of Blood Agar in Obstetric Practice, By FABRE and AMSTAD.
2. Protection of Infants at an Early Age, By Dr. HORAND.
3. Immediate and Remote Results of Surgical Intervention in Biliary Lithiasis, By GASTON COTTE.

1. Blood Agar in Obstetrics.—Fabre and Amstad claim that by the method they describe the presence of the streptococcus pyogenes, the most frequent excitant of puerperal fever, is readily detected, and that by its means one is enabled to separate the gracilis from the group of streptococci, which is important, as this microorganism is not active in the production of puerperal fever. The technics of the method is simple to any one accustomed to bacteriological research.

2. Protection of Infants at an Early Age.—Horand presents the final installment of his paper on this subject, and finally sums up the requirements for the proper care of infants thus: 1. For the mother, quiet for a certain time before and after confinement. 2. Maternal nursing should be obligatory except in cases where it is absolutely impossible. 3. Sufficient aid for the mothers who are nursing. 4. An organization in each district to look after nutriment, with distribution of sterilized milk. 5. The increase of day nurseries and the creation of places where babies can be cared for within the reach of all purses. 6. The organ-

ization of maternal associations. 7. The assistance, without distinction, of all needy mothers, whether married or single, and of illegitimate as well as legitimate children.

3. Biliary Lithiasis.—Cotte's article is really a review of a recent German work on the technics of operations for gallstones.

SEMAINE MEDICALE.

April 5, 1905.

Asthénia,

By Dr. P. LONDE.

Asthénia.—Londe defines asthenia as an impossibility of, or at least a difficulty in making a muscular effort, particularly if prolonged. This condition may be general or local. General asthenia may be subjective or objective. The prostration of acute diseases, such as typhoid fever, acute peritonitis, or Addison's disease, is an example of the objective form, while the less strongly marked weakness which accompanies infection or chronic poisoning is an example of the subjective. The aetiological conditions are: 1. Infections, autointoxications, intoxications; 2. abdominal diseases; 3. central nervous lesions; 4. neuroses and psychoses. Sometimes the asthenia is of cerebellar origin, more often of visceral and abdominal, or sympathetic origin. In a great variety of diseases, peritonitis, Addison's disease, grippe, diabetes, mucomembranous enteritis, exophthalmic goitre, melancholia, etc., the sympathetic is at fault as is shown by the frequent association of vasomotor or secretory troubles. This has also been confirmed by experiment. The author also believes that there are anatomical relations between the cerebellum and the sympathetic which explain their physiological and pathological associated actions. By localized asthenia is meant asthenia predominating or confined to one place, as in chronic nervous dysphonia, accommodative asthenopia, and perhaps nocturnal incontinence of urine in children, which is a bulbospinal asthenia.

PRESSE MEDICALE.

April 15, 1905.

1. Cutaneous Ankylostomiasis, By W. DUBREUILH.
2. Drink, Qualitatively and Quantitatively Considered in Healthy and Sick People, By H. LABBÉ.

1. Cutaneous Ankylostomiasis.—Dubreuilh has collated the literature which goes to show that the disease known as "ground itch" is caused by various forms of ankylostoma, the larvæ of which are to be found in the soil.

2. Drink.—Labbé uses the word drink as an expression of a physiological necessity of constant recurrence. Only one liquid is physiologically necessary, water, and this forms the basis of all drinks, which he divides into three classes: 1, Water either pure or containing sugars and aromatics; 2, saline waters, containing a larger or smaller amount of mineral matter; 3, water containing alcohol in greater or less proportion. All drinks after passing the intestinal epithelium are incorporated in the blood, and the value of each is to be determined from a comparison of its osmotic pressure with that of the blood cells. Every drink must therefore be hypotensive, iso-

tensive, or hypertensive. Ordinary water is usually hypotensive. The same is true of sweet drinks, drinks made from fruits, such as lemonade, and syrups in their usual concentration. The other classes are hypertensive in their action. They cause a concentration of the blood serum, and equilibrium is reestablished by drawing the necessary water from the blood and tissue fluids of the body.

REVUE DE CHIRURGIE.

April, 1905.

1. Foreign Bodies in the Joints, Especially Those of Traumatic Origin, from an Experimental and Histological Point of View, By CORNIL and COUDRAY.
2. Concerning Carotid Aneurysms, By MENDES.
3. Gastrorrhagia in Connection with Simple Ulcer of the Stomach, By TUFFIER and JEANNE.
4. Intestinal Hæmorrhage Following Operations for Hernia, By SAUVÉ.
5. Functional Impotence Following Traumatism of the Joints, By MALLY and RICHON.

1. **Foreign Bodies in the Joints.**—Cornil and Coudray report the following conclusions: 1, Experimental traumatic bodies do not always remain free in the joints; they may become attached to the bony skeleton or to the synovial membrane; 2, pathological osteocartilaginous bodies: These bodies appear to originate from an ecchondriosis which is similar to the lesions of dry arthritis; 3, tuberculous sequestra simulating traumatic foreign bodies. These bodies are often found at the lower extremity of the femur, and often upon the internal condyle. They are often attached to the condyle. They are often flattened in form, are similar to traumatic bodies, and are constituted from osteoarticular fragments of the condyles.

2. **Concerning Carotid Aneurysms.**—Mendes states that the objection raised by most surgeons to the extirpation of the sac of carotid aneurysms is the difficulty of its dissection. This may be a valid objection, for there may be dense adhesions, very firm tissues, and important nerves which cannot easily be turned aside. These obstacles are seldom insurmountable, especially since the carotid itself, according to this method of operating, has already been ligated. A portion of the sac may be left if necessary. Seven cases of extirpation have been reported, in all which the result was satisfactory. The operation is curative of existing evils and preventive as to subsequent ones. The ordinary accidents from simple ligation are inflammation, suppuration, and hæmorrhage. It may also result in syncope, headache, convulsions, delirium, and hemiplegia, and these accidents often lead to a fatal result. Aphasia, dyspnœa, cough, and bronchitis are also frequent consequences. The conditions in a carotid aneurysm are such that the author doubts the advisability of an operation in those who have passed their sixtieth year. Extirpation of the sac is believed by him to be the operation of choice for the lesion in question.

4. **Intestinal Hæmorrhage Following Operations for Hernia.**—Sauvé draws the following conclusions: 1, The intestinal hæmorrhage which is

under consideration may be either arterial or capillary. In the hæmorrhages which occur soon after operation, ischæmia which follows strangulation of the intestine has produced structural change in the arterioles. The same is true for the deferred hæmorrhages which follow arterial thrombosis; 2, venous thrombosis is not a cause for such hæmorrhages, so far as is known, and it would seem to be contrary to physiological facts; 3, the treatment for this form of enterorrhagia depends upon the conditions; hæmorrhage from faulty operative procedures, of course, ought never to occur. If the hæmorrhage occurs soon after operation and is not excessive, ice and opium will suffice to keep the intestine quiet, and recovery is almost certain. If the hæmorrhage occurs late and is profuse one must be guided by the nature of the bloody stools, and by the pulse. If the stools contain sloughy débris and are of very repulsive odor, and the peritonæum has not been seriously injured, ice, opium, and ergotine will usually give favorable results. If the stool is composed of pure blood and the pulse is rapid, the choice will lie between medical treatment, expectancy, and resection of the intestine. The last, under the conditions which are present, does not promise brilliant results.

REVUE DE MEDECINE.

April, 1905.

1. Classification and Pathogenic Value of Orthostatic Albuminuria, By TEISSIER.
2. The Metabolism of Water and of the Chlorides, By LABBÉ and MORCHOISNE.
3. Neuropathic Aureolas, By FERÉ.
4. Habitual Physiological Oliguria, By COTTET.

2. **The Metabolism of Water and of the Chlorides.**—Labbé and Marchoisne offer the following propositions: 1, Though there is a nitrogenous equivalent in the daily elimination which can be readily and accurately determined, from day to day, there is no similar equivalent of chlorides in healthy individuals. There may, however, be an average equivalent of chlorides calculated from a sufficient number of days, which, however, is quite variable. The regulation of the ingesta will lead to the regulation of that which is eliminated; 2, the equivalent of water cannot be obtained with accuracy, but can be determined with about the same relative accuracy as is the case with the chlorides; 3, with an unrestricted diet the ingestion of water is directly influenced by the ingestion of chloride of sodium; 4, in a healthy normal individual, with whom the ingestion of water and of salt is regulated, there is almost uniformly a concentrated condition in the urine, as to chlorides; 5, the relation of the elimination of water to that of chlorides should be fairly constant in a healthy individual from day to day; 6, the daily weight of a healthy individual is consequently variable, but such variations are reduced to a minimum in those in whom the ingestion of chlorides and of water are carefully regulated; 7, in order to determine the elimination of chlorides in those who are more or less in a pathological condition, they must be rigidly submitted to a diet which is carefully determined, as to quan-

tity and quality, and which is fixed as to chlorides.

4. **Habitual Physiological Oliguria.**—Cottet insists that the urinary function should be carefully observed, not alone during disease, but also during health. Habitual oliguria, especially in those who have by heredity a gouty diathesis, becomes the more dangerous as it is repeated from day to day, and as it is overlooked until accidents result which cause it to be conspicuous. This condition should be observed at the beginning and should be corrected as promptly as possible. Simple hygienic or therapeutic measures may be all that would be required at this stage.

FORTSCHRITTE DER MEDIZIN.

April 10, 1905.

1. Diseases of the Joints in Connection with Hæmophilia, By ZESAS.
2. The Germ Cell Theory of Cancer, By GRÜNBAUM.

2. **The Germ Cell Theory of Cancer.**—Grünbaum states that the explanation of the origin of malignant tumors has come nearer by means of two remarkable discoveries: 1, The demonstration of the morphological continuity of the germ cells; 2, the discovery of heterotypic mitosis in malignant tumors. Until recently it was believed that the sexual cells in the embryo came from a layer of peritoneal epithelium in the blastoderm, but that they did not differ in any respect, in their origin from the other cells of the embryo. Beard has demonstrated the morphological continuity of the germ cells, and confirmed the hypothesis of an antithetic exchange of generation in the human being. This hypothesis briefly is that after the union of the spermatozoon and ovum the chorion is formed by the division of the united cells, corresponding to a larva or trophoblast. From one of these cells are formed a number of spores. One of the spores at length becomes the embryo and absorbs the other spores which become its sexual cells. In other words, they are not formed from the embryo, but the embryo serves as a home for them. Concerning their particular position in the embryo these germ cells may wander and in a few days may be found in various locations. According to Beard they may serve as the origin of a cancerous tumor, though he prefers to regard them as a developed and undeveloped embryo from the same cell. The proof of the connection between germ cell and malignant tumor is advanced by Fanner and others. They have discovered a kind of cell division in malignant tumors which occurs normally only in germ cells. One of the distinguishing features of this heterotypic mitosis is the formation of only half the normal number of chromosomes by means of the subdividing cells. These and other characteristics are also observed in the cells of myelogenous tumors. There must therefore be something in common between germ cells and tumor cells. In benign tumors this form of cell division could not be found. This deficiency forms the real difference between the two types of tumors. This strengthens the view that there is no fundamental difference between benign and malignant tumors. We know that one form can

pass clinically into the other. Heterotypic mitosis does not occur suddenly in the evolution of sexual cells. In the testicle it is not found prior to the third division, and the same is true of the ovary. The membrana granulosa then begins to proliferate and the discus proligerus is formed, this being a proof of their non-somatic origin. In the same way heterotypic mitosis cannot occur in tumors during the stage when they are not malignant. Why this change should occur suddenly is not more remarkable in the case of a tumor than in the case of the testicle and ovary. In a given cell or cells of potential growth it does not seem improbable that the toxine of a parasite, the brief irritation of traumatism, the persistence of a chronic irritation, or the chemical conditions of a disturbed metabolism would be sufficient to dissipate their energies, and thus a sufficient number of causes would act to produce a given result.

April 20, 1905.

1. Appendicitis and Erythema Exudativum Multiforme, By CHENOWETH.
2. The Results of Operations for Appendicitis, By TREVES.
3. The Treatment of Chronic Pruritus Ani, By BALL.

1. **Appendicitis and Erythema Exudativum Multiforme.**—Chenoweth says the eruption of this disease may be the first and only expression of disease, or there may be debility, headache, pain in the back, gastric disorder, and fever. There may also be visceral lesions, the lungs, brain, kidneys, stomach, and intestine being involved. Not infrequently there is colic, nose-bleed, fever, hæmaturia, hæmatemesis, or intestinal hæmorrhage. The appendix is concerned more frequently than is usually supposed. Colic with abdominal crises of erythema may suggest the diagnosis of appendicitis when this disease does not really exist. Or the disease of the appendix may be overlooked until the more serious symptoms become manifest. The position of the appendix, the abundance of its lymphatic tissue under a thick layer of fibromuscular tissue, and its terminal circulation make it an inviting object for circulation disturbances. The diagnosis of appendicitis is based upon pain, swelling, and muscular rigidity, the last being absent when erythema is present. Two cases are reported in which the pathological condition of the appendix was determined both clinically and microscopically, and was associated with the lesion of the skin. The skin disease returned after the appendix had been removed. It is not asserted that appendicitis is dependent upon the erythematous condition of the skin, but the former is a visceral manifestation of this disease.

2. **The Results of Operations for Appendicitis.**—Treves gives statistics of 45 incomplete operations for appendicitis during the interval period. In 2 there was incomplete removal of the appendix, in 9 there was coexisting ovarian disease, in 8 cases of colitis, in 7 persistent local pain, in 5 neurasthenia or hypochondria, in 3 attacks of gallstone colic, in 2 intestinal colic, in 2 movable kidney, in 1 renal calculus, in 1 the cause was obscure, in 5 there was tumor in the right iliac fossa. In a second group of cases in which a perityphlitic

abscess was opened there was persistent inflammation in forty per cent., recurrent abscess in twenty-four per cent., recurrent attacks of appendicitis in sixteen per cent., fecal fistula in twelve per cent., inflammatory deposits in the iliac fossa in eight per cent. In all, the statistics of 1,000 operations are given, 364 of which were performed during the interval period with 4 deaths; during an attack there were 39 cases with localized peritonitis, but without suppuration, with 5 deaths; there were 431 cases with abscess, with 35 deaths; there were 166 cases with general peritonitis, with 127 deaths. Of complications in the 1,000 cases, there were 49 fecal fistulae, 12 thromboses of the femoral vein, 10 cases of intestinal obstruction, 17 of bronchopneumonia, 14 of pleurisy with effusion, 2 of dry pleurisy, 7 of empyema, 4 of acute bronchitis, 1 of pulmonary embolus, 4 of non-suppurative parotiditis, 4 of pyelophlebitis, 11 of residual abscess, and 12 of secondary abscess. Six of the cases were in pregnant women.

3. The Treatment of Chronic Pruritus Ani.—

Ball believes that cauterization and excision of the skin, in cases in which there is chronic irritation, but no dermatitis, is rough, irrational, and unscientific practice. There are usually trophic changes in the skin in such cases which are caused by changes in the sensitive nerves. In some cases there may be dermatitis at the beginning which may disappear, though the local condition may become worse. In other cases inflammation may be caused by the scratching. Should a case become obstinate the author recommends the excision of the posterior roots and ganglia of the third and fourth sacral nerves, or since this might affect the integrity of the sphincters of the rectum the ends of the sensitive nerves in the affected area might be divided instead. A curved incision is made on either side of the anus, including the diseased area, forming an ellipse, the skin at either extremity of which, however, is not cut. The skin is then dissected away and the nerve endings divided. The wound is then closed and the itching will cease. Should it return the nerve ganglia can be excised.

RIFORMA MEDICA.

April 8, 1905.

1. The Passage of Agglutinins and Tuberculosis Antitoxines Into the Milk, and Their Absorption Through the Gastrointestinal Tract, By F. FIGARI.
2. Some Points on the Medical and Surgical Treatment of Pott's Disease, By ARTURO CAMPANI.
3. Family Lateral Amyotrophic Sclerosis, and Pellagra, By ARMANDO TESTI.
4. The Ocular Disturbances of General Paralysis, as Compared to Those of Locomotor Ataxia, By CESARE MANNINI.

1. Antitoxine in Milk of Animals.—Figari found that the agglutinins and antitoxines of tuberculosis appeared in the milk of cows and goats that had been actively immunized, and of rabbits which had been passively immunized against the disease. Young goats born of immunized mothers inherit the defensive properties

of the mothers, and continue to receive defensive substances as long as they nurse. Calves and young goats born of non-immunized mothers are not only capable of absorbing agglutinins and antitoxines of tuberculosis with the milk of immunized animals taken into the stomach, but are able at the same time to produce additional defensive substances in their own organisms. Rabbits passively immunized either by subcutaneous injections, or by the gastric route, by the administration of immunized milk are capable of transmitting to their young, by means of their milk, the tuberculous agglutinins and antitoxines which they possess. Adult rabbits fed on the milk of immunized cows also absorb, through their stomachs, the agglutinins and antitoxines of tuberculosis, and their serums are capable of producing agglutinating and antitoxic effects.

2. Treatment of Pott's Disease.—Campani, in speaking of the non-surgical methods in treating Pott's disease, says that the old routine of giving codliver oil and iodides is not to be commended, as it does not give good results, and is apt to produce disturbances of digestion. He prefers, above all, the use of hydrotherapy in the form of cold sponging. This method increases the appetite, promotes nutrition, and the general development of the child, as well as the formation of new blood cells. In five cases reported, he came across abscesses, of which one healed spontaneously; one had to be opened widely, and the rest were punctured by means of Plessi's cannula. In all cases local healing followed. He prefers puncture with lavage of the cavity to all other methods of treating abscesses of Pott's disease. The operation is easy and harmless. The antiseptic fluid to be used should be mild, such as salicylic acid, one part in a thousand. The pressure to be employed in injecting it should be sufficient to distend the walls of the sac. He thinks that injections of iodine, iodoform, oil, etc., are useless. Hydrotherapy acts not only by its antiphlogistic effect, but also by its special stimulating effects on the spinal nerve roots. The author thinks that it should be used always in Pott's disease, except in those acute cases in which there is high fever and great pain, and in which immobility is demanded.

ROUSSKY VRATCH.

April 2, 1905.

1. What is a Healthy Normal Child? By A. O. KARNITZKI.
2. The Influence of Uresin (a Dilithium Citrate of Urotropin) on Uric Acid and Its Salts, By L. G. SPASSKI.
3. A Case of Fibrinous Pneumonia Which Ended Favorably in the Presence of a Marked Leucopenia, By V. F. PETROFF.
4. A Case of Typhus Fever in a Child Five Months Old, By P. P. EMINETT.
5. A Case of Abnormally Located Cecum, with a Common Mesentery, By D. S. MOROSOFF.

1. What is a Healthy Normal Child?—Karnitzki says that we do not know what a healthy normal child is. Studies in child physiology have

not been made with sufficient accuracy as regards the normal weight and development of children. The author reports a series of observations which he made upon his own children from birth to the seventeenth year. In order to gain a clear idea of what really constitutes a healthy normal child it would be necessary to study for a number of years a series of children born and raised under the most favorable conditions possible, who remain healthy and escape all the severe illness to which children are subject. He urges especially school physicians to undertake this study.

3. Recovery from Pneumonia in Spite of Leucopenia.—Petroff says that a pneumonia may end favorably, even when a leucopenia is present. This was the case in the patient whose history he reports. Leucocytic reactions take place in persons with leucopenia in the same way as in normal persons, and in pneumonia in such patients there is an increase of the number of white cells found in the blood, with a preponderance of the polynuclear or overripe forms, while the destruction of the white cells is not as rapid as in normal conditions. The blood, in other words, is older and the destruction of white cells is retarded.

4. Typhus Fever in an Infant Five Months Old.—In this case Eminett observed a very severe course, although the child recovered in the end. Cases of typhus are extremely rare in infants under six months of age, and are rare in young children. In Russia, where epidemics of typhus fever have been comparatively frequent, only 0.2 to 0.5 per cent. of all cases occurred in children under one year of age. The case observed by the author occurred in the family of a farmer and was a part of an epidemic involving the farm hands and other inhabitants of a hamlet.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 11, 1905.

1. Infections of the Respiratory Tract with Influenza Bacilli and Other Organisms, Their Clinical and Pathological Similarity, and Confusion with Tuberculosis (*To be continued*), By FREDERICK T. LORD.
2. Perforated Duodenal and Gastric Ulcers: A Report of Two Cases: Operation: Recovery, By CHARLES L. SCUDDER.
3. Some Suggestions in Regard to the Diagnosis of Seminal Vesiculitis, By HUGH CABOT.
4. Report of a Case of Exstrophy of the Bladder, with a Consideration of Operative Treatment, By HENRY G. SPOONER.

2. Perforating Ulcers.—Scudder summarizes his two cases thus: One case was an ulcer of the stomach. The other case was an ulcer of the duodenum. Both ulcers perforated, causing acute peritonitis. The first patient was operated upon four hours after the initial sign of perforation. The diagnosis of a perforated gastric ulcer was confirmed. The second patient was operated upon forty-eight hours after perforation. It was thought previous to operation that the patient had an appendicitis and a general peritonitis. Both the ulcers were closed by sutures. The peritoneal

cavity in each instance was quickly cleansed by salt flushing and wiping. Cigarette and tube drains were used for a few days only in each case. Both patients recovered. In each case at a subsequent time a posterior gastrojejunostomy was done. The anastomosis was made close to the ligament of Treitz. Both patients recovered from the second operation and are well to-day. The report of the cases is followed by an analysis of their course, and the paper ends with a review of the symptomatology and treatment of duodenal and gastric ulcers.

3. Seminal Vesiculitis.—Cabot contends that the diagnosis of seminal vesiculitis is frequently made on insufficient grounds. He insists that for the termination to be correct there must be a true inflammatory condition. This implies the presence of infiltration and inflammatory exudate. The author studied nineteen cases of the type usually classed as seminal vesiculitis. He found that in only three of the cases was true inflammation of the seminal vesicle at all reasonably certain. The remaining nineteen cases were cases of prostatitis. The author has no intention of disparaging the work done by Fuller, but believes that with some seminal vesiculitis is a hobby.

4. Exstrophy of the Bladder.—Spooner reports the case of a man of twenty-four years who, though suffering from exstrophy of the bladder, was in robust health and managed to live a fairly comfortable life. The author's review of the operative treatment of this condition leads him to formulate the following conclusions: (1) Continence is never obtained by the most successful plastic operation. (2) Implantation of the ureters into the bowel is a difficult operation, and apt to be followed by infection of the kidneys. (3) The operation of Sonnenburg is a simple operation and with less danger than the others and permits the patient to wear a comfortable urinal. (4) Patients can live to old age without any operation.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 13, 1905.

1. The Therapeutical Art, By OLIVER T. OSBORNE.
2. The Therapeutical Use of X Rays. Three Years After, By WILLIAM ALLEN PUSEY.
3. A Bacteriological and Clinical Study of a Curative Serum for Typhoid Fever, By WILLIAM ROYAL STOKES and JOHN S. FULTON.
4. Lead Poisoning. A Study of the Gastric Contents in Twelve Cases, By JOSEPH SAILER and JOHN M. SPEESE.
5. Brain Hæmorrhage, By W. A. DICKEY.
6. The Manufacture and Use of Tin Splints. With Some Special Appliances, By ARTHUR T. MANN.
7. The Diagnosis and Treatment of Abdominal Pain, By JOHN B. DEAEVER.
8. Report of the Medical Department of the Universal Exposition, St. Louis, 1904, By LEONIDAS H. LAIDLEY.
9. Immunity. Chapter XV. (*To be continued*).

2. The X Ray.—Pusey's personal experience with the x ray in the treatment of a large variety of affections has been in hypertrichosis, not very

satisfactory; sycosis and tinea, exceedingly satisfactory; acne, a little short of marvelous; rosacea, as in acne; hyperidrosis, of value; inflammatory dermatoses, of much value; lupus erythematosus, disappointing; pruritus, of benefit; pigmented and vascular naevi, of distinct value; keloid and scars, can be cured; lupus vulgaris, of value; tuberculous glands, variable results; tuberculous joints, variable results; abdominal tuberculosis, of apparent value in one case; deep sinuses, no radical relief; blastomycosis, uniformly favorable; actinomycosis, one cure (potassium iodide also used); cutaneous carcinoma, can be used with confidence; epithelioma of lip, to be employed only with extreme caution; senile keratosis and leucoplakia, fairly good results; carcinomata in the neck, of no utility so far as cure is concerned; mixed tumors of parotid, effect indeterminate; recurrent carcinomata of the breast, results at times brilliant; primary carcinomata of breast, treatment should not be undertaken when operation is feasible; sarcomata, react as do carcinomata; pseudoleucæmia and leucæmia, patients improve, but the results are not radical; goitre, results on the whole negative.

3. **A Serum for Typhoid.**—Stokes and Fulton believe they have succeeded in producing a serum for the treatment of typhoid fever which shortens the febrile period of the disease and favorably modifies the daily variations in temperature. Details of their work are given in full.

4. **Lead Poisoning.**—Sailer and Speese conclude: (1) In a series of 12 cases of lead poisoning, or suspected lead poisoning, there was deficiency in the secretion of HCl in 10 of the chronic cases, and no deficiency in 2, one of which was doubtful and the other acute. (2) This deficiency in the secretion of free HCl in the majority of cases is associated with an extreme reduction in the percentage of peptic digestion, and with the presence of lactic acid. (3) It is not justifiable at present to regard it as an indication for treatment, at least not until the effects of the ordinary treatment for achylia gastrica in cases of lead poisoning have been tested.

7. **Abdominal Pain.**—Deaver shows the importance of carefully trying to determine the significance of abdominal pain. If the cause can be removed well and good. If it cannot or if preparations for a suitable operation are under way these anodynes should be resorted to, but not otherwise.

MEDICAL NEWS.

May 13, 1905.

1. **Physiology the Basis of Clinical Medicine.** Suggestions as to Courses in Applied Physiology,

By J. MADISON TAYLOR.

2. **On the Hypodermic Use of Adrenalin Chloride in the Treatment of Asthmatic Attacks,**

By DAVID M. KAPLAN.

3. **Principles Governing the Technics of Röntgen Ray Therapy,**

By ENNION G. WILLIAMS.

4. **Common Causes of Gynecological Disease, with Some Remarks on Prophylaxis,**

By GEORGE GRAY WARD, JR.

5. **Remarks on Treatment of Fulminating Appendicitis,**
By J. M. INGE.
6. **Gonorrhœal Arthritis,** By HENRY W. FRAUENTHAL.
7. **A Case of Sudden Death in a Newly Born Infant Due to Suprarenal Apoplexy,**
By R. E. PICK.

1. **Physiology.**—Taylor holds that there should be special teaching in applied physiology in addition to the systematic course. Unless the student is specifically instructed in applying the principles of life, growth, and functionation to the elucidation of the natural history and phenomena of change and disease, it is impossible for him to grasp the principles of general pathology or to form sound concepts of therapeutical measures. The paper concludes with a number of letters written to the author by the leading teachers of physiology in the United States concerning this subject. With very few exceptions they favor the author's position.

3. **The X Ray.**—Williams asserts that the great variations in the results obtained by those using the x ray are due more to personal equation than to difference in apparatus. He gives briefly his own views regarding the most effective ways of applying the Röntgen ray in different conditions.

4. **Gynecological Diseases.**—Ward asserts that one eighth of gynecological diseases are due to gonorrhœa and that two thirds are due to pregnancy and its consequences. A large proportion of the cases consequent on parturition or abortion could be avoided if all women were properly attended. It is therefore "up to" the general practitioner to improve the present lamentable condition of affairs.

5. **Fulminating Appendicitis.**—Inge gives the following concise advice: "If we have a case developing rapidly too late for an early operation, too early for a late operation, the mass or tumor, due to adhesions, easily felt by palpation, we adopt the course given by Ochsner to localize the infection. In addition, drain by a small stab wound, through abdominal muscles, transversalis fascia, and peritonæum to the mass of adhesions. If pus escapes, use only a narrow strip of rubber tissue as suggested by Robert Morris, not wider than a pencil; if no pus, only serum, a small, loosely rolled gauze wick surrounded by rubber tissue, not larger than a pencil. If there is no suppurative condition, yet pus may escape in a few hours. Whether pus or only serum escapes in small quantity at first, the capillarity is such that the flow of the infected material will certainly and promptly start in the direction of the drain and escape externally. Tissue pressure will force it along the line of least resistance, more especially so in cases of appendicitis where the muscles contract and are constantly rigid, much more so than in cases of salpingitis and oophoritis and other intraabdominal inflammations; such drains will draw quarts of fluids from the abdominal cavity by capillarity."

6. **Gonorrhœal Arthritis.**—Frauenthal asserts his belief that if the same zeal was displayed in seeking for gonococci as a cause for arthritis as

there is in looking for uric acid and urates, it is possible that more cases of gonorrhoeal arthritis would be found. The treatment of specific arthritis recommended is thus summarized: In the acute stage iodine should be painted over the joint, ice bags applied about the joint, a fixation splint to hold the joint immovable, with sufficient morphine internally to appease the pain. Cautery over the joint relieves the pain; also the high frequency current. As a last resort, arthrotomy may be employed. In the subacute and chronic stage the use of blue ointment, Credé ointment and liquid iodi comp., combined with dry heat and galvanic electricity, are of great value. All joints should be put at rest in plaster, as this makes the most easily applied and most perfectly fitting splint for all joints except the hip, which requires a Thomas or Sayre traction splint. In the phlegmonous joint, extension and counter-extension should be used. Urotropin, salol, carbonate of guaiacol, carbonate of creosote, and quinine are underestimated in their value for destroying gonococci found in the interior of the body.

AMERICAN MEDICINE.

May 13, 1905.

1. Surgical Intervention in Cases of General Peritonitis from Typhoid Fever and Acute Gonococcus Infection, By JOSEPH PRICE.
2. Diphtheria Antitoxine in Cerebrospinal Meningitis, By ARTHUR J. WOLFE.
3. Gallstone Obstruction of the Bowel; Report of a Case; Removal of One Stone from the Bowel and a Second from the Gall Bladder: Recovery, By ALFRED C. WOOD.
4. The Alleged Destruction of Red Blood Corpuscles in the Spleen, By EDWARD T. WILLIAMS.
5. Pancreatic Cyst: Report of Case, By M. J. KARPELES.
6. The McGraw Elastic Ligature for Gastroenterostomy Secondary to Murphy Button: Operation with Description of Technics, By R. J. CHRISTIE, JR.
7. Gunshot Wounds and Their Treatment, By JOHN R. COOK.

1. **Peritonitis.**—Price urges early diagnosis, early intervention, more thorough cleaning of the soiled peritoneal cavity. He favors drainage, irrigations with plain sterile water (not hot saline solution), and the curetting or wiping of dirty points. In typhoid resection of the gut is not justifiable. If the gut is in very bad condition close perforations with interrupted sutures and anchor the gut to the wound in the abdominal wall. If a fistula forms it will usually close spontaneously.

2. **Diphtheria Antitoxine in Meningitis.**—Wolfe reports the observations and experiments which led him to suggest the use of diphtheria antitoxine in the treatment of epidemic cerebrospinal meningitis. He believes that there is an antagonism between the Klebs-Löffler bacillus and the meningococcus, that the Klebs-Löffler bacillus is precipitated and agglutinated by the meningococcus when rich cultures of both are mixed; that the diphtheria antitoxine in proper proportion inhibits the growth of the meningococcus. The author finds that the meningococcus assumes a varying morphology according to the

media in which it is grown, and that the positive or negative reaction to Gram's stain is not absolute for the diagnosis of the meningococcus. Clinically the author presents no evidence to show that diphtheria antitoxine will influence the course of epidemic cerebrospinal meningitis.

3. **Gallstone Obstruction of the Bowel.**—Wood reports his own case and reviews the history, symptomatology, and treatment of gallstone obstruction of the bowel. The paper ends with abstracts of twenty-one similar cases reported since the appearance of Gibson's paper on the subject in 1900.

7. **Gunshot Wounds.**—Cook is very positive in his belief that all gunshot wounds should be drained. This is specially true in the case of wounds of the viscera. If drainage was always employed the author is certain that the mortality from this class of injury would be greatly reduced.

MEDICAL RECORD.

May 13, 1905.

1. The Tuberculosis Situation in Penal Institutions, with Especial Reference to the State Prisons at Sing Sing, N. Y., and Columbus, Ohio, By S. A. KNOPF.
2. Dermatitis Seborrhoica and Its Relations to Alopecia and Other Conditions, By L. DUNCAN BULKLEY.
3. Prostatectomy, By REGINALD HARRISON.
4. The Importance of Early Recognition of Suppurative Ear Disease, By ALICE G. BRYANT.
5. The Treatment of Epidemic Cerebrospinal Meningitis with Injections (Chiefly Intraspinal) of Diphtheria Antitoxine, By GEORGE L. PEABODY.
6. A Case of Long Standing Major Hysteria Characterized by a Paroxysmal and Fixed Pain, Mental Depression, Confusion, Delirium with Delusions, and Hallucinations Terminating in Sudden Recovery, By THEODORE DILLER.
7. A Case of Menstrual Urticaria, By D. J. M. MILLER.

1. **Tuberculosis.**—Knopf describes a number of the most unsanitary features existing at Sing Sing and at Columbus, and the most easily applicable remedies. So far as the tuberculosis problem is concerned the following suggestions are made: (1) The State Prisons should be rebuilt and their location changed to some high and dry locality. (2) Tuberculous prisoners should be sent to penal farms. (3) Convicts should be examined on admission to both city and State jails. (4) Examinations should be repeated at definite intervals, say, every three months. (5) Sanitary measures should be rigorously enforced. We cannot give in detail all that is implied in this last recommendation. That the problem of tuberculosis is a very real one in prison management must be conceded when it is remembered that the death rate from tuberculosis averages about fifty per cent. of the total death rate.

2. **Dermatitis Seborrhoica.**—Bulkley defines dermatitis seborrhoica as a chronic, more or less inflammatory affection of the skin, probably of microbic origin, exhibiting varying degrees of scalliness, generally of a greasy character, on normally colored or moderately congested skin, with

a tendency to extend (generally from the head downwards) by sharply defined, commonly circular areas. It is frequently accompanied with itching, which, however, is not as severe as in eczema. Most observers agree that the eruption is primarily one of the scalp, causing one of the forms of dandruff, where it may remain confined for years, and suddenly develop elsewhere, as a scaly eruption, or with more or less inflammatory symptoms. This affection is most commonly confounded with tinea, pityriasis rosea, psoriasis, eczema, and at times syphilis. It constitutes about one tenth of all the skin lesions met in private practice. It is very amenable to treatment. Resorcin and sulphur lotions give the best results.

3. **Prostatectomy.**—Harrison favors the suprapubic route for performing prostatectomy. The mortality by either of the two routes, perineal and suprapubic, is about the same. The advantage of the latter method lies in the after results and in the facilities it affords for detecting calculi when present.

5. **Diphtheria Antitoxine in Meningitis.**—Peabody gives the results obtained by himself and Jacobi at Roosevelt with diphtheria antitoxine in the treatment of twenty-two cases of cerebrospinal meningitis. In their hands neither good nor bad resulted from the experiment. Some of the cases are still in hospital and the mortality is to date fifty per cent.

7. **Menstrual Urticaria.**—Miller reports the case of a girl of 15 years, who began to menstruate at the age of 12 years. The periods were, at first, irregular, but for the last two years have recurred regularly every four weeks, lasting from three to four days each time. With the establishment of regularity the attacks of urticaria began. They make their appearance seven or eight days, and cease from two to three days, before each period. Occasionally the urticaria persists until the flow begins, rarely during the first day or two of its course. During the intervals between the periods the patient is quite free from attacks. That the skin affection is dependent upon the menstrual flow is shown by the fact that, owing to a change of residence from England to this country, some eight months ago, the patient missed two periods, and that during these two months she was quite free from urticaria.

ANNALS OF SURGERY.

April, 1905.

1. Studies on the Pathology and Ætiology of Obstructive Hypertrophy, and Atrophy of the Prostate Gland, By PILCHER.
2. Has the Catheter a Place in the Treatment of Chronic Prostatic Hypertrophy? By THORNDIKE.
3. Prostatism Without Enlargement of the Prostate, By CHETWOOD.
4. Some Anatomical Points Connected with the Performance of Prostatectomy, By WATSON.
5. The Question of Priority in the Adoption of the Method of Total Enucleation Suprapublically of the Hypertrophied Prostate, By FULLER.

6. The Treatment of Prostatic Hypertrophy by Enucleation Through a Suprapubic Incision, By LILIENTHAL.
7. Suprapubic Prostatectomy Without Ether or Chloroform, By WIENER.
8. Conservative Perineal Prostatectomy, By YOUNG.
9. The Cause of Incontinence as a Sequel of Prostatectomy, By RUGGLES.
10. The Choice of Operative Method for the Removal of the Hypertrophied Prostate, By PILCHER.
11. A Study of Various Forms of Prostatic Hypertrophy from Post Mortem Specimens and by the Cystoscope, with Reference to Operation, By CUNNINGHAM.
12. Transperitoneal Ligation for Aneurysm of the External Iliac Artery, By CURRIE.
13. An Osteoma of the Frontal Sinus, By HASTINGS.

1. **Studies on the Pathology and Ætiology of Obstructive Hypertrophy and Atrophy of the Prostate Gland.**—Pilcher, from a careful investigation of many specimens relating to this subject reaches the following conclusions: 1. Pathologically there are three types of prostates causing urinary obstruction: (a) the large soft type, (b) the hard, small contracted type, (c) the mixed type. 2. Infection does not influence the variety of the pathological change. 3. The contracted form of prostate is not a secondary stage of the large soft type of hypertrophied prostate, but is distinct from it. 4. In many cases of hypertrophy of the prostate there is present a true muscular hypertrophy. 5. In some of the atrophic cases the glandular elements are relatively diminished and the muscular elements relatively increased. 6. Gonorrhœa is not an important ætiological factor in the production of this disease, and there is no necessity for assuming that it is. 7. The theory of obstruction to the ducts causing passive dilatation of the glandular elements, as advanced by Ciechanowski, and Crandon does not satisfactorily explain the pathological findings. 8. Hypertrophy of the prostate results from glandular overgrowth, influenced by the degenerative changes of old age, and other agencies which tend to cause the development of fibrous connective tissue in an actively functioning gland.

2. **Has the Catheter a Place in the Treatment of Chronic Prostatic Hypertrophy?**—Thorndike answers this question by saying that the catheter has such a place. While it is true that radical operations upon the prostate are pushing the catheter and other palliative measures aside, there are many patients who are unfit to endure the shock of such radical procedures and others who are better off after palliative measures. These cases include old and infirm men in whom prostatic symptoms have developed slowly, and who may be made comfortable by the proper daily use of the catheter. When palliation ceases to be possible operation should be undertaken in spite of its risks. In another class the patients are relatively young, but the bladder, though clean, is overdistended and atonic. Three catheterizations in the twenty-four hours keep them free from all discomfort. In yet another class the quantity of residual urine is small, and the bladder clean. The

annoying symptoms may be palliated and an occasional visit to the surgeon may be all that is required. This still leaves a large number of patients in whom the condition and surroundings are such that only the radical operation will place them in a condition of safety and comfort.

3. Prostatism Without Enlargement of the Prostate.—Chetwood analyzes thirty-six cases in which contracture of the neck of the bladder was found to be a cause of vesical obstruction. He found in these cases that a safe and sure relief could be obtained by means of galvanoprostato-tomy through a perineal opening. This condition produced the symptoms of prostatism, though the prostate was not enlarged.

4. Anatomical Points in Prostatectomy.—Watson shows by photographs of suitable specimens: 1. The completeness of the tumor formation in each of the three lobes, and their separation from the fibrous sheath which incloses the gland; 2, the thickness of the outer sheath; 3, the space between the surface of the gland and the inner aspect of the outer sheath. Enuclations should be made in this space; 4, the level of the lower border of the urethral aspect of each lateral lobe is above that of the floor of the prostatic urethra and above the level of the ejaculatory ducts. An operation which does not injure the floor of the prostatic urethra will not injure the ducts; 5, the tumor formation of the middle lobe is outside the urethra, and intravesical. It is also outside the sphere of the ducts which, therefore, need not be injured in its removal. The author refers to the services of Gouley in insisting, for many years, upon the desirability of radical procedures upon the prostate. He also alludes to the fact that he has been an advocate of the same procedure for seventeen years, asserting that the mortality from catheter treatment was greater than from prostatectomy. He believed the perineal operation to be the one of choice, but that in a minority of cases the suprapubic route must be accepted.

6. Suprapubic Prostatectomy.—Lilienthal, after an experience of thirty-one cases at the Mount Sinai Hospital, expresses his belief that this is the safest and most thorough of all the operations for the relief of prostatic obstruction. It is radical, no important vessels or nerves are cut, the urethra is not injured, the rectum is less rarely wounded than by the perineal method; palpation and inspection of the interior of the bladder are easy and accurate and precedent cystoscopy is not necessary. There is very little shock, and the urethra being uninjured, the subsequent passage of sounds is unnecessary. Drainage is accomplished by siphonage. The operation may be performed under local anesthesia. The operation may be performed in two stages which is of great value in hæmorrhage, uræmia, or sepsis of the bladder when catheterization is difficult, painful, or dangerous. It may be performed more rapidly than any other method. It is a very simple operation, and is rarely followed by impotence.

8. Conservative Perineal Prostatectomy.—Young has operated upon 200 hypertrophied prostates, and believes that for most cases the perineal method is the safest, surest, and quickest in producing a cure. The Bottini method is the simplest and quickest for a limited number of cases, which may be determined by the cystoscope, but it is not so safe nor so sure of relieving the obstruction as the perineal enucleation. The suprapubic route may be used for large intravesical lobes. A careful preliminary cystoscopy should always be made.

INTERNATIONAL JOURNAL OF SURGERY.

May, 1905.

1. Value of the X Ray in the Treatment of Fractures, By CAMPBELL.
2. Fracture of the Skull, with or without Laceration of the Skin and Underlying Soft Parts and Brain, Rupture of Vessels and Concealed Hæmorrhage. General Technics. How to Meet Complications. Drainage, By WEBSTER.
3. Treatment of Chronic Purulent Otitis Media, with Illustrative Cases, By BRYANT.
4. Practical Treatment of Diseases of the Eye, By COOKE.
5. Practical Gynæcology, By SELLMAN.

1. Value of the X Rays in the Treatment of Fractures.—Campbell thinks the diagnostic value of the x ray, compared with its therapeutical value, is unquestioned. Cases of fracture may be divided, in this connection into three classes: (1) those in which the condition are so apparent and palpable that an x ray picture would be deemed unnecessary; (2) those in which an incomplete diagnosis is made, subsequent symptoms showing that the real lesion was not appreciated; (3) those which are seen immediately after the injury and in which, by means of the x ray, exact diagnosis, reposition, and retention may be accomplished. The author thinks this means should be utilized as a routine procedure in all cases, the radiograph being filed with the history of the case for convenient reference and for the protection of the physician.

BRITISH MEDICAL JOURNAL.

April 29, 1905.

1. Remarks on the Ætiology of Carcinoma. Has It a Physiological Function in the Body? By G. T. BEATSON.
2. Malignant Disease of the Fundus Uteri Treated by X Rays Through the Abdominal Wall: Recovery, By A. J. CLEVELAND and D. D. DAY.
3. The Points of Incidence Compared with Cancer, Leucoderma, and Scleroderma, By G. L. CHEATLE.
4. Cinnamic Salts in the Treatment of Cancer, By L. DRAGE.
5. A Case of Cancerous Disease of the Stomach with Secondary Infection of the Liver, of the Thoracic Duct, and of the Cervical Lymphatic Glands, By W. M. STEVENS.
6. Grafting of Completely Separated Skin Flaps in the Treatment of Contractures, Due to Cicatrices, By R. KENNEDY.
7. Recurring Torsion of the Spermatic Cord, with an Account of Five Cases, By J. W. DOWDEN.

8. An Investigation on the Regeneration of Nerves, with a View to the Surgical Treatment of Certain Paralytic Cases. By B. KILVINGTON.

1, 2, 3, 4. **Cancer.**—Beatson puts forward as the most likely explanation of carcinoma what he terms the "germinal theory." It assumes the existence of a general tissue secretion that cannot be absolutely proved, but in favor of which there is a fair amount of reasonable and confirmatory evidence. With such a procreative fluid in the body, in the event of the testes or ovaries through functional decay or disease being unable to deal with it, and the fat of the body having no special capacity for storing it, it is possible that tissues or organs that have retrograded physiologically, and, by losing their differentiation, have reverted to a more primitive type, should under these conditions take upon themselves the function of secreting it when they would, of course, do so in the cellular form followed by the normal reproductive tissue. This is a return to some extent to the old "spermatic" theory of cancer, but it does not assume a conversion of the normal tissue of the part into tumor tissue—on the contrary, the masses of the tumor cells are not looked on as a tissue at all, but as cells thrown off by altered somatic cells in the elaboration of a special secretion. In carcinoma we have a tissue secretion to deal with, in relation to which the fat of the body probably acts as a middleman just as lymph does in ordinary nutrition. This being true we should not be too pessimistic as regards the successful treatment of the disease.

Cleveland and Day report the case of a married woman, aged 40 years, who was suffering from cancer of the uterus. The growth was so extensive and adherent to adjacent parts, that removal by operation was deemed inadvisable. As a forlorn hope the x rays were tried, a moderately high tube excited by a mica plate static machine being used, and the rays applied directly over the pelvis for fifteen minutes at a time three times a week, the tube being about six inches distant from the skin of the abdominal wall. At first there was little change, but in two months she began to improve, and five months later vaginal examination showed the tumor to have disappeared and the uterus to be freely movable. At one time the cessation of treatment was followed by a return of the symptoms.

Cheattle has studied the points of incidence in which the cancer process begins in the skin, confining his example of cancer to rodent ulcer. He finds that the points of incidence of primary cancer occur at points at which the nerves become cutaneous, corresponding with the points of incidence of the so called neurotrophic diseases—leucoderma and scleroderma. The points of incidence in the latter diseases correspond also to those points at which nerves become cutaneous. The author's opinion is that the incidence of cancer may be due to the direct or indirect nervous influence of the area in which it occurs. The nervous influence which affects its incidence is probably either peripheral, or a peripheral modification of central influence and not only segmental.

Drage reports the results obtained by him in the

treatment of cancer by the subcutaneous injection of a ten per cent. solution of sodium cinnamate, or of a twenty-two per cent. solution of sodium orthocoumarate. The dose of the former is thirty minims once or twice a week, of the latter twenty-five minims at the same interval. In two cases of cancer of the pharynx and larynx, relief from pain and distressing symptoms were experienced, and the discharges were free from fætor. In a case of lymphatic recurrence and in another of cancer of the breast, the tumors disappeared entirely. Patients when they die, do so from simple exhaustion and not from the old horrors of the disease. Early diagnosis is of supreme importance.

7. **Torsion of the Spermatic Cord.**—Dowden states that torsion of the spermatic cord is more frequent than is generally supposed. There are two varieties: (1) Characterized by one sudden and acute attack; and (2) more or less frequent recurrence with or without the eventual onset of an acute degree of torsion. The main predisposing factor is the abnormal manner in which the testicle, suspended by the cord, hangs free in the tunica vaginalis. The exciting causes are indefinite—strain, walking, crossing the legs, coughing, defecation, etc., are among those assigned by the patients. In many instances the attacks come on at night. There is sudden onset of pain in the testicle, sickening in character and spreading upwards over the hypogastric region. Vomiting occurs early, and with it signs of collapse. The testicle is tender and in the course of a few hours swelling occurs. Prostration is complete till relief comes in the course of a few hours; the severe symptoms suddenly moderate and the local swelling disappears in the course of a day. Such attacks may come on at intervals of weeks or months. The condition is most likely to be mistaken for epididymo-orchitis: for there is pain, swelling, and extreme tenderness—but there is no urethral discharge, and no history of gonorrhœa, mumps, or traumatism. After swelling has occurred strangulated hernia may be simulated—this is especially true in undescended testicle. The rotation is usually from without inward. A severe attack may be followed by atrophy—and in the recurrent form, if severe and persistent, a certain amount of atrophy usually follows. Treatment consists at first in an attempt to untwist the cord, care being taken to avoid too much force. Detorsion may be a failure, when an operation must be performed to remedy the condition and fix the testicle. The author reports five cases in which such an operation was successfully performed.

8. **Regeneration of Nerves.**—Kilvington summarizes his observations as follows: 1. It is possible to functionate two opposing groups of muscles by a single nerve, which previously supplied one group only; it is possible to innervate fairly completely muscles with a much smaller number of motor horn cells than usually bring about this effect. 2. When the central end of one nerve is joined to the peripheral ends of two nerves there are many more fibres in the peripheral nerves than

in the central nerves, so that the nerve fibres in the proximal trunk divide on going to the distal trunks. 3. In some cases at least some of the branches from one nerve fibre go to supply one set and others the opposing set of muscles. This may prevent very delicate movement being restored. 4. After this form of suturing the arrangement of the nerve fasciculi in the peripheral nerves is considerably altered.

LANCET

April 29, 1905

1. Nutrition and Malnutrition. (*Lumleian Lectures, I.*)
By W. H. ALLCHIN.
2. Two Cases of Cerebrospinal Meningitis.
By J. A. ORMEROD.
3. A Case of Excision of the Rectum for Carcinoma Recti.
By F. C. WALLIS.
4. On the Absence or Marked Diminution of Free Hydrochloric Acid in the Gastric Contents in Malignant Disease of Organs Other Than the Stomach,
By B. MOORE, W. ALEXANDER, R. E. KELLY, and H. E. ROAF.
5. Latent Pneumothorax.
By B. C. STEVENS.
6. The Effect of Certain Baths and Forms of Electricity on the Blood, Blood Pressure, and Metabolism; with Remarks on Their Therapeutical Uses,
By W. BAIN, W. EDGECOMBE, and H. FRANKLING.
7. A Case of Extensive Cutaneous Diptheria, with an Examination of the Nervous System,
By C. BOLTON and D. BREWER.
8. Tumor of the Right Caudate Nucleus and Frontal Lobe,
By D. McCAY and E. O. THURSTON.
9. Two Cases of Tetanus Treated by Antitetanic Serum,
By R. A. STONEY.

1. **Nutrition.**—Allchin, in the first of his Lumleian lectures, states that in the discussion of nutrition and malnutrition there are two factors to be considered at the onset—the bioplasm on one hand and the food or nutriment on the other. He considers in detail the proximate principles of the bioplasm: (a) proteids, free, and combined, the former including the albumens, albumoses, globulins, and peptones, the latter hæmoglobin, glycoproteids, and nucleoproteids; (b) the fats; (c) the carbohydrates; (d) the various inorganic salts; and (e) water. This living matter is of unknown and perhaps unknowable exact composition, of the chemical nature of which we have any conception from its derivatives only. The food corresponds in great measure to the same derived substances. He next presents in summary an account of the successive changes undergone by the ingesta from their intake to their assimilation by the bioplasm.

2. **Cerebrospinal Meningitis.**—Ormerod reports two cases of cerebrospinal meningitis—one tuberculous, and the other of uncertain origin. He calls attention to the following points: 1. When meningitis occurs as a terminal event in the course of some severe primary disease, it may present no really distinctive symptoms; they may be so merged in those of the original disease that the meningitis is "latent" and only discovered post mortem. 2. In severe cases of meningitis coma may be an early symptom and so pronounced as to mask nearly all the others. 3. Since

the disease is an acute affection it presents the common symptoms of acute infectious disease; and as there is extensive lesion of the nerve centres there are also general symptoms of nervous disease. Under these heads may be reckoned fever, vomiting, headache, pain and tenderness, and optic neuritis. The pain in the head and back is so frequent that it is almost distinctive. 4. Still more characteristic signs are: (a) retraction of the head and opisthotonos, indicating that the base of the brain or the upper part of the cord is specially involved; yet in acute disease, especially in pneumonia, retraction of the head may occur and pass off completely in a day or so; (b) Kernig's sign, resistance to extension of the legs when the thighs are semiflexed on the abdomen; this is probably due to the pain caused by the tension which is put upon the inflamed sacral nerve roots. A similar phenomenon is often observed in sciatica; (c) lumbar puncture, which is an important aid to diagnosis. A long fine trocar and cannula are introduced into the third lumbar interspace; this is relatively easy in children, but harder in adults. In the normal subject the fluid is clear, but in most cases of meningitis it is turbid or even purulent.

4. **Hydrochloric Acid in the Gastric Juice.**—Moore, Alexander, Kelly, and Roaf have investigated the secretion of hydrochloric acid in the stomachs of patients suffering from malignant disease of other organs than the stomach. They find that the absence of free hydrochloric acid in cancer of the stomach is not due to local action in that organ, for hydrochloric acid is absent or reduced greatly in amount whatever may be the situation in the body of the malignant growth. Using the various tests for the various forms of acidity they obtained the following results: 1. The total acidity in malignant disease, wherever situated, is very low. Of 17 cases, only one showed the normal total acidity of 0.28 per cent. 2. There was entire absence of acidity in over 50 per cent. of the cases—9 out of 16. 3. In 11 out of 17 cases there was an entire absence of free hydrochloric acid—and in the remaining six there was only the merest trace. 4. 5. Certain test methods gave relatively high acidity figures because of the presence of inorganic acid combined with an organic base. 6. The methyl-acetate inversion method shows clearly what small traces of effective acid are present as compared with the normal cases. 7. After removal of the growth, there is not a re-appearance of acid. This tends to show that there is a persistence of those conditions in the body tending to favor the reformation of new growths.

9. **Tetanus.**—Stoney reports two cases of tetanus treated with antitetanic serum, which presented a marked contrast to each other. In both the incubation period was long, in the first case 17 days and in the second case probably 18 days. In both the temperature was normal on the first appearance of the symptoms, in the second case it remained normal throughout the course of the disease; but in the first case after a preliminary fall it rose rapidly through 102° F. in twenty hours. In both cases the treatment was the same

—i. e., injection of serum and the administration of large doses of bromide of sodium and chloral by the rectum. In the one case death occurred within sixty hours of the onset of the first symptoms, whereas the second patient recovered. In the first case the spasms were frequent and severe, while in the second only one was observed. The result was due to the degree of infection and was not materially influenced by the treatment.

GLASGOW MEDICAL JOURNAL

April, 1905.

1. Some Cases of Uterine Myoma, with Remarks on the Indications for Operation, By RUSSELL.
2. Movable Displacements of the Kidney, By NEWMAN.
3. Pyelophilitis in Relation to Carcinoma and Foreign Bodies, By RUTHERFORD.

1. **Uterine Myoma, with Remarks on Indications for Operation.**—Russell speaks of two classes of operations: 1, Those in which the checking of the growth of the tumor is the object, or possibly its disappearance, by lessening its nutrition. This form of operation is unreliable, whether it consists in tying the ovarian arteries and removing the appendages, or in ligating the uterine arteries per vaginam or in tying them by abdominal section or in ligating the entire broad ligament. Only interstitial fibroids are likely to be influenced by such an operation, but there are cases in which this is the only operation that is available; 2, those in which the removal of the tumor alone, or the tumor and uterus, by either the vaginal or abdominal route, is the object of the operation. The author prefers the supravaginal form of hysterectomy, although recently he has followed the plan of Bland Sutton and excises the cervix as well as the uterus and tumor. An operation may be required for other indications than hæmorrhage, and if it is delayed there may occur not only growth and degeneration of the tumor, but interference with neighboring organs, and a distinct myomatous cachexia, with accompanying cardiac hypertrophy, blood changes, and physical weakness. These factors add to the risk of the operation and lessen the chances of recovery.

2. **Movable Displacements of the Kidney.**—Newman gives the following list of advantages which nephrorrhaphy offers compared with nephrectomy: 1, In nephrorrhaphy the organ is not removed, secreting tissue is therefore not diminished, and there is no danger of removing the only organ the patient has; 2, the mortality in nephrectomy is thirty per cent., the mortality in nephrorrhaphy is a little more than one per cent.; 3, nephrorrhaphy may be performed when both kidneys are movable or when one is diseased; 4, in stitching the kidney to abdominal wall the peritonæum is not opened as in the anterior operation for nephrocetomy, when the peritonæum is incised at least twice; 5, nephrectomy is only permissible when nephrorrhaphy has failed, where the patient's life is still seriously threatened, and where the movable kidney is diseased, and the fixed kidney is healthy.

Letters to the Editor.

INFECTION THROUGH THE TONSILS.

1801 PINE STREET,
PHILADELPHIA, May 2, 1905.

To the Editor,

Sir: In connection with Dr. Anderson's excellent paper on the very interesting subject of infection through the tonsils, in your issue of April 29, 1905, will you permit me to direct attention to a striking instance of infection through this portal reported by me in the *Archives of Pediatrics*, for June, 1904? The patient, a girl of ten years, who had suffered repeatedly from amygdalitis, was again attacked during a house epidemic of the disease, and immediately thereafter had polyarthritis, purpura, abdominal colic, intestinal hæmorrhage, and severe hæmorrhagic nephritis, the latter persisting for ten or eleven weeks, but ending in complete recovery.

This winter an almost identical case has been under my care, with the exception that the attack did not follow so closely upon an acute amygdalitis, the relation to the tonsillar inflammation being limited to a history of repeated attacks of that disease. This patient, also a girl, aged thirteen years, was seized early in December, 1904, with febrile polyarthritis, together with a maculopapular purpuric rash on the extensor surfaces of the upper and lower limbs, especially about the joints, and upon the buttocks. There was no pruritus. In addition, there were attacks of severe abdominal pain, with vomiting of blood, and the passage of bloody and mucous stools. These symptoms lasted for ten or eleven weeks. From the first the urine had been bloody, and contained much albumin and many casts, hyaline, granular, and blood, as well as numerous red and white blood cells. When she was first seen, a month after the onset, the face was swollen and the eyelids were puffy; but there was no œdema of the lower limbs. The nephritis persisted until the patient passed from under observation, i. e., sixteen weeks from the beginning at the attack. The urine was at this time that of chronic nephritis, viz.: loaded with albumin; sp. gr., 1.004 to 1.008; hyaline and granular casts. Blood cultures were negative. The temperature varied. At the onset there seemed to have been considerable fever, but later the temperature was usually below normal, although it occasionally rose to 100° F. and over.

How these cases should be classified will not be discussed here. They belong to that interesting class of cases which Osler has brought together under the heading of The Visceral Manifestations of the Erythema Group of Skin Diseases. In some respects they resemble the so called Henoch's purpura. My purpose in reporting them now is to emphasize the importance of recognizing the tonsils as a port of entry for infective processes. That the poison which induced the severe symptoms in the first case gained entry to the system through this gateway seems more than probable; it seems almost impossible to interpret the rapidity with which the general symptoms followed the throat affection by any other hypothesis. In the second case the relation, perhaps, is not so clear. There was no history of an acute amygdalitis immediately pre-

ceding the arthritis and other symptoms, but the patient was subject to amygdalitis, and the tonsils were enlarged and scarred, a certain evidence of repeated inflammatory attacks. In addition to the two cases just mentioned, I recall still another instance of apparent infection through the tonsils. A lady of thirty-five years, who had been subject to acute amygdalitis from early childhood, was attacked severely with the same affection (temperature, 105° F.; marked prostration; extensive exudate, which proved to be due to the streptococcus only). After five or six days the throat symptoms abated, but a week later subacute polyarthritis occurred, from which the lady has suffered repeatedly ever since, a period of eight years.

Surely with such histories we should regard amygdalitis with more apprehension than is usual. An affection capable of inducing such serious conditions as endocarditis, nephritis, rheumatic polyarthritis, and even tuberculosis (Koplik) is not to be considered lightly. Individuals subject to amygdalitis should be guarded as much as possible from repeated attacks, and when attacked, should receive prompt local and general treatment, being kept at rest (in bed) until the acute symptoms, especially the fever, have subsided. D. J. M. MILLER.

HEREDITY.

ELEVENTH AND PINE STREETS,
PHILADELPHIA, April 13, 1905.

To the Editor,

Sir: In my editorial on Pathological Heredity, published in your journal for March 25, 1905, the remark concerning the effect of parental toxic conditions on the sperm, germ, cells, and impregnated ovum has become the subject of inquiries from various sources. Instead of answering individually, I prefer to ask you for a small space in the columns of your journal, as it may be of interest to your readers in general.

Féré has shown experimentally the influence of vapor of alcohol on incubating eggs during the pre-embryonic stage. The results of these interesting experiments were published in *Comptes rendus de la Société de biologie*, vol. lii, pp. 231, 471, 601, 681, and 790. In the *Biologisches Centralblatt* for 1903, p. 448, Ziegler showed that alcohol injured and retarded the development of the impregnated ovum. Magnan and others have found in the testicles of the dog fatty degeneration with lowered mobility of the spermatozooids.

ALFRED GORDON.

SUPRARENAL EXTRACT IN SCARLET FEVER.

3508 FIFTH AVENUE.
PITTSBURGH, PA., April 18, 1905.

To the Editor,

Sir: I wish to call your attention to a remedy that I have been using in the treatment of scarlet fever for the last five years, with good results. I have treated in that time fifty cases without a fatal result.

The remedy I speak of is a spray of suprarenal capsule extract on the tonsils every hour for the first forty-eight hours, with lessening intervals

thereafter, according to the urgency of the case, and with the administration internally of liquor ammonii acetatis and infusion of buchu freely, the temperature being kept down by tepid baths. The results of this treatment certainly have been remarkable, the temperature becoming normal in from twenty-four to forty-eight hours. In regard to the bacteriological effect of this remedy, at present I am not prepared to give accurate results. I have asked our city physician, Dr. Booth, to investigate these effects and report later. Relative to the strength of the remedy, I use ten grains of suprarenal extract to the ounce of water. I should like to say that in the use of this remedy I have had not one case of enlarged glands in the neck, nor, where the glands have been enlarged before the case was in hand, have I observed any other than perfect resolution.

MALCOLM W. EVERSON.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, March 2, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

The Induction of Labor.—(Concluded from page 985.)—Dr. O. HOPKINSON, JR., considered all methods of interfering with pregnancy dangerous. The term "accouchement forcé" was unfortunate, as it implied force, which was not necessarily employed. The slow method was uncertain and sometimes too slow. The choice of method should be determined after a careful study of the case, as every case was a law unto itself. He preferred accouchement forcé in all cases where the cervix had been previously dilated. He used the Goodell dilators to the full extent and then the Harris or Edgar method, and delivered by version or forceps or allowed a spontaneous termination, as the occasion demanded. If there was no need of haste, he preferred the bougie or packing with gauze. Both these methods were uncertain, and if the patient showed signs of fever or a rapid pulse, he terminated labor by accouchement forcé. He had never used the de Ribes bag.

Dr. STRICKER COLES believed there were many cases best treated by the induction of labor. In the cases where the child would be too large for the pelvis if pregnancy was allowed to go to term, the fitting of the child's head to the mother's pelvis was the best index as to the time for the induction of labor. If this showed that labor should be induced before the thirty-second week, it would be better to consider some other method of treatment. While the bougie had given good results in a large number of cases, it should be removed when labor pains become strong and regular, for when it was allowed to remain there was danger of premature rupture of the membranes. This accident had not occurred except in cases where the bougie was left in too long. When the membranes had not ruptured, labor should be allowed to proceed normally, and with

as little interference with Nature as possible. If the membranes ruptured prematurely, then he would insert the bag exhibited by Dr. Norris, which was large enough to give sufficient dilatation with but slight lacerations to the cervix or pelvic floor.

The Bossi dilator must be used with care in completing the dilatation, as there was more danger of causing lacerations at that time. When obliteration of the cervix had not taken place, the Bossi dilator was a dangerous instrument if used to dilate rapidly, and under no circumstances should the cervix be dilated in less than half an hour. He thought the operation of induction of labor was useful and would be successful if the cases were carefully studied and scientifically treated.

Dr. NICHOLSON said, in regard to the aetiology of eclampsia, that in the majority of cases structural changes were found in the kidneys and liver; they might, however, be only microscopical. There was some poison circulating in the mother's system. He failed to see what use there was in doing anything approaching accouchement forcé or any rapid method of delivery in a case of eclampsia. The woman was depressed by the toxins, and the question of a few hours would not make any difference in her life. The changing of a case of eclampsia from the gestational to the puerperal period did not cure the case. While it was true that statistics showed that a woman who did not become eclamptic until after her delivery, was in very much less danger than if convulsed before delivery, nevertheless, there was a distinct mortality in this period, and the mere fact of rapid delivery did not put a gestational case into the puerperal class. Therefore he did not see any reason for the rapid delivery in eclampsia. He believed the slow method was the method of value.

Dr. RICHARD C. NORRIS remarked that he would not like the members to understand that the method he had described was the one he would use under all circumstances. He thought the indication for the induction of labor and the condition of the patient determined largely the method that should be used. For a case with no necessity for a short labor, if the bougie failed, he dilated the cervix mechanically and followed with dilatation by the bag. The method described had enabled him to terminate labor in eight and a half hours, and that was sufficiently rapid for the induction of labor for all the complications he encountered. In cases of heart disease, eclampsia, or placenta prævia, where he thought it to be the best interest of the patient to be delivered rapidly, he used this method in preference to the employment of the Bossi dilator or vaginal hysterectomy. It was a relatively rapid method for the termination of pregnancy, and when, in the obstetrician's judgment, eight or ten hours was sufficiently rapid, it was the method of choice. He could not recall a case where a more rapid delivery had seemed to be necessary.

Dr. HIRST usually employed this method himself, and thought that in selected cases it was going to be a decided addition in the power to ter-

minate pregnancy. In one instance he had been called to a distance from his home and could not return until the woman was delivered. He carried out this plan, and between the time of dinner and dessert the dilatation was sufficient to accomplish delivery. He thought that if the case were near home he would take his chances with the bougies.

Book Notices.

Manual of Antenatal Pathology and Hygiene; the Embryo. By J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S., Edin., Lecturer on Midwifery and Gynæcology, Medical College for Women, and Surgeons' Hall, Edinburgh, etc. Edinburgh: William Green & Sons, 1904. 1p. xix+47. (21s.)

Dr. Ballantyne's work has become so well known that the appearance of a new book by him will be greeted with interest. In a former volume the author dealt with the physiology of the fœtus and the deviations from the normal. In the present work he takes up the pathology of the embryo and has given us *in extenso* a work on teratology which embraces not only a great amount of his own labor, but also the newer views as to monsters, their development and aetiology.

The author takes up the chronology of the embryonic life first, carrying it through the sixth week after impregnation and continuing the consideration of its physiology and pathology as outlined in his former volume. He points out correctly that a proper understanding and interpretation of the facts he presents can only be appreciated if embryology is previously studied; for many of his deductions are based upon observation of deviations from the normal development.

After considering in detail the theories as to teratogenesis—mental impressions, traumatism, fetal diseases—Ballantyne goes on to a classification of teratology historically considered. This is followed by a description in detail of the various types of monsters and deviations. Illustrations of the various forms are given, with dissections in many instances, and mostly from original sources.

Ballantyne does not believe that "definite impressions upon a pregnant woman's mind can ever cause a defect in the fœtus closely resembling the thing producing the impression," but he is frank to affirm that the mother's mental attitude during pregnancy may have an effect upon her unborn child in the way of premature labor or retarded growth or development. These conclusions are reached after a most careful consideration of the evidence on both sides of the question, not only of the literature of recent times, but of that of ancient profane and scriptural writings as well.

The practical solution offered by the author to reduce the number of the births of monsters and of those pathologically tainted, must be regarded as somewhat chimerical. He urges those who are themselves "endowed with the sad legacy of family ill health" not to reproduce; but if they do, to keep themselves free from every possible taint, especially

alcoholism. "It is a family matter, in this kind of treatment," says the author, "the cleanness of life and the control of the indulgence of morbid cravings for narcotics and stimulants of the parents does much, but it may be insufficient, to effect a cure." Several generations may be required to blot out a serious deviation from the normal. The theory is undoubtedly correct, but it is not new, and it applies equally well to those of normal birth and form and habit. However, there is no question that Ballantyne has done superb pioneer work in reviewing anew the complex data of teratogenesis and its forms, and his work, now that it is completed, must, perforce, rank as one of tremendous value to the scientist, to the embryologist, and to the physician to whom the uplifting of the race is dear.

Burdett's Hospitals and Charities, 1905. Being the Year Book of Philanthropy and the Hospital Annual. By Sir HENRY BURDETT, K. C. B., etc. London: The Scientific Press. Pp. 966.

This volume well sustains the reputation of its predecessors for comprehensiveness and accuracy of information concerning the hospitals, asylums, dispensaries, sanatoria, etc., of the English-speaking world. It would be hard to think of a point in hospital administration on which it does not give all the data obtainable.

Transactions of the Medical Society of the State of North Carolina. Fifty-first Annual Meeting, 1904.

This creditable volume of nearly 600 pages has been prepared under the direction of a publication committee consisting of Dr. J. Howell Way, of Waynesville; Dr. George W. Pressly, of Charlotte, and Dr. H. McKee Tucker, of Raleigh. Besides addresses, reports, and the minutes of the meeting, it contains forty-five papers of a valuable character.

Miscellany.

Poor Beverages in the Philippines.—Military and naval surgeons have so vigorously condemned the vile native beverages sold to American soldiers and sailors in the Philippines and have so vividly described the terrible effects of those liquors upon persons using them that the civil authorities of the islands have very wisely enacted an ordinance making it unlawful in the province of Cavite for any person to give, sell or otherwise dispose of to enlisted men of the army, navy, or marine corps any of the so called native wines or liquors, and providing that any person violating the act shall be punishable by a fine of one hundred dollars, or imprisonment for six months, or both. This action of the insular authorities is highly commendable, says the *Army and Navy Journal*, for May 6, 1905, and we regret that it does not apply to the Philippine Islands in general, instead of to a single province in the Island of Luzon. It may be needed more in Cavite, perhaps, than elsewhere, for the reason that the seamen attached to the naval station there are con-

stantly exposed to danger at the vile saloons where vino, tuba, anisado, and other poisonous native beverages have hitherto been on sale, but the effects of those decoctions are so frightful that it would be a good thing if their sale to soldiers and sailors were absolutely prohibited everywhere in the islands. The use of those liquors by enlisted men of the army has greatly increased since the abolition of the canteen, and medical officers agree that they have never encountered intoxicants so degrading, both physically and morally, to the victims. The soldier who drinks beer in a saloon adjacent to the post where he is stationed is obliged to pay twenty-five cents a bottle for it, and as the price is virtually prohibitive he is frequently tempted to use vino, with the result that he falls a victim to the worst form of drunkenness known to medical observers. If the sale of such injurious beverages to our soldiers and sailors in the islands can be wholly prevented, every friend of the army and navy will have reason to be thankful.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon General, Public Health and Marine Hospital Service, during the week ending May 12, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
California—Los Angeles.....	Apr. 15-22.....	1	
California—San Francisco.....	Apr. 22-29.....	2	
District of Columbia—Washington.....	Apr. 30-May 6.....	7	
Florida—Jacksonville.....	Apr. 30-May 6.....	8	
Illinois—Chicago.....	Apr. 30-May 6.....	13	3
Kentucky—Covington.....	Apr. 30-May 6.....	1	
Kentucky—Lexington.....	Apr. 22-29.....	1	
Massachusetts—Boston.....	Apr. 30-May 6.....	1	
Michigan—Grand Rapids.....	Apr. 22-May 6.....	47	5
Missouri—St. Joseph.....	Apr. 30-May 6.....	20	
Missouri—St. Louis.....	May 1-8.....	11	2
Ohio—Cincinnati.....	Apr. 29-May 5.....	3	
Ohio—Toledo.....	Apr. 25-May 6.....	7	
Pennsylvania—Lebanon.....	Apr. 30-May 6.....	3	
Wisconsin—Appleton.....	May 1-8.....	1	1
Wisconsin—La Crosse.....	Apr. 22-29.....	1	

Smallpox—Insular.

Hawaii—Honolulu.....	Apr. 24.....	1	1
Total steamship traffic from Oriental ports.			

Smallpox—Foreign.

Africa—Cape Colony.....	Mar. 25-Apr. 1.....	1	
Africa—Morocco.....	Apr. 4-11.....	10	2
Brazil—Pernambuco.....	Mar. 13-21.....	5	240
Brazil—Rio de Janeiro.....	Apr. 2-9.....	3	5
Canada—Guayaquil.....	Apr. 11-18.....	11	3
France—Paris.....	Apr. 15-22.....	11	
Great Britain—Bradford.....	Apr. 1-22.....	10	
Great Britain—Cardiff.....	Apr. 15-22.....	1	
Gr. Britain—Newcastle-on-Tyne.....	Apr. 15-22.....	1	
Great Britain—Nottingham.....	Apr. 15-22.....	4	
Great Britain—Southampton.....	Apr. 15-22.....	2	

Among cases previously reported.

Great Britain—South Shields.....	Apr. 15-22.....	2	
India—Bombay.....	Apr. 4-11.....	86	
India—Calcutta.....	Apr. 1-8.....	6	
India—Karachi.....	Apr. 2-9.....	15	6
India—Madras.....	Apr. 1-7.....	9	
Italy—Catania.....	Apr. 6-13.....	2	
Italy—Catania.....	Apr. 20-27.....	2	
Norway—Christiania.....	Apr. 8-15.....	1	
Russia—Moscow.....	Apr. 8-15.....	5	
Russia—Odessa.....	Apr. 15-22.....	3	
Russia—St. Petersburg.....	Apr. 1-15.....	21	7
Spain—Barcelona.....	Apr. 10-20.....	10	
Spain—Barcelona.....	Apr. 15-25.....	2	

Yellow Fever.

Panama—Colon.....	Jan. 23-Apr. 2.....	6	3
Panama—Panama.....	Jan. 1-Apr. 29.....	50	20
Cholera.			
India—Calcutta.....	Apr. 1-8.....	58	

Plague.			
Africa—Cape Colony.	Mar. 25 Apr. 1.	5	1
Arabia—Aden.	Apr. 7-11	6	5
India—General.	Mar. 25-Apr. 1.	65,000	57,702
India—Bombay.	Apr. 4-11	765	
India—Calcutta.	Apr. 1-8.	712	
India—Karachi.	Apr. 2-9.	104	
India—Rangoon.	To Apr. 11.	500	176
Mozambique—Goyura.	Feb. 2.	Present.	380

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 10, 1905:

- BILLINGS, W. C., Passed Assistant Surgeon. Relieved from duty at Quebec, Canada; directed to proceed to Seattle, Wash., and report to commanding officer of United States steamer *Perry* for temporary duty.
- BROCK, G. H., Pharmacist. Granted leave of absence for thirty days from May 18th.
- CARRINGTON, P. M., Surgeon. Detailed to represent the Service at meeting of the American Association for the Study and Prevention of Tuberculosis at Washington, D. C., May 18th to 19th.
- FOSTER, J. P. C., Acting Assistant Surgeon. Granted leave of absence for ten days from April 17th.
- GAHN, HENRY, Pharmacist. To report at Washington, D. C., for special temporary duty.
- HOLT, J. M., Passed Assistant Surgeon. Granted leave of absence, on account of sickness, for twenty-three days.
- KERR, J. W., Passed Assistant Surgeon. Relieved from duty at Ellis Island, N. Y.; directed to proceed to Quebec, Canada, for duty in office of the United States Commissioner of Immigration.
- LUMSDEN, L. L., Passed Assistant Surgeon. Relieved from duty at Philadelphia, Pa.; directed to proceed to Baltimore, Md., and report to commanding officer of United States practice ship *Chase* for temporary duty.
- PETTUS, W. J., Assistant Surgeon General. Granted leave of absence for two days from May 4th.
- ROBINSON, D. E., Passed Assistant Surgeon. Relieved from duty at Port Townsend Quarantine; directed to proceed to San Francisco, Cal., and report to commanding officer of United States steamer *Manning* for temporary duty. May 8, 1905.
- STANTON, J. G., Acting Assistant Surgeon. Granted leave of absence for eight days from May 10th.
- TROXLER, R. F., Pharmacist. To report to Medical Officer in Command, Marine Hospital, Port Townsend, Wash., for temporary duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 13, 1905:

HULL, H. F., Assistant Surgeon. Detached from the *Franklin* and ordered to the Naval Hospital, Philadelphia, Pa.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 13, 1905:

- ASHFORD, B. K., Captain and Assistant Surgeon. Reported at Albonite, P. R., on special duty with the Governor of Porto Rico.
- BAILY, HOWARD H., First Lieutenant and Assistant Surgeon. Left Fort Myer, Va., on ten days' leave of absence.
- FAUNTLEROY, P. C., Captain and Assistant Surgeon. Granted twenty days' leave of absence.
- HAYARD, VALERY, Colonel and Assistant Surgeon General. Returned to duty as Chief Surgeon of the Department of the East, from detached duty.
- MARROW, CHARLES E., First Lieutenant and Assistant Surgeon. Left Fort Sheridan, Ill., on thirty days' sick leave of absence.
- MASON, CHARLES F., Major and Surgeon. Appointed a member of the board of officers to select site for a new army post in the vicinity of Buffalo, N. Y.

MAUS, LOUIS M., Lieutenant Colonel and Deputy Surgeon General. Ordered to Fort Logan H. Roots, Ark., Fort Reno, O. T., and Fort Sill, O. T., on inspection duty.

MCCULLOCH, C. C., Jr., Major and Surgeon. Granted ten days' leave of absence.

OWEN, WILLIAM O., Major and Surgeon. Relieved from treatment at the Army and Navy General Hospital, Hot Springs, Ark., and ordered to join proper station, Fort Logan, Colo. Also granted three months' sick leave of absence.

PALMER, FRED W., First Lieutenant and Assistant Surgeon. Returned to the United States Rifle Range, Arcadia, Mo., from detached duty at Jefferson Barracks, Mo.

RENO, WILLIAM W., First Lieutenant and Assistant Surgeon. Relieved from temporary duty on the transport *Sumner* and ordered to return to his proper station in Fort Myer, Va.

RHOADS, THOMAS L., First Lieutenant and Assistant Surgeon. Left West Point, N. Y., on ten days' leave of absence.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon. Reported at Fort McDowell, Cal., for temporary duty.

TRUBY, A. E., Captain and Assistant Surgeon. Relieved from duty at Alcatraz Island, Cal., and ordered to the Presidio of San Francisco, Cal., for duty with Company B, Hospital Corps. Granted ten days' leave of absence.

WADHAMS, S. H., First Lieutenant and Assistant Surgeon. On being relieved from duty on the transport *Logan*, ordered to Alcatraz Island, Cal., for duty.

Births, Marriages, and Deaths.

Married.

DODD—ROBERTS.—In Boynton, Virginia, on Monday, May 1st, Dr. W. T. Dodd and Miss L. Fahy Roberts.

FOSTER—RUSSELL.—In Boston, Massachusetts, on Tuesday, May 9th, Dr. Michael George Foster, of London, and Mrs. Margaret Manning Russell.

REED—BAKER.—In Baltimore, Maryland, on Wednesday, May 3rd, Dr. Jacob W. Reed and Miss Edith L. Baker.

RHODES—JOHNSON.—In Baltimore, Maryland, James Mauran Rhodes, Jr., and Miss Ella Brock Johnson, daughter of Dr. Robert W. Johnson.

Died.

ALLEN.—In New Orleans, Louisiana, on Friday, April 28th, Dr. John Calvin Allen, in the forty-ninth year of his age.

CAMPBELL.—In Montreal, Canada, on Thursday, May 4th, Dr. Francis Wayland Campbell, in the sixty-ninth year of his age.

CAREY.—In Philadelphia, Pennsylvania, on Thursday, May 4th, Dr. Elias B. Carey, in the seventy-second year of his age.

DAVIS.—In New York, on Saturday, May 6th, Dr. Albert A. Davis, in the seventieth year of his age.

Goss.—In Chelsea, Vermont, Dr. Story N. Goss, in the seventy-fifth year of his age.

GRADY.—In Philadelphia, Pennsylvania, on Sunday, May 7th, Dr. James B. Grady, of Los Angeles.

HOOPLE.—In Brooklyn, N. Y., on Monday, May 8th, Dr. Heber N. Hoople, in the forty-ninth year of his age.

KING.—In St. Louis, Missouri, on Tuesday, May 2nd, Dr. Robert M. King, in the sixty-second year of his age.

NIXON.—In Biloxi, Mississippi, on Tuesday, May 9th, Dr. Oliver W. Nixon.

TROUTMAN.—In Somerville, New Jersey, on Saturday, May 6th, Dr. Seymour C. Troutman, in the eighty-fourth year of his age.

WALLACE.—In Fox Lake, Wisconsin, Dr. F. A. Wallace, in the eighty-ninth year of his age.

WARREN.—In Groton, Massachusetts, Dr. William B. Warren.

YOST.—In Youngstown, Ohio, on Tuesday, May 2nd, Dr. Joseph O. Yost, in the thirty-eighth year of his age.

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Original Communications.

INTERMITTENT ANGEIOSPASM ON THE BASIS OF CHRONIC MALARIA.

By FRITZ SCHWYZER, M. D.,

NEW YORK.

Malarial disease is one that has been recognized for centuries, and its clinical aspects and aetiology are as clear as those of any disease known to medical science. Although, therefore, it seems not easy to contribute to the knowledge of this affliction of mankind, I feel justified in publishing the following observations on a complexity of malarial symptoms, which, if not unknown to perhaps many physicians, have never been as clearly classified as they deserve. I mean the disturbance of the vasomotor nerves caused by chronic malaria, and will deal chiefly with the symptoms caused by an irritation of the vasoconstrictor nerves. This irritation of the vasomotor nerves can be compared to an irritation of the sensoric nerves, neuralgia, which causes a contraction of the arteries in a circumscribed portion of the body, or, as is the case during a chill, in all the peripheral arteries. If the contraction of the artery is very pronounced it leads to local ischæmias, and a consequence of this will be very diverse subjective symptoms according to the location of the arterial spasm. The whole disturbance may justly be designated as an angeiospastic form of chronic malaria.

Angeiospasm is to be found under many different conditions. They are quite frequent in neurasthenical and hysterical patients, and especially in the various forms of pure angeioneurosis which have been described of late. It is necessary to exclude all the forms mentioned before one can consider the malarial vasomotor disturbances which I characterize by the enlargement of the spleen, frequent, but generally light fever, anæmia, indications of melanosis, and, at times, by the periodicity of the angeiospastic attacks. The presence of plasmodium malarie is, of course, convincing, although it cannot be demonstrated in every case.

My first observation of angeiospastic malaria was made in 1903, in a very pronounced case. This case

enabled me to question for similar symptoms in patients with chronic malaria with the result that, within one year and a half, I found three more cases belonging to this group and as many others with indications of the same trouble. To lead the reader *in medias res* I shall give a description of my first, as well as of several other cases.

CASE I.—A man, European, eleven years in New York City, aged 39 years, with a malarial history of seven years' standing, otherwise quite strong; no venereal history. During a sojourn in the northern part of New York State, in August, 1903, he complained, for about a week, of great prostration. Upon slight exertion his temperature rose to 100° or 100½°. He had occasional neuralgias, yawning spells, and all the weariness and depressed feelings, the well known accompaniments of chronic malaria. He neglected to take quinine, hoping that the mountain air would cure him. One evening, about five o'clock, while reading in a hammock, he had a sudden feeling of numbness in his right arm, and although retaining the power of motion, that of sensation was almost gone. His arm felt as if it were "asleep," and there was a tingling sensation in it and in his hand. While he tried by moving his arm to restore to it its natural feeling, his right leg developed the same symptoms, and faintness and nausea forced him to lie down. Within a few minutes tingling and numbness of the tongue ensued, and gradually aphasia. This reached its height about fifteen minutes after the onset of the first symptoms. He lost his power of speech entirely, for about twenty minutes he was unable to pronounce or even to think one word, although fully conscious all the time. The queer feeling in his arm and leg gradually subsided, and about half an hour from the beginning of the attack his speech showed signs of improvement. In less than two hours the symptoms had all disappeared, except a pronounced prostration which may have been partly the outcome of the emotion caused by the seemingly dangerous character of the attack. A physician who was summoned called the whole trouble a slight cerebral hæmorrhage, although it was not possible to localize it.

Two days after, at the same hour, the patient had a very slight recurrence of the attack, and again, two days later, at the same hour, the trouble repeated itself, with slight aphasia which lasted scarcely ten minutes. The physician then changed his diagnosis and called the case neurasthenia.

I now had an opportunity to make a careful study of the case. The patient had all the symptoms of

chronic malaria, but although he was of rather a nervous temperament, and came of a somewhat neurotic family, up to his fortieth year he had never had any neurasthenic symptom. It seemed to me probable that the case must be some strange utterance of malaria, especially after the third attack in tertian type. There was, at that time, no possibility of testing the blood, but as I knew from former blood examinations that the patient had malarial plasmodia I commenced an antimalarial treatment. Large doses of quinine, about one and one half or two grammes a day made him feel much better, but in spite of these doses he had attacks of numbness and formication in arms and legs of more or less severity for several weeks, chiefly in the late afternoon. The true tertian type disappeared in about two weeks, and was followed by a more regular but milder quotidian type. The numbness and formication did not adhere to the right side alone, but attacked the left arm especially, and persisted there for quite a long time.

A few weeks after the first attack I was able to show the case to Dr. George W. Jacoby and Dr. J. Kaufman. Both agreed with me in the diagnosis of severe malaria which led to vasomotor disturbances and their consequence, *paræsthesia*. Our finding was: very large spleen, 9 by 17 cm., moderately enlarged liver, normal blood vessels, no arteriosclerosis, somewhat weakened heart action, slight dyspnoea, greyish yellow discoloration of the skin, and brown pigment, but no plasmodia in the blood, which could not be expected after the prolonged quinine treatment. The patient's temperature was normal before leaving his bed in the morning, but the slightest exertion sent it up to 99.6° or 100°, in rectum. Even for weeks after the first attack a slow walk resulted in a temperature of 100.5°.

A careful examination of the eyes by Dr. R. Denig, showed normal blood vessels and a normal field of vision. The urine contained a faint trace of albumin, but no casts. It took many weeks of severe quinine treatment and hypodermic administrations of arsenic before the patient felt himself again. The attacks of slight *paræsthesia* made themselves felt, off and on, until January, and even in the spring of 1904, six months after the first attack, a slight bronchitis brought back the old numbness for a time, each onset lasting for about half an hour or less. The temperatures of the patient were normal in the morning, i. e., 98.2° or 98.4° by rectum; in the evening, after a restful afternoon, they ranged from 98.8° to 98.6°, while as late as May, 1904, the evening temperature, after a good day's work, went up to 99.6°, 100°, or 101°. The faint trace of albumin found at the end of September, 1903, had disappeared by November, 1903, and since April, 1904, the general condition of the patient has been very good.

While in the Alps in August, 1904, he had a recurrence of the *paræsthesias*. The trouble commenced during a severe atmospheric disturbance, when the temperature dropped from summer heat to freezing, followed by a snowstorm. The angiospasm localized in the left arm chiefly, but also in the coronary arteries, causing attacks of cardiac asthma accompanied by moderate pain in the heart region. For one week the patient was scarcely able

to go up a slight incline, and he could not lie on his left side, or flat in bed. The symptoms disappeared after he had taken about 120 milligrammes of sodium arsenite in eight hypodermic doses, one every day.

CASE II.—A man, of German origin, fifty years resident in New York, aged 61 years, told me that in 1890 he had had some numbness and formication in the extremities, especially in the left arm and leg, but at times in the right one also. He went to a nerve specialist, and, after long therapeutical efforts, his case was diagnosed as incipient malarial polyneuritis, and was improved by prolonged quinine treatment. But ever since then the patient has had for a period each year, especially in the autumn, slight reminders of his old trouble in the form of *paræsthesias*, chiefly in the left leg. He had long given up the hope of a permanent cure. In December, 1903, he complained to me about numbness of the left side, arm and leg, he had a feeling as if rubber bands were bound tightly round them, of general weakness, and occasional feelings of faintness. He told me that the same condition had shown itself fourteen years before.

Physical Examination.—A well built man, tall, weighing about 170 pounds, heart and lungs showed no changes, heart sounds did not point to increased arterial pressure, all of them excluded any marked degree of arteriosclerosis. A careful examination of the palpable arteries of the body did not reveal any sclerotic condition. Liver normal in size, spleen large, the absolute dulness measuring 16 by 9 cm., stomach and intestines apparently normal, urine contained no albumin, sugar, or bile, and the amount of urea, uric acid, and salts in the twenty-four hours was normal. The fingers in several phalangeal joints showed slight arthritic changes (no gout), of pretty long standing, and seemingly non-progressive. I had occasion to examine the radial artery during an attack of severe numbness in his left arm, and found the left radial pulse to my touch distinctly smaller. The veins on the left side were much less filled than on the right side, and even the color of the skin showed that the blood supply in the left arm was considerably less than in the right. The blood pressure measured with Potain's sphygmomanometer showed in both radial arteries 19 cm. Hg. This sphygmogram of the two radial arteries spoke for itself. The left radial gave a much smaller tracing than the right. The patient complained of general lassitude, and with certain regularity had his good and bad days (tertian type), at times he felt a difficulty in speech, which made him timid of speaking in public.

The examination of the blood showed much pigment, but no plasmodia. Antimalarial treatment brought about a very marked improvement in four weeks, but then the effect of the quinine and arsenic seemed to be exhausted. During February, March, and April of 1904, the patient, although much improved, felt his old trouble quite often. In May the malarial symptoms were again so marked that I had to put him back to the antimalarial treatment, and then sent him to Oeynhausen in Germany to take a course of carbonic acid baths. The result of this hydropathic treatment was not encouraging, the symptoms of angiospasm did not disappear, and

even a long sojourn in the Alps brought no relief. The patient was very much discouraged when he returned to New York. On examination I found his spleen much smaller, his skin less pigmented, and his general condition good. No sign of malaria remained, the periodicity had disappeared, and I concluded that the primary malarial disturbance had led to true neurosis. I put him on an antineurotic treatment with glycerophosphate of calcium, which benefited him a great deal, but he still has occasional slight paræsthesias.

CASE III.—Mr. P., born in Vermont, aged 53 years, had had tuberculosis of the lungs twenty years before, and still suffered occasionally from bronchitis. He had had malaria ever since he has lived in New Jersey, perhaps twenty years. In November, 1903, he complained of severe malarial symptoms, chills and fever, pains all over, depression, and cold sweats.

The general examination revealed some remainders of tuberculosis, a cicatrix in the right apex, but no active tuberculosis. The heart quite normal in rhythm, frequency, and strength, and the heart sounds showed normal accentuation. There was no sign of arteriosclerosis; urine normal. The liver was slightly enlarged, the spleen measured 9 by 22 cm.

One morning he came to my office in great excitement because he had lost his speech when wishing to talk to his employees. On his way to business he had felt numbness in his right arm, also slightly in the right leg, symptoms which he knew well and did not mind. On arriving at his office his speech became heavy, and for a time he could not speak at all. When I saw him his speech was restored, only a slight difficulty in pronunciation remaining. The right radial pulse was distinctly smaller than the left one, and the skin of the right hand seemed to contain less blood than that of the left. In spite of the fact that he had had these attacks before but without aphasia, the patient thought that he was paralyzed. During the height of the attack he felt nauseated and faint. His blood contained a moderate number of plasmodia malariae, some pigment, and signs of rather severe anæmia. I at once commenced giving quinine and hypodermic injections of arsenic, and in about three weeks he was much improved. He has had no paræsthesias since then.

CASE IV.—G., French, fifteen years in the United States, aged 40 years and 6 months, a heavy drinker and smoker, under my treatment on account of gumma hepatitis, which had disappeared through prolonged mercury and iodide medication. In December, 1903, he complained to me that about every ten days he had a severe attack of chills and fever. I examined his blood during an attack of this kind, and found a moderate amount of plasmodia, quartan type. After his attacks, fornication and numbness in the right, and occasionally in the left arm and leg continued, and on one occasion he observed a marked difficulty in his speech. The spleen was very large. Quinine improved his condition rapidly, in a few days the paræsthesias were all gone. I do not know if this cure was permanent as I have not seen him since January, 1904; besides I should not call his case purely malarial. He may

have some cerebral endarteritis luetica, which might have caused a part, or all of the symptoms.

CASE V.—K., born in New York of European parents, aged 36 years, had been suffering from malaria for a number of years. Her temperature, of late, had been scarcely ever normal, always 99.5° in the morning, and 100.5° or 101° in the evening. She complained of attacks of numbness in her arms, especially in the left one, accompanied by nausea and faintness. These attacks came every second day, at the same hour, and had been going on for some time. The patient got alarmed at last, in the thought that she would become paralyzed.

I found her heart and arteries normal, a slight difference in the size of the radial pulse, the left being smaller than the right, a very large spleen, a greyish brown pigmentation of the skin, a pronounced anæmia, parasites in the blood of the tertian type, and the urine normal. She lost all the malarial symptoms after three months of antimalarial treatment, and in June, 1904, her temperatures were normal, the skin lighter in color, the spleen small. The paræsthesias had disappeared after four weeks of the treatment. In October, 1904, she was entirely well, and has remained so.

CASE VI.—R., European, in America for fifteen years, living in Hoboken, had, since 1895, irregular attacks of malarial fever, sometimes intermittens tertiana.

His skin was brownish gray, liver large, spleen very large. Of late he complained of repeated attacks of faintness, vertigo, and irregular chills. One day, in March, 1904, feeling tired and feverish, he went home where he lay down on a sofa. He fell asleep; when he awoke he did not feel his right leg at all, and fell when he tried to rise. His leg was not really paralyzed, only very numb. His right arm was also slightly affected in the same way, and his speech was much impaired. Next morning he felt better, but a slight weakness, nervousness, frequent attacks of vertigo, etc., persisted.

The urine showed 0.2 per cent. of glucose, the blood vessels were normal, as far as one can judge; the pupil of the right eye reacted to the light much more slowly than the left, and was usually rather the larger. The patient denied syphilis, and I had no reason to doubt his assertion, but the difference in the size of the pupils prompted me to give him potassium iodide, and, of course, antimalarial treatment as well. His sugar disappeared on very moderate antidiabetic diet. Since then his health has been very good.

I report this case chiefly on account of its complicated aspect. The apoplectiform attack could be explained by the diabetic tendencies, as well as by a possible lues, and I would never have thought of malaria as an ætiological factor, but for the cases just described. The patient certainly had no motor paralysis, as one would expect in luetic or diabetic apoplectic attacks, but I shall be obliged to leave the diagnosis open for several years to come. He had had no recurrence of the trouble up to April, 1905.

CASE VII.—A. R., brought up in Jersey City, aged 28 years, was robust until three years ago, when he began to be ailing. He had frequent chills,

general pains, and was usually very tired and depressed. In May, 1904, he complained to me of paræsthesias in his limbs. Four months before he had first noticed them in his feet, then in his arms also, and now often in his head and tongue. He had good and bad days alternately, and always slight fever, ranging from 99° to 101° .

Examination revealed a hard and very large spleen, large liver, slightly melanotic skin, and very anæmic blood, with plasmodia of the tertian type, and one semilunar body; the urine and blood vessels normal. Four weeks of antimalarial treatment brought some relief, but he is not yet entirely free from attacks of numbness.

CASE VIII.—W. M. R., born in Philadelphia, aged about 48 years, had a severe attack of malarial fever when eighteen years old. During that time he had attacks of vertigo, numbness in the right arm and leg, and difficulty in speaking. He has had several of these attacks in his later life, and, as he asserted, each time with malarial symptoms. I believed the attacks were malarial angeiospasm, although I cannot exclude hemicrania with spastic symptoms. (See *Semaine médicale*, August 10, 1904, Meige: "Migraine ophthalmique avec hémianopsie et aphasie transitoires.") Meige, also, explains his case as angeiospasm.

SYNOPSIS.

The eight cases described above, Nos. 1 to 8, exhibit a number of symptoms in common. Each shows a malarial history with repeated chills and fever; each shows the exterior signs of chronic malaria: the brownish gray pigmentation of the skin, and anæmia. In each the spleen is either large, or very large, and hard when palpable; in most of them the liver is enlarged. Cases Nos. 3, 4, 5, and 6 had irregular chills shortly before, or during the time of observation. Case No. 1 had frequent attacks of fever, but during the time of the angeiospasm, the patient showed a subcontinua for months, which ranged from 99° to 101° F., and a very mobile temperature, which rose on the slightest exertion. Case No. 2 had almost a normal temperature, Case No. 7, a subcontinua of 99° to 100.5° , with occasional rises to 101° . The blood of that patient no longer shows malarial plasmodia, but the spleen is still pretty large. The skin is pigmented and the patient looks anæmic. It seems as if he has been injured permanently, as if he would have great difficulty in getting out of his anæmic condition, and I would not be surprised if a secondary condition, like Banti's disease, would develop in him.

Case No. 8 I can mention only from the patient's own history, because when I saw him it was three weeks after his last attack, and I had no opportunity of examining him more closely. He had lived abroad for a number of years, and his general appearance certainly did not betray malaria; but he asserts that his first attack of numbness, etc., set in

during the time of his chills and fever, and that the later attacks were usually accompanied by malaise and fever, which he recognized as malarial.

The temperatures of these cases are not especially characteristic, but simply show the signs of chronic malaria, at times with acute exacerbation. In chronic malaria the temperature is usually not high, sometimes it is normal, generally rather above. The mobility of the temperature, that is to say the rise of temperature after even a slight exertion, is very characteristic of chronic malaria. We find the same conditions in tuberculosis cases.

In giving the history of my first case, I mentioned some of the diagnostic possibilities. In it I was obliged to reject: incipient polyneuritis, hysteria, neurasthenia, reflexneurosis, and ordinary angeioneurosis; last, but not least, arteriosclerosis and arteritis luetica, with all their consequences: cerebral hæmorrhage, embolism, thrombosis, and their disturbances in the peripheral circulation; further, intoxications, like uræmic poisoning, alcohol, tobacco, caffeine, etc. The latter were all excluded in my most severe cases, Nos. 1, 2, 3, 5, and 7, as were arteriosclerosis, and lues. I believe, that the diagnosis very frequently made in such cases is hysteria and neurasthenia, to both of which so many occult troubles are attributed. It is evident that in the above cases this diagnosis would be erroneous: hysteria does not cause a low, but continuous fever, although it is supposed, at times, to cause high temperatures. Neither does it cause the peculiar malarial look, nor melanosis, nor does it lead to enlargement of the spleen and liver. The anæsthetic zones of hysteria are more anæsthetic, often analgetic, they do not come and go in short attacks, and certainly not in the tertian type. A great difficulty in making a diagnosis will occur, when the patients with severe chronic malaria, especially its angeiospastic form, become neurasthenic, in consequence of their anæmia and prolonged malaise and suffering. It will then be hard to classify the symptoms into the two groups, and to say how much of the trouble is due to neurasthenia, and how much to malaria. The diagnosis between ordinary angeioneurosis and reflexneurosis and angeiospastic malaria, is evidently the presence, or the absence of malaria, and especially the type of the attacks.

Let us now look into the pathogenesis of the complexity of symptoms, which I wish to call the angeiospastic form of malaria. In describing Case No. 1 I have mentioned that the pathological process at first looked like apoplexy. But excepting the aphasia, there was no motor disturbance. The sensory disturbance lasted only a few hours, and could not be placed in any picture of cerebral hæmorrhage, embolism, or thrombosis. The symp-

toms were, in the first attacks, of a cerebral character (the aphasia); later peripheral (local paræsthesias, for instance, in the region of the ulnar nerve). It was not a polyneuritis (no pain, motor disturbances, or anæsthesia), in fact the picture in Case No. 1, or in the other cases, could not be explained by any purely nervous trouble. The symptoms most resembled those found in severe arteriosclerosis, or arterial lues, but neither of these processes was present in my principal cases.

It must, therefore, have been a functional disturbance of the circulation, which caused the symptoms in the blood vessels. There are two kinds of functional disturbances: contractions and dilations, the former leading to local anæmias, the latter to hyperæmias. In our cases it was contractions, or angeiospasm. Spasms of this kind explain the sudden onset of the paræsthesias and its sudden disappearance, and account for the variability of the symptoms.

Angeiospasm is quite frequent under many conditions, and are well known to cause local ischæmias, and their consequences, paræsthesias and anæsthesias. They occur in the cerebral arteries, and not infrequently in the coronary arteries, giving rise to false angina pectoris and cardiac asthma. They often occur in the extremities, and are not rare in the internal organs. They even influence the renal circulation, and the production of urine can be interrupted by angeiospasm.

With several of my patients I could clearly establish that, during the attacks, I had to deal with a spastic contraction of some of the arteries. In peripheral paræsthesias I found, on the affected side, the radial artery contracted and the pulse much smaller than on the normal side. I also found the blood pressure higher on the affected side, measured with Potain's sphygmomanometer in the radial artery; but this does not seem always to be the case. I took pulse tracings several times during the attacks, and found the affected pulse to be much smaller than normal, also much smaller than in the free interval. The blood pressure in the fingers, measured with Gaertner's tonometer, was invariably lower on the affected side.

The location of the spasms was, in our cases, either cerebral or peripheral. In Case No. 1, the first three attacks indicated plainly cerebral angeiospasm, while later the spasms were located in the arteries of the extremities. In Cases Nos. 3, 6, and 8, there were cerebral attacks also, while the cerebral symptoms observed in Cases Nos. 2, 5, and 7 pointed more to a disturbance of the general blood distribution, which manifested itself by anæmia of the central nervous system. So I consider the

angeiospasm but indirectly responsible for the dizziness, nausea, faintness, etc.

It now remains to show that, in our cases, the angeiospasm were due to malaria. The toxins produced by malarial germs have a great tendency to attack the nervous system. Neuralgias, especially of the intermittent forms, are amongst the most frequent utterances of chronic malarial infection, and even malarial neuritis and polyneuritis are not rare. Why should not the vasomotor nerves, therefore, suffer under the influence of the malarial toxins, and lead to either a contraction or dilatation of the arteries, according to whether the vasoconstrictors or vasodilators are irritated, or paralyzed? Malaria, *eo ipso*, is a great strain on the peripheral vasomotor nervous system, as chills and chilly sensations are always accompanied by general vasoconstriction, while during the subsequent fever and perspiration, the blood vessels of the periphery show extreme dilatation. It is possible that in our cases the angiocontractions represent the chill, and this would explain the intermittent attacks.

In some patients we find the condition of the blood vessels reversed: we find extreme vasodilatation appearing in intermittent attacks. Of course, locally, we find the opposite of ischæmia, we find enormous hyperæmias and swelling of the affected parts. I can mention a few instances of the hyperæmic type.

1. A patient in my service at St. Francis Hospital a few years ago complained of an intermittent swelling of the tongue. Every second day, at six o'clock in the evening, her tongue swelled up to such a size that she had to keep her mouth open to allow it to protrude to keep from suffocating. Quinine, given after the third attack, brought prompt relief. The spleen was very large; blood slides were not taken.

2. Two years ago I saw a similar case in private practice. A lady of about 35 years of age, complained to me about choking sensations, pain in the throat, and swelling of the tongue. But when I examined her I could see neither redness nor swelling of the pharynx or tongue. A few days later she told me that her trouble continued and upon questioning her more closely, I found that she had an intermittent swelling of the pharynx and tongue, the former becoming dark red during the attacks. This came every day, and each time an hour earlier than the day before. Her tongue swelled so that she had to keep her mouth open. I found the spleen very large, and prescribed quinine, which cured her in two days.

3. A case observed by Dr. J. Kaufman, showed intermittent swelling of the thyroid gland. The swelling was so great, and the tension of the gland, at times, so painful, that a prominent surgeon suspected an abscess or tumor. Several probatory punctures proved negative. As the patient's spleen was very large, quinine was prescribed with success; the gland resumed its normal size and consistence, and for six years has shown no signs of disturbance.

One might compare the attacks of vasodilatation to the final state of the malarial attack. It is well known that a malarial attack begins with vasoconstriction and high blood pressure during the chill, and the height of the fever. Then the blood pressure sinks below the normal, because the blood vessels dilate very much. Therefore, it would be important to measure the blood pressure in cases of intermittent malarial attacks of local hyperæmias, and that might decide the correctness of my supposition.

It would be mere guesswork for me to venture an opinion on the issue of angeiospastic malaria. It is certainly a severe strain on the blood vessels, and possibly the endothelium will suffer and arteriosclerosis be the consequence.

It is scarcely necessary to find further proofs of the angeiospastic nature of the symptoms of my most pronounced cases, Nos. 1, 2, 3, 5, 7, and 8. As I said above, Case No. 2 ran more into plain vasomotor neurosis, and Case No. 4 was uncertain in its nature, as syphilis was present, and as I could not continue my observations on the patient. Case No. 6 was so complicated, being slightly diabetic, malarial, and possibly syphilitic, that I will not mention it as a purely malarial angeiospasm.

Severe angeiospasmus must of necessity lead to hyperæmias somewhere else, as the blood is not compressible. It is but natural to surmise that the abdominal circulation, the great regulator of the blood pressure, can be overloaded during the vasoconstriction. In Case No. 1 I could clearly observe the truth of this supposition. During a spasm involving the extremities of the left side, the patient had a desire to defecate, and emptied about 100 c.c. of pure blood from a small hæmorrhoid. He had never before passed more than a few drops of blood from his rectum, and that only at long intervals.

If luetic patients, No. 4, and possibly No. 6, are attacked by malarial angeiospasmus it is advisable to give the treatments for both malaria and syphilis simultaneously. With heavy smokers, like No. 8, it will be difficult to make a distinction between tobacco poisoning and malaria. I would never have attributed to malaria any of the influence in that case, but for the anamnesias which clearly described the first attack as occurring during pronounced intermittent fever.

Another issue of angeiospastic malaria seems, as Case No. 2 shows clearly, and Case No. 7 probably, a gradual development of true angeio-neurosis, which remains either constantly or comes in absolutely irregular attacks, and which cannot be benefited by antimalarial treatment. Case No. 2 has, since I wrote this article, improved wonderfully under antineurotic treatment, while the same

measures taken in true malaria had no more influence at all.

The treatment of angeiospastic malaria does not differ from that of chronic malaria in general. Quinine has a good effect during severe attacks, but later on I have used it without much result. Arsenic then proved more efficacious, especially when given hypodermically.

Medical literature on malaria reports a great number of cases with nervous symptoms, and amongst them apoplectic attacks due to that disease. Some of them accompanied, or substituted ordinary attacks of malarial fever, and left no trace. Others led to permanent lesions. Landouzy reports several cases of intermittent paralysis. Such cases are explained, in literature, by thrombosis of the cerebral blood vessels with parasites, or hæmorrhages due to high pressure, or as an effect of toxins. From my experiences I do not doubt that many of the cases of intermittent transitory paralysis, especially as far as they are sensory, belong to the class which I designate as an angeiospastic form of malaria, while the more permanent lesions may be parasitic embolisms, or ordinary apoplectic attacks that are not dependent on malaria, but are, perhaps, hastened by the vasomotor disturbance during the malarial attack.

54 EAST FIFTY-EIGHTH STREET.

Mortality of Michigan During April, 1905.—

The total number of deaths returned to the Michigan department of State for the month of April was 3,022, a decrease of 345 from the number returned for the preceding month. The death rate was only 14.4 per 1,000 population, as compared with 15.5 for March and 15.7 for April, 1904. There were 432 deaths of infants under one year of age, 171 deaths of children aged one to four years, inclusive, and 934 deaths of elderly persons over 65 years old. A marked diminution appears in the deaths of infants under one year. Important causes of deaths were as follows: Tuberculosis of lungs, 243; other forms of tuberculosis, 34; typhoid fever, 38; diphtheria and croup, 24; scarlet fever, 10; measles, 15; whooping cough, 7; pneumonia, 228; meningitis, 57; influenza, 72; cancer, 140; accidents and violence, 147. A slight increase appears in the mortality from typhoid fever, and considerable decrease in the number of deaths returned from pneumonia and influenza. Meningitis caused 57 deaths during the month, as compared with 54 for March. There were four deaths from smallpox distributed as follows: One in Alpena city, Alpena county; one in Dorr township, Allegan county; one in Walker township, Kent county; and one in the city of Grand Rapids.

ACUTE APPENDICITIS.*

By LEON BRINKMANN, M. D.,

PHILADELPHIA.

I present the subject of acute appendicitis in a form that will appeal more directly to the general practitioner. Although much has been written upon this subject, the last word is far from having been said. Anything which may tend to throw additional light upon the early recognition of acute appendicitis will, in the end, tend to lessen the mortality. To produce this reduction in the mortality we all agree that early operation is the surest means of avoiding complications, and by instituting prompt surgical interference in the early hours of the attack the mortality of the disease will be reduced to the minimum, which should be about 1 per cent. instead of from 4 to 20 per cent. in the acute cases.

The responsibility of failure to resort to early surgical interference in acute appendicitis may be classified as due to: (1) The patient's neglect in failing to send for a physician early enough in the disease. (2) The physician's inability to recognize the disease at the first visit. (3) The patient's or physician's repugnance to surgical measures. (4) The hope that something may turn up to produce recovery.

(1) If the responsibility is due to the patient's failure to secure proper medical attendance at the onset of an acute attack of appendicitis, and there is a further delay in the treatment by procrastination, this class of cases will form a nucleus for a mortality which cannot be eliminated. There is a very large class of cases of acute appendicitis which demands instant surgical interference after the onset of the disease, owing to the severe type of the infection, to early perforation, or to gangrene, and in which the patient's only hope for a prompt recovery is by immediate operation within the first ten or twelve hours after the onset.

(2) The physician's inability to recognize the disease at the first visit represents a state of affairs that, after such an exhaustive discussion of the subject has been before the medical world for the past decade, seems almost incredible. I will admit in very exceptional instances there may be a case in which the diagnosis is in doubt. There should not, however, in the average case of appendicitis be any hesitancy or doubt expressed in making the diagnosis after a careful examination of the individual. Failure should be ascribed to ignorance or neglect; in either instance it is inexcusable.

(3) The patient's or physician's repugnance to

surgical measures: Undoubtedly there is a certain percentage of people who would under no circumstance permit the performance of a surgical operation upon their persons. This class we cannot consider in the mortality of the disease. There is, however, a much larger percentage who will not permit surgical measures to be adopted until it meets with their preference, or who will permit it as a last resource notwithstanding the advice of the medical attendant. The latter class of patients should be dealt with in a manner in which they deserve, as no conscientious medical practitioner ought to permit his patients to dictate to him what they believe to be the proper course to pursue. The physician would better sever all connections with such a case, thereby avoiding the unnecessary responsibility which he will otherwise ultimately have to shoulder if the case terminates fatally. While it is the duty of the surgeon to alleviate suffering and distress, and to restore the sick to usefulness, I would not, under such circumstances, blame him if he refused operation as a last resort. Operation done upon patients with one foot in the grave with the hope of pulling the other foot out is usually the means of adding additional and unnecessary mortality and stigmata to surgery, especially in those instances in which the patient's dissent was the factor in the delay.

In speaking of the physician's repugnance to surgical interference I can in no other way account for the many deplorable cases which are referred for operation to the surgeon *in extremis*, sent by those misguided doctors who do not believe in the propriety of operation at any stage; by those who believe in waiting until the case is ripe, until a huge abscess has formed, until a second or third attack, or, lastly, trusting that the case will subside and permit an interval operation which is attended by no risk (?), providing the patient survives the attack.

That appendicitis has been determined a surgical affection is the consensus of opinion among medical leaders throughout this country, and yet the disease is treated medically. Why? The answer resolves itself into a lack of confidence in the ability to diagnose the disease, to a lack of assurance as to the ultimate effect of surgery, or to a repugnance for surgical intervention. Which is it?

The spirit of antagonism displayed to surgical interference in acute appendicitis by the medical practitioner is inexplicable in many instances in the face of the patient's apparent condition. When we consider the extraordinary statements made by some, that they have never lost a case of

* Read at the meeting of the Philadelphia County Medical Society, January 27, 1904.

acute appendicitis, and have never had even one of them operated in, it seems as if they certainly had a most remarkable sequence of cases, if they were all of appendicitis. A second class of physicians depends upon the chances the patient has to get well without operation, not counting upon the balance of the chances against the patient occasioned by the delay. In a case recently seen by the writer, the physician took the stand that the patient had seventy-five chances to get well without operation, although he stated he would pass several very anxious days until convalescence was assured. When pressed for an opinion as to the patient's chances by immediate operation, he thought they were from 99.5 to 100 to get well. It seems that the physician was willing to assume a risk for the patient of one out of four chances merely to avoid an operation.

Operation revealed an acutely inflamed appendix with gangrenous involvement of its mucous and submucous coats and the organ filled with foul smelling pus. The appendix was removed through a small incision; drainage was unnecessary; recovery uneventful. This is a single illustration of a large group of cases which under the ordinary or usual medical procrastination would have terminated fatally from a so called fulminating appendicitis as kind nature, the savior of so many cases, had failed to protect the peritoneal cavity by lymph or adhesions.

There are but few patients with acute appendicitis too ill to contraindicate the operation, unless absolutely moribund. I am satisfied that in the past I have refused to operate in cases in which there were present symptoms of advanced general peritonitis. During the past year I have operated in fifteen such cases, and am happy to state that ten patients recovered. One of these was that of a child that had been ill for two weeks, was much distended, suffered excruciating pain, with a temperature of 104° F. and a pulse of 160. Local anæsthesia was employed, the purulent fluid in the peritoneal cavity evacuated, and drainage introduced. This child survived the operation but six hours notwithstanding the fact that the simplest treatment was resorted to. In the remaining fourteen cases there were all the evidences of general peritonitis, although I could not positively affirm that every square inch of the peritonæum was infected.

(4) The hope that something may turn up. It has been said that hope and faith are the foundations of religion. We must not, however, employ our hope and faith in direct violation to conviction. It is a fact that a great many cases of catarrhal appendicitis are not of sufficient gravity

to warrant the patient in sending for his medical attendant, owing to the transient character of the pain. That a fairly large percentage of cases of acute appendicitis do not stop at the catarrhal stage is attested by the increasing statistics of operations; the many cases of circumscribed abscess, perforation, gangrene of the appendix, general peritonitis, lymphatic infection, and of the remote consequences of the disease, all form too vivid a picture to allow hope to sway our judgment against operation while waiting for something to turn up, which may, at best, defer the inevitable. The best thing that could happen would be an intelligent physician to point out the urgent necessity for intervention and thus bring about a cure and with it the conviction that this was the best means to adopt.

The remarkable unanimity of opinion among surgeons who are familiar with the subject of acute appendicitis in declaring that early operation is the only means whereby a reduction in the mortality may be accomplished, makes it all the more important to familiarize ourselves with the early characteristics of the disease and its progressive phenomena.

The apparent unfamiliarity of the average physician with the early symptoms of acute appendicitis and with the changes of the symptoms as the disease progresses accounts, in a measure, for the inability to make a diagnosis. Every physician is, or should be, familiar with the cardinal symptoms of the disease, viz., pain, tenderness, and rigidity, which, varying in location according to the stage of the disease, the position which the inflamed appendix holds, and the personal idiosyncrasy of the individual to the effects of sepsis, are the determining factors in arriving at a diagnosis after excluding any other abdominal condition with which it may be confounded.

The pain in acute appendicitis is not confined to any fixed point within the abdominal cavity; while it is true that in the majority of cases it is located in the right iliac fossa late in the disease, the early pain in acute appendicitis will be found in the epigastric, umbilical, suprapubic, left iliac, hepatic, or right lumbar regions.

The nature of the pain at the onset is usually of a colicky character, and the patient complains of cramps. These cramp-like pains are paroxysmal and intermittent, increasing in severity with shorter intervals between the seizures, and may be attended with either nausea or vomiting or with both; they are, however, not constantly present.

The onset of an abscess is marked by a very material increase in the pain, located at and con-

fined to the immediate vicinity of the abscess. A sudden cessation of pain is indicative of perforation or a rupture of the appendix, particularly if associated with sudden depression.

A decrease in the amount of pain and a persistence of the rigidity mean that gangrene has set in.

When there is a diffused pain late in the attack and a commencing rigidity of the abdominal walls (stiffness) it marks the advent of a commencing general peritonitis.

The tenderness in acute appendicitis varies in degree quite as much as does the pain. In the very early hours of the affection the tenderness is not so marked and might be overlooked by one not familiar with the quality and quantity present at this time. If, however, the tenderness is associated with the pain and other phenomena of the disease at this particular stage, slight rigidity and nausea or vomiting, one can scarcely be mistaken. As time passes and if the disease is progressive, then the tenderness becomes more marked, increasing each hour; located as it is over the site of the appendix, it makes it more possible to locate the organ by the sense of touch. In cases with fecal concretions or foreign bodies and in the presence of localized abscess, the tenderness is most marked, the patient wincing at the slightest pressure and drawing away if much force is brought to bear over this region. When the appendix is situated in the pelvis, then we may expect to find the tenderness in the left iliac or suprapubic region. If the tenderness is in the umbilical zone the appendix is either behind the mesentery or points upward toward the gall bladder. If the base of the appendix is involved, then we may in all instances find the tenderness in the right iliac fossa.

The amount of rigidity, like the tenderness, varies according to the stage of the disease and the intensity of the inflammation within. At the onset of an attack of acute appendicitis the rigidity is very slight and can only be elicited by the slightest pressure made with the finger tips over the portion of the abdomen in which the appendix is located. If, however, the appendix is situated in the pelvis the rigidity will be most marked over the lower portion of the left rectus muscle. The fact that the rigidity is often overlooked is easily explained by the method employed in the endeavor to find it, too much force being exerted in the effort. As the disease progresses, the rigidity becomes more marked and more easily defined. I quite recently saw a young woman about one hour after the onset of the attack, and discovered upon palpation of the ab-

domen a most marked, progressive rigidity over the entire right iliac region. I was unable, for reasons over which I had no control, to secure operation until eighteen hours had elapsed, and found a completely gangrenous organ present.

We cannot place too much reliance upon what might be called surface indications to determine how severe an attack of appendicitis will ensue. One individual will present all the phenomena of a most severe type of infection with excessive pain, tenderness, rigidity, nausea, and vomiting, with high temperature and rapid pulse, and yet an operation will reveal a small, engorged appendix without any circumappendiceal inflammation and without pus. This has been ascribed to the personal idiosyncrasy of the individual to sepsis. I believe, however, that it is due to some particular type of infection, either the *B. coli communis* or the streptococcus, or a combination of both, in which the operation has anticipated an extraappendiceal invasion.

In other instances individuals will have a progressive appendicitis with destructive changes going on without any particular grave or alarming symptoms appearing until late in the disease. On more than one occasion I have seen patients walking about, experiencing but slight discomfort, in whom I have found quite a large circumscribed abscess.

The danger in appendicitis is not alone from the formation of an abscess, but also from the plastic material thrown out by nature to protect the peritoneal cavity from infection. Upon the evacuation of a pus collection the plastic material forming a part of the abscess wall contracts in the process of obliteration of the cavity, and herein lies the danger, for an acute internal intestinal obstruction is liable to occur if the bowel is included in the abscess wall, and I might say that this is the usual state of affairs. Therefore, the danger of acute obstruction is ever present in all cases of circumscribed abscess. Further comment is unnecessary in reference to this complication other than to remark that early interference, before a collection is permitted to develop, would obviate this danger.

The ability to tell with any certainty how far the disease has progressed or that the patient will recover from an attack of appendicitis is beyond human skill, and is dealing with the disease and the patient in a hazardous manner. There are some physicians, and some surgeons as well, who delude themselves with the idea that they possess this power. These men in a large measure must face the responsibility for the continued high mortality in the disease, because, by their acts as well

as by their influence on other physicians, they allow a certain latitude to those who are always seeking some justification for deferring operation until it is either too late or is attended with great danger to the patient. When a conflagration is in progress the owner of the property undergoing destruction would certainly and properly lay the blame upon those whose duty it was to secure the means of extinguishing the fire, which in the course of a short time would consume his goods if they failed to procure such means.

We can replace goods lost by fire, but we cannot restore a life consumed in an appendiceal conflagration, and it is just what will occur in a certain proportion of cases if the physician or surgeon will presume to guess just how much the fire of an appendiceal volcano will consume. It has been the experience of many of us whose patients were apparently recovering from an attack of appendicitis, to be much chagrined by a rekindling of the inflammatory process, which was succeeded by a general peritonitis from a perforation of the appendix, the case ending in death; all of which might have been avoided by early operation. This is one of the dangers of waiting for the interval operation, the opportunity for which sometimes never comes.

There is no doubt in my mind that the so called cases of fulminating appendicitis are those in which there have been previous attacks which were unrecognized, and in which there remained a nidus of the primary attack only awaiting a favorable opportunity to rekindle. The number of cases operated in in the interval between the attacks has led to a more careful research as to the determination of the cause of the fulminant type, with the result that a fairly large number of cases have demonstrated either the presence of pus in varying quantities in the cavity of the organ, the presence of a cystic and strictured organ, or the occurrence of faecal concretions imbedded in the organ with the eroded and ulcerated mucous lining and one or more spots of pressure necrosis, leaving the peritoneal coat as the only barrier between the contents of the appendix and the peritoneal cavity.

The diagnosis of appendicitis is, as I have before stated, an easy one to make with but few exceptions, and the border line cases, if they may be so styled, are of such a character as to require abdominal section quite as urgently. When we consider that appendicitis is the most common acute intraabdominal disease, and if when brought in contact with any acute abdominal colic we should bear appendicitis in mind as the first possibility until other conditions with which it may

be confounded are excluded, the diagnosis will be greatly simplified.

I have found from experience that there are but few conditions in the male which will so closely simulate acute appendicitis as to require consideration in arriving at the diagnosis; these are acute inflammation of the gall bladder and its ducts, pancreatitis, stone in the kidney or ureter, hernia, intestinal obstruction; the various pelvic conditions resulting from inflammation of the Fallopian tubes and ectopic pregnancy in the female.

There is a sequence of symptoms in acute appendicitis which is not found in other diseases already enumerated. The pain, tenderness, and rigidity are not so marked, and if we note the difference in the progressive phenomena, as I have tried to make clear in the early portion of this paper, I cannot conceive how one can fail to make the diagnosis.

I wish to draw attention to two facts in making a diagnosis, which are not generally brought out in the discussion of this subject. One is the cause for the slight pain experienced by some notwithstanding the fact that an abscess is present. When the inflammatory process includes the parietal peritonæum there is always a greater amount of pain, and also increased rigidity; if the disease is deep within the abdominal cavity and surrounded by coils of intestines, the pain and rigidity are not so marked.

The only purely medical condition with which appendicitis may be confounded is the onset of pneumonia. I have found in quite a few instances, when called in consultation in cases of supposed appendicitis, a beginning pneumonia with acute paroxysmal pain in the right iliac fossa, which, however, was not associated with the other phenomena of appendicitis. Examination of the chest revealed the early phenomena of pneumonia. This is particularly of importance in children, in whom I have found this condition four times.

In discussing the treatment of appendicitis I will not waste time in describing methods with which all of us are more or less familiar, nor speak of medical means of combating the disease, except to remark that this is a surgical affection and requires surgical measures to insure complete relief.

I do not believe that any patient with acute appendicitis should be refused operation unless actually moribund. As I have previously stated in this paper, I have operated in fifteen cases, the patients being in *extremis*, ten of whom recovered. All of these patients presented unmistakable evidences of general peritonitis; one was so clearly

moribund that the anæsthetizer expected a fatal result from the administration of the anæsthetic. The best result that I expected in this instance was a prolongation of life. There was a gangrenous appendix separated from the cæcum at its base, pus and faecal matter in the peritoneal cavity, and yet this patient recovered after a three months' convalescence.

In conclusion, I wish to enter a pronounced protest against the Ochsner treatment of appendicitis; the plan of the starvation treatment without the intervention by surgical means until late in the disease violates the basic principles of good surgery. When we are confronted by the products of inflammation and bacterial action, it is evident that until these are disposed of by operation resolution will not take place. If delay is resorted to, experience shows that there is always an increase in the amount of purulent material, that the area of tissue involvement will be increased, that the inflammatory changes in the contiguous structures will be proportionately greater, that the organization of the adhesions will be firmer, and the disposal thereof will greatly endanger the structures involved.

When we consider further that patients live for a period varying from three or four days to one or two weeks after a more or less circumscribed peritonitis has developed, and then die either from the shock of a late operation or from neglect to operate, it is self evident that had surgical interference been adopted instead of trying speculative measures one would have nothing with which to reproach oneself.

One of Ochsner's main points in advocacy of the starvation plan is the prevention of peristalsis, thus avoiding a further contamination of the peritoneal cavity. If we will pause for a moment and carefully review the other possible means of spreading the infection within the peritoneal cavity, one of the strongest arguments for the treatment falls flat. The action of the diaphragm in the act of respiration, inspiration, or expiration has a greater or less tendency to siphon action on the contents of the abdominal cavity, which is clearly noted in the performance of any abdominal operation, hence there will be bowel movement without peristalsis. The peritoneal cavity contains a quantity of fluid which in the acute infective process of a peritonitis offers the very best culture medium for the growth of microorganisms, and as the contents of the abdominal cavity are bathed in this fluid and each act of respiration displaces it to some extent, it will be readily seen how this is an additional factor in the spread of the infection. The remaining method of infec-

tion is through continuity and contiguity of tissue. We cannot limit the migration of the bacteria or the invasion of the germ by inhibition of peristalsis.

Dr. Ochsner states further that large nemata should never be given, for fear of rupture of an abscess or a circumscribed collection. This, to my mind, is a clearly defined proposition for operation instead of delay. He further states that when neither food nor medicine has been administered from the onset of the disease, his mortality has been *nil* in acute cases. I must say that I have yet to see the case of appendicitis in which some household remedy has not been administered prior to the visit of the medical attendant, or even after treatment has been instituted by the physician in attendance. Those cases which would recover by physiological rest may be classed among those which it is the lot of the ordinary surgeon never to see. Ochsner states further that by abstention from food and lavage operation is made easier for the surgeon. I fail to see whereby this abstention will in any manner facilitate operation or help the operator. I certainly have never found sufficient peristaltic movement of the bowels to be appreciable in any degree whatsoever, or any faecal accumulation in the cæcum to embarrass the operation.

I do not for one moment want it understood from my remarks that Dr. Ochsner does not favor early operation. He does, but he places a time limit after which operation should be deferred until all acute inflammatory action has subsided.

Cooper Medical College, San Francisco, has graduated the following:

Walter Clement Alvarez, of Honolulu, H. I.; Archibald Anand Atkinson, A. B., of San Rafael; John Irving Beattie, of Santa Clara; Adolph Berg, of San Francisco; Ralph Percy Bernard, of San Francisco; Arthur Phinney Calhoun, of Seattle, Wash.; William Leon Channell, of Oakland; Willis Hiram Corson, of Issaquah, Wash.; Dorothea Willson Dekau, of Benicia; Percival Dolman, B. S., of Berkeley; Edwin Wood Earing, of Los Angeles; Frank Weston Edmonds, of Berkeley; Julius Columbus Egeberg, of San Francisco; John Stanley Hanlon, of San Francisco; Atlas Thompson Hembree, of Windsor; Reuben Heywood Hunt, of San Francisco; Peter Nathaniel Jacobson, B. S., of Healdsburg; Harry Clifford Loos, of San Francisco; Thaddeus M. McNamara, Jr., A. B., of Oakland; Albert Henry McNulty, of Fortuna; Edwin Merrithew, of Gold Run; Roy Henry Morris, of San Francisco; Archibald Leonard Offield, of San José; Joseph Bethencourt Perry, of Haywards; William Quinn, of San Francisco; William James Quinn, of Beatrice; Alva Jacob Remmel, B. S., of Alameda; Frank Holmes Smith, of San Francisco; John Waldo Snoke, of Seattle, Wash.; Aly May Spencer, Ph. B., of Pueblo, Colo.; Harry Lesel Swauger, of Oakland; Mary C. Taylor, of Stockton; Zilda Turner, of New Zealand; Calvin Albert Walker, of San Francisco; Harold Staniford Warren, of San Francisco; Philip Henry Weber, of Pomona; Irving Scott Zeimer, of Oakland.

THE SURGICAL PARADOX.

By ELY VAN DE WARKER, M. D.,

SYRACUSE, N. Y.

The differences between Dr. Daniel H. Craig, of Boston, and myself are so slight that the careless reader might feel justified in regarding Dr. Craig's kindly notice of my paper on the Dangerous Operation of Uterine Curettement as a waste of time; or, that this criticism on a paper contributed by him to the *New York Medical Journal and Philadelphia Medical Journal*, for March 19, 1904, bearing the same title, plus a suggestive mark of interrogation, was even less called for.

Slight as these differences may be they are vital to my contention that in uterine curettement we have a surgical proceeding inherently dangerous. When we admit that an operation is of such a character, or that the instruments necessary to its performance are of such a nature, that the best among us may do something that we did not intend doing, the mere fact that such an error was not always attended by fatal results in no way lessens the potential danger of the procedure.

I do not believe that there is a gynecologist in the land who will regard with complacency an accidental puncture of the uterine wall. All must be in accord with the author of the paper that such accidents occur and no harm is done; and we must agree with him in his statement that the dull curette may perforate the uterine wall as readily as the sharp. Nearly all of the accidents that have occurred within my personal knowledge were due to forcible dilatation which may occur in experienced hands. In abdominal surgery we have the reverse of these conditions. Here we are dealing with an operation of precision. We can see and feel what is before us and deal with it directly. In curettement we have an operation of indecision. With touch prolonged to the end of a piece of steel, with uterine tissue forcibly stretched by the action of an automatic instrument, sometimes actuated by a screw instead of the pressure of the hand, guided by neither sight nor touch, the surgeon cannot be decided as to what he is doing. The only safe thing about it is that he brings to his task trained muscles and ripe experience.

The division of operative gynecology into major and minor may have a certain influence in inducing inexperienced men to attempt the operation. This will not, however, explain the fact that two of the men referred to in my article of October 10, 1903, were attached to hospital staffs, one in a large city and the other in a small town. These men were doing "major" surgery.

One of the men, Dr. Craig none too severely

criticises when he says that "of an individual who fails to recognize the intestine when he has it in his sight and in his hands, and proceeds to scrape a hole in it, nothing in this connection need be said." This, however, is the very connection in which he must be reckoned with. "Any operation," our author concludes, "would be dangerous in such hands and no conclusions need be drawn as to the danger of such occurrences." This man was an abdominal surgeon and was doing this class of work with average success. The other man, who lives not many miles from Boston, is also a hospital surgeon and doing abdominal work with credit to himself and to his hospital, I am told.

It is very evident that it will not do to reach hasty conclusions in this matter; nor will it simplify the solution of the problem to say that curettement is safe in safe hands. We conclude from these facts that one may operate with the average safety in one department of gynecic surgery and be absolutely unsafe in another. Is this anomalous state of affairs due to the operator alone, or may it be due to the nature of the operation and the character of the instruments employed, or is it a mixed condition involving all?

Judging from the class of work in general surgery that I see about me, the best is done by the physicians who are good mechanics and who began young; the poor work is done by physicians approaching middle life who have gone wrong. Every man who has bestowed some normal indwelling upon his own limitations ought to realize that he can neither train old muscles to do new things nor can he educate into being new special faculties. Excepting one, all of the operations referred to in my paper were performed by men who became gynecologists at or past middle life.

Dr. Craig describes a carefully planned series of antiseptic precautions in preparing a patient for curettement. The result is that he never has the septic complications that so often occur in the surgical work of the inexperienced surgeon. Our author is perfectly right in stating that these precautions would make the operation safe from sepsis at any hands. This is the view taken by the text book writer and the teacher. I feel assured that this is a mistake. The experienced surgeon thinks in terms of his antiseptic technique; each act is a step as it were to a logical conclusion. What he does is the result of conviction induced by long and patient self training, rather than by teaching. The mistake exists in the fact that they assume that the old doctor can be induced to follow these essentials in every detail by teach-

ing instead of by training. He believes that he has followed every step when he has not. What appears to him as so very simple is really complicated, but its complexity has escaped him. It is not unusual for him to return to his home firmly convinced that there is a lot of nonsense in so much antiseptic fuss over so simple an operation. He has been taught and what is teaching for unless to enable him to use his mind? I have seen these men operate and I have been convinced that their preparation of the patient was regarded as a waste of time. Take the dilator, for instance. Our author can teach its use and the belated postgraduate can see him use it, but can any form of teaching yet devised convey to his mind, not the degree of force that he ought to use, but the actual amount that he is exerting with the instrument? The curette, blunt or sharp, is another thing that he is taught, not trained, to use. I have long ago defined practical gynecology to be simply a highly trained and differentiated sense of touch. Can fingers which have never acquired this gain any idea of consistence or resistance with such a touch prolonged to the end of a steel wire? This cannot be taught, it must be acquired by training.

It is doubtful if the author has added anything to the general belief in the safety of uterine curettement by referring to the frequency of puncture of the walls of the organ without evil results. Already there is a growing tendency to belittle the dangers of the operation. We all know that such accidents do happen even with experienced operators. This fact alone, if we had no others, is sufficient to prove that there are positive and inherent dangers in the operation. I think Dr. Craig hardly grasped the motive of my paper. It was simply this: that college and postgraduate teachers, as well as the textbook writers, regard the operation too lightly. They have minimized its dangers to very nearly a negligible quantity. Very little is said to caution the untrained man that he is dealing with a dangerous procedure. We will always have the untrained operator with us, and there are no conscientious, trained surgeons who do not deplore the fact.

The social and professional reasons that induce men at or after middle life to attempt surgical work have been very active during the past ten or twelve years. If we search for an explanation it takes us beyond professional or ethical limits. It becomes a problem in sociology and shows a strange lack of discrimination on the part of those who have to select a surgeon. The readiness with which men and women, especially the latter, submit to operations is only equalled by their indifference concerning the fitness of the operator. It is all difficult to explain, unless it

may be an upheaval on the surface of the existing social order of a primordial civilization that held human life cheap. Our author teaches the young men and his skirts are free from the odium which, according to Dr. Kelsey, belongs to the postgraduate teacher. His responsibility, however, does not end with teaching surgery. The young graduate should be given a high standard of surgical attainment. He should be surgically trained as well as surgically taught.

Dr. Craig's contention that the operation is safe in trained hands fails as a criticism of my position that certain dangers belong to the operation *per se*, since he admits that perforation may occur to the most experienced operator. The only advantage that the man of experience would have over the surgical novice or general practitioner would result from the fact that he would know how to deal with it, while the other man would open the abdomen and attempt to sew up the uterine rent, which might be comparatively safe if he knew enough to let it alone. Further, a man may be a fairly safe ovariologist, hysterectomist, appendectomist, and yet make a veritable fool of himself when he attempts the dangerous operation of uterine curettement. This is the operation that belongs to the general practitioner and to the belated surgeon, and which he is encouraged to attempt by the textbooks for students and general practitioners, usually written by men in Dr. Craig's position, or by articles in the journals, so cheerfully optimistic in the interest of the inexperienced surgeon that the most serious complications are charged up to the trained surgeon on equal terms with the untrained. This is, to say the least, a dubious way to encourage the untrained surgeon to seek faithfully to do his best, with a due regard for human life. There was a time not so very many years ago when gynecic operations were done by the elect; then our author's criticism would hold good that it was not right "to characterize the operation of uterine curettement as dangerous in the abstract," from the standpoint of the operator at least. The abstract side of any question is hardly a safe one to generalize from, and is especially so here since this operation, as well as many others, is in the hands of the average and under-average men.

A great responsibility rests upon those who assume to teach. Is it safe, for instance, to state that the vagina may sterilize itself by its own secretions without also stating its corollary that this is true of the normal vagina with normal secretions only and that this immunity exists by such a narrow margin that it is negligible in practice. It would be more fair had the author given some later facts concerning this quality of

the vagina now fast becoming mythical. Döderlein in vaginal secretion found fifty per cent. of pathological bacteria, while ten per cent. contained *Streptococcus pyogenes*. Czerniewski demonstrated the presence of the same germ in thirty-three out of eighty-one women. Robb and Smith show that sixty-four per cent., all streptococcus cases, were found following labor or abortion; the very class of cases in which the average man would feel impelled to operate. In view of the interrogation in Dr. Craig's title he is writing for the general practitioner instead of the expert. From this standpoint I cannot forbear to express regret that our author indorses the irrigating curette. Dr. W. R. Prior's assertions of its possible dangers, backed up by actual demonstration, ought to condemn the instrument. If the question of method is ever to be settled, careful statements of facts from such a competent observer as Dr. Prior ought to be accepted as final, or at least deserves mention by the most opinionated writer. His statement makes it certain that there are dangers which inhere to the instrument aside from any question of skill on the part of the operator.

Another statement which is made too positively and which ought to be modified is, that if we have measured the depth of the uterus and introduce the dilator, I assume, to conform to this measurement, there is no danger of perforating the wall of the non-puerperal uterus. Why not say something about the time required and the force one may safely exert at this stage of the operation? As a matter of fact, I do not believe that rupture or perforation of the organ is made by driving the dilator too far within the cavity, but that it is due to the enormous force that can be exerted by the leverage of the expanding blades.

The day of writing for "those competent to undertake the performance of any surgical procedure" is past. The belated surgeon and the average man is an assiduous factor in American surgery and in elementary textbooks and journal articles he must be reckoned with. A man of Dr. Craig's reputation and position has grave responsibilities resting upon him. His utterances carry greater official weight than those of others not so placed. While he has safeguarded the operation with every precaution and made it as safe as it is possible at his hands, has he placed any danger signals out to guide the untrained man who attempts to carry out the details of his exquisite technique; or from this far more serious side, in what way has he driven the fact home to the "experienced" man that in making a uterine curettement he is dealing with a dangerous oper-

ation? We cannot lessen danger, nor change the fixed qualities of the personal equation by magnifying the value of technique.

Dr. Charles B. Kelsey, of New York, in a paper entitled the Surgery of the Day, in this *Journal* for January 2, 1904, takes my paper on The Dangerous Operation of Uterine Curettement, appearing in this *Journal* for October 10, 1903, as a text to explain some of the bad surgery of the day. My thanks are due to Dr. Kelsey for the pleasant allusion to my article, but I never regarded it as an omission on my part that I made no attempt to explain the existence of the unskilled surgeon. Dr. Kelsey, however, has convictions on the subject unalloyed with either doubts or fears.

The author traces the imperfect knowledge of the amateur surgeons of to-day to the postgraduate medical school. "There the surgery taught is good in itself and taught by masters, but it is taught to those incapable of understanding and with no restrictions upon their use of it." This may be true, but from what source did the postgraduate student gain the desire to become a gynecologist or take up any surgical specialty, usually at or past middle life? There was a seed thought, and I think the most reasonable place to look for the germ exists in the text book for the general practitioner. After that the postgraduate school, but not always. If all who attempt surgery would take the time to study the branch they have elected to follow for six weeks or so in some postgraduate school a better showing might be made. I am not one who believes that no knowledge is better than a little. I have seen so many examples of this class that I am satisfied with even a little knowledge in a special direction.

The men who swell the army of amateur surgeons are text book graduates. Nearly all of the men who were guilty of the deplorable accidents referred to in my paper were of this type. It is very evident that Dr. Kelsey, strenuous as he is in denouncing the class of men that the postgraduate schools scatter over the country to do their worst to humanity, has not sounded the depths of the evil. He has not said anything about the man himself. He is too impersonal, and by overlooking the man's incapacity for self-help, condemns the only agency that offers him any help at all.

The evil tendency of the surgery of the day cannot be understood without a study of the prime factor of the error, the man himself. He defines a type; the man who has passed his life in narrow surroundings and has reached or is past middle life. He has been a fairly successful general practitioner, but hardly ever of the highest grade.

Very often he is a man with a grievance and his ability and profound knowledge, of which he never tires of talking, have not received the appreciation they deserve. When he happens to be in a company where he cannot brag he is silent. In his county society, which he rarely attends, he never contributes a paper or joins in a debate; looking down upon his colleagues and holding their opinion as of little worth. He is a man of ambitions—the little, querulous aspirations that beset the ill trained mind. He believes that he is capable of higher things and his sense of duty well performed is always cramped by his morbid egotism. His normal habitat is in the small towns among the daisies, the elegiac flora of the village church yard. He is never a text book graduate, but he belongs to the kind upon whom Dr. Kelsey opened the phials of his wrath.

These men make a common mistake. The healthy man between forty-five and fifty-five years of age is in no manner conscious of age, nor need he be. He is simply at the summit of maturity; but he cannot reeducate the old centres of muscular coordination, nor can he forget one kind of training and educate his mind to think in terms of a new occupation. If I was to tell a belated surgeon that I intended to study the violin and become a great artist he would pronounce me a lunatic; and yet, he intends to do something more difficult and more hopelessly unattainable. If he was a genius he could not do it, for the genius has lived his life before he starts on his surgical career.

This man is aided and condoned by a strange social phenomenon peculiar to the American people. They take him at his own estimate of his ability and skill. Within a year he may make the claim, not without reason, that he is doing all of the surgery in his town. His chosen field is a narrow one. He removes tubes and ovaries with consistent indiscrimination, but his one hold, that excels in force "the power of herbs and might of magic spell," is appendicitis. In this field he is supreme, with a facility of diagnosis only equaled by the abiding faith of his public. He is the one who has run the death rate of appendectomy to the ghastly figure of thirty per cent. and held up American surgery as a spectacle for all the world. The trained and educated surgeon has an idea that the public will find him out and keep away from him. They do not find him out, for we are a peculiar people,—a people of fads, and the present surgical fad is appendicitis. Of course the fad will die when the time comes, and we shall look back on it with shame, just as we do to-day on female castration; but meanwhile he and his

type are working their malignant will about a disease upon which no man thinks sanely.

The surgeon estimates a man's fitness as a surgeon by the number of his recoveries, but the public has another standard which appears to be the number of his operations and his success in boasting of them. I know of one man who has the ability to achieve a very respectable death rate in repairing birth rents in the perineum and cervix, which is openly discussed in his community, without any impairment of a considerable practice. I trust that Dr. Kelsey will perceive that we have not only the postgraduate school graduate, but that we have a public prepared to receive and put faith in him. If we are going to find a remedy for this we must begin at the bottom and work up. While we have been advancing the cause of medical education we have neglected to educate the people in discrimination and good medical and surgical judgment. Until we do this the unfit and belated surgeon will do his share of work along with better men.

In the text book graduate we have another phase of the belated surgeon. He is the product of social conditions which have developed with great rapidity in a few years. Small towns and villages, with populations ranging from 1,500 to 5,000 inhabitants, have organized local hospitals. The women have raised the money and been foremost in erecting new buildings or in converting old ones to hospital use. They have done this out of the goodness of their hearts and from a most commendable philanthropy. But they have created in their midst an evil which is active in a ratio proportioned to their means of doing good. The best men of the town, as a rule, have been selected for the staff. Those who were the most popular have become surgeons, while others have received places on the medical side. In little hospitals of from five to fifteen beds every important surgical specialty is represented. With rare exceptions they are text book specialists at or past middle life. The most radical surgical methods are followed. Appendicitis is never given medical treatment. The infirmities of women afford ample scope for surgical intervention. The most difficult genitoplastic operations are undertaken with results not necessary to describe. When they are in doubt the textbook is brought into use and from which very singular procedures are undertaken. One of the best of these surgeons had a case of bladder incontinence which he treated by doing Emmet's buttonhole operation and afterwards found that he was unable to do the simple operation of closing it. This is only one illustration of what the text book will do for

the text book surgeon. The ophthalmologist, hitherto content to do his best in adjusting glasses, does iridectomy and operates for cataract, while the rhinologist finds ample recompense for belated opportunity in diverted septa.

If any one among our readers is familiar with these rural hospitals and believes that I have over-colored the picture, if he will take the trouble to state it I will submit cheerfully to the correction. I am simply giving my own experience of the work done, for many of the unfortunates drift afterwards into my own hands in the central New York region. I regret to say that I do not believe that the special surgery will ever improve, as there is not material enough to build up the expert, nor would it pay for a well qualified young man to locate in one of these small towns.

Dr. Kelsey's theory fails to explain the situation in the rural hospitals. These men are rarely the product of the postgraduate school. They do not resort to these schools, because they cannot afford it. After the appointment to the surgical side of a rural hospital the only way to hold it against all rivals is by showing the best front that he is able to. It would be a confession of weakness to seek knowledge for two months, or so, at a polyclinic. He is obliged to stand by his work and rely upon the text book. In spite of the fact that these rural institutions develop the belated surgeon with his undeveloped surgical judgment, his untrained diagnostic faculties, his uneducated touch, and his ignorance of technique, I believe that they do more good than harm. They are emergency hospitals in their true rôle. The country is traversed by railways and electric lines along country highways, while farming is carried on largely by machinery which inflicts serious injuries. All combine to produce a class of accidents unheard of ten years ago, and in the care of which the country doctor is most proficient. The men who cause all of us serious regret when they attempt difficult surgical specialties here show their shining qualities. Life is but a compromise and no evil exists without its alloy of good. The rural hospital is of such recent creation that it shows its worst side. The belated surgeon will pass and be replaced by younger men better educated who may be taught to let some things alone. His opportunities for harm will be less. The appendicitis fad like all other fads among us will pass. The respect shown by expert gynecologists for the intact female genitals, which exists already in fair proportion and is yet growing, will permeate the country side and do away with some scandals and much evil.

I think that Dr. Kelsey will agree with me that what he explains in such simple terms is really a

very complex matter. When we see errors it naturally causes us to look about for some means of correction. It is not the kind of morality which bears fruit that contents itself with finding fault. The Rooseveltian dogma is that there are not many removes in evil between the bad man and the impractical good man. What the medical profession now ask and the general public will soon strenuously demand is a remedy for the widely spread surgical incompetency that exists in the United States. As Dr. Kelsey truly says, we find here "some of the best and most of the worst surgery of the day." I believe that some of this bad surgery can be improved, not to equal the best, but to bring it to an average level of safety. "But of what use is it to record these things?" Dr. Kelsey asks, "unless a remedy can be found. They cannot be told to the laity without discrediting the whole profession, and telling them to the profession is useless—because they are already known." I take it that our first duty is to humanity and not to the profession. Our sense of humiliation comes, not from what the laity may know about our professional derelictions, but from what we know concerning them. So far as the laity is concerned are we not sufficiently discredited already? Appendicitis is the subject already of constant ridicule and humorous stories in the lay press, which state of mind on the part of the public will be sure to effect a remedy in time. The humiliation of this is that reform will be forced upon us from the side of the laity instead of the profession.

The same was true concerning the laws enacted for a State examination to practise. Had there not been back of it a general conviction of the necessity for the reform, it surely would have been defeated by the teaching medical bodies. Dr. Kelsey lays the responsibility for surgical unfitness to the shortcomings of the postgraduate school. He is partly right, but if he is going to correct the errors, he will be obliged to do so through the force of opinion created among the laity. I fail to see how the profession will be discredited by this. Discredit never came to an individual, or a class of individuals, by attempts to do better or to reform. On the contrary, it comes from sitting inertly under the morally debilitating conviction that a wrong to correct or a stain to wipe out lies at your very door.

There is something radically wrong in the surgical teaching of the day. The colleges teach surgical rudiments, not surgical art. They do not attempt to educate the surgical specialists. One of the best of medical colleges with a four years' curriculum gives to gynecology thirty-two didactic lectures and sixteen clinics in the fourth year.

It will barely enable the graduate to pass the State examination. General surgery fares a little better, as the work begins in the last half of the third year. The only chance the graduate has to supplement this is to secure a hospital position, which, to the great army of graduates, affords no relief. The polyclinics and the postgraduate schools were, it is only logical to conclude, founded to supply this want. This they cannot do. In the first place the courses in any given branch are too short to give a practical training. In the second place, they start out on the theory that they are dealing with educated men who simply need to brush up. Consequently they attempt to give in a few weeks what the colleges barely touch upon and of which the postgraduate student is ignorant unless he has been diligent with his text book.

The postgraduate schools are extralegal teaching bodies. They have charters which enable them to hold only property in which the object and purpose is stated after the usual formula in private charters. They have no legal status as teaching bodies and any credential they may grant is not recognized in law. In order to conform with the educational laws of the State of New York they should be under the restrictions of the Board of Regents, and until they do this they are violating the educational laws of the State.

To meet the conditions which have developed in the postgraduate schools additional legislation is needed, not aimed at these schools in particular, but controlling all schools in which after the conclusion of the stated course of study a final certificate of fitness and training is given. This credential is intended by the schools that grant it and by the student who receives it to have a certain value by inducing the public to have extra confidence in the holder in the business or branches covered by it. The holder of such a certificate should be required to pass a new State examination before he is allowed to seek special business in the calling covered by his certificate. The State medical examination is intended to test the fitness of a general practitioner, and it gives to the holder no extra fitness in any special subject. But in fairness to the State licentiate and to the public, when a man receives a credential of fitness in any special branch and intends to appeal to the public as one having more than ordinary knowledge and skill by reason of it, public safety demands that he should be subjected to a test of his extra attainments. An amended law to this effect would not effect the general practitioner in following any branch of his profession. It would only regulate the man who by an inadequate

course of study had acquired some written credential as a specialist and which he intended to display to the public as evidence of his special attainment.

If, however, the postgraduate schools were to pass under the control of the Board of Regents and the certificates of attendance emanate from that body nothing more would be needed to make such a certificate well worth seeking. Looking back over the profession as I have seen it, there is every reason to be optimistic as to the future. Young men of a higher grade are entering the profession; better educated and specially fitted to study medicine. They will bring greater knowledge, better trained faculties, and a refined capacity for discrimination and judgment to their life work. This higher grade man will also educate his public, which is already beginning to see that the tail of the plow is a poor preparatory school for the study of a profession that is yearly becoming more difficult. The present type of man that has gone daft in his surgical furor will have no standing then. Let us hope for better things. Let all of us, who have suffered many things and have been made desolate at the hands of these men, hope that they who come after us will receive the ministration of trained hands and sane minds.

MALPOSITION OF THE ABDOMINAL VISCERA, AND MEDICAL AND SURGICAL TREATMENT FOR SOME OF THE ACUTE CASES.*

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During fifteen years of surgical work, a greater portion of which has been abdominal operations, many of them necessitating a free opening of the peritoneal cavity, I have so frequently observed displacement of one or more, or all of the viscera, that I am compelled to believe the condition of vast importance, not only to the surgeon, but to the general practitioner. When one considers the very important place that regional anatomy holds in physical diagnosis, it is not difficult to understand the necessity of knowing the relation between normal and displaced organs.

Allow me to say that I have frequently found displacement of every organ contained within the abdominal and pelvic cavity, in some, one particular organ, others, another organ, and yet again, several, and in many, all; in fact, general splanchnoptosis obtains quite as frequently as displacement of one or more of the organs. This can be accounted for by the fact that in general splanchnoptosis there exists a complete relaxation, while

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in displacement the displaced organ usually depends upon either pathological conditions present in the organ displaced, or in adjacent organs, or in supports; therefore, all pathological conditions affecting the neurotic tone of the system may produce the former, and when one considers the vast amount of exhausting, debilitating, and wasting diseases, one can see how very common must be splanchnoptosis, of some degree at least. But displacement of certain organs not due to splanchnoptosis is the condition which, because of the absence of general relaxation, is the most frequently overlooked by the diagnostician. Malposition of some organ, not due to splanchnoptosis, occurs so frequently that one is often at a loss to know what causes it, even while operating. As to my own observations, enteric displacements are those most frequently present, and displacements of the colon, the transverse colon particularly, are the most common of any in the abdominal viscera, and one can readily understand that if the transverse colon is tossed or displaced the ascending and descending colon, as well as the cæcum and sigmoid flexure, must necessarily be in an abnormal position; hence, due to angularity, we may have constipation, appendicitis, fecal impaction, and ileus as results.

The great number of times that the appendix is found displaced to a greater or less degree indicates how frequently the cæcum must be displaced, and, therefore, the relative position of the colon. The appendicular organ has been found at almost every possible locality within the abdominal and pelvic cavity, and I have found it twice outside, once in the right femoral canal, once in the left scrotum, both times, however, with intestinal hernia. I have dissected it twice from the lower side of the liver close to the gall bladder, and quite a number of times I have found it on the left side of the median line. In fact, one should always consider the possibility of disease of the appendix when other symptoms exist with some particular sore point within the abdominal or pelvic cavity, as well as an accompaniment of hernia protruding through or within any of the openings from the abdominal or pelvic cavity. Therefore, displacement of the cæcum must be very frequent and the range of mobility very great.

If not too trying on your patience, I should like to report the case of appendicitis in the femoral canal, also that of the left scrotum. The ordeal will be very brief. In the month of October, 1886 (when little was known regarding appendicitis), I was called to operate on a strangulated femoral hernia in a lady, aged 28 years. There was the usual enlargement in the right femoral canal, but

the extreme soreness to touch and elevated temperature of 103.4° suggested something more than strangulation, which had been present less than twelve hours, without obstruction of the bowels. However, the usual incision was made when there appeared in plain view a gangrenous something of which (never having seen a gangrenous appendix) I was very suspicious, but after removing it, and while doing so finding it attached to the bowel, I concluded it was the appendix. That was my first appendectomy; of this I am sure, for it was my good fortune to open this same abdominal cavity five years later for a subserous fibroid, and ten years later for a pyosalpinx. I found the appendix absent at the second operation, and it was still absent at the third. The lady since her last operation, in 1896, has been in perfect health, and undoubtedly the appendix remains absent, as she has not been operated on for appendicitis in the mean time.

The other case was in a baby of 11 months, operated on in 1901, who had acute strangulated inguinal hernia of the left scrotum during an attack of bronchial pneumonia. The strangulation was complete; and because of the pneumonia the little one was in extremis. The usual incision was made, which, when the sac was incised, revealed the head of the cæcum and attached to it the appendix, which was sloughing. The bowel was badly discolored, but was returned with the hope that it might resolve, which it did. The babe recovered.

Enteroptosis of the small intestines I have found quite a number of times and twice, I am sure, death would have resulted very quickly if the conditions had not been remedied. Because of surgical treatment being followed with success in the two, and medical treatment successfully in some others, I wish to describe these cases.

November 27, 1902, I was called to see Miss O., aged 34 years, slight of stature, in consultation with Dr. J. H. Robison. Miss O. gave the following history: Had been ill for three days, bowels had moved from cathartics, and for two days she had had some nausea. Dr. Robison was called the morning of the day I saw her, and was fearful of intestinal obstruction because of extreme nausea, vomiting, pain in the lower abdomen. When I saw her at 11 o'clock p. m., I found her almost pulseless, body and face covered with a cold, clammy sweat, anxious expression, constant vomiting, which was stercoraceous. Operation was decided upon. She was taken to the hospital and was immediately operated on. When the abdomen was opened through the linea alba, the transverse colon presented immediately above the pubes, so low down that at first sight it suggested a full bladder. Further examination revealed the fact that all of the small intestines, ex-

cept the duodenum and jejunum, were impacted within the pelvic cavity. With considerable difficulty the intestines were lifted up into normal position, when they were found very much congested and discolored. The circulation returning to them, however, soon gave them a nearly normal color. There was no disease of the appendix, tubes, or ovaries, and the patient recovered without one unpleasant symptom. I am fully convinced this patient would not have lived until the next morning. Dr. Robison and Dr. Hogan, who assisted at the operation, both think as I do. I am not aware of any similar case having been previously reported. The case was one of intestinal obstruction due to impaction of the ileum within the pelvic cavity.

Before giving a synopsis of a case of enteropneumosis which recovered under medical treatment, allow me to state that much has to be taken in doubt, as far as diagnosis is concerned, and because of the fact that surgical interference made the diagnosis in the other case, I shall endeavor, in this case, to state the few principal symptoms which I have observed.

Miss B., a maiden lady, aged 44 years, was taken ill December 8, 1903. Her previous history is that of a nervous dyspeptic, with considerable difficulty in getting the bowels to move at certain times, and always constipated. She had several attacks of acute stomach trouble, but did not call a physician. However, this time, because of continued nausea and vomiting, she called Dr. D. E. Ash, December 9th. He prescribed the usual remedies for nausea and vomiting, also a cathartic, which was repeated on the 10th and 11th. Nausea and vomiting continued, getting worse each day. The vomit had become fecal and black. Rectal enemas of Noble's solution, etc., had brought away, December 11th, a dark liquid, but increased the nausea and vomiting. I was called the evening of December 11th, as patient was greatly depressed. Examination showed a well developed woman, musculature of limbs and trunk good, skin moist, patient dull, expression passive, tongue voluminous, indented, and coated, breath foul; patient very nervous, and moaning with nausea; pulse 128, small and soft, temperature 98°, urine not sufficient, but not measured or examined. The abdomen above the umbilicus was retracted and bulging two inches below. By gently stroking with the warmed open hand from the stomach downward, the transverse colon could be distinctly located two inches below umbilicus. Below this was a flat surface, extending across abdomen, about two inches wide. The ascending and descending colon could also be mapped out distinctly, and both the hepatic and splenic flexures were too low. There was no tympany except in the colon. The abdominal musculature was good, yet I diagnosed enteropneumosis. The nausea, vomiting, obstipation, absence of pain, malposition of entire colon, absence of normal amount of intestines in abdominal cavity, no elevation of temperature, in addition to a soft and flabby mass in pelvis, as shown by digi-

tal examination, were the symptoms from which I made the diagnosis.

Now as to medical treatment in these cases, I think that the patients on whom I operated, if treated medically soon enough (or, I should say, mechanically, for drugs are of little use), would have recovered without an operation, as this one did, but treatment must be begun before the displaced bowel, impacted as it is, becomes adherent, or glued one coil to the other, as in the case in which I report operation. In the latter case impaction had not occurred.

As I stated a moment since, drugs have little effect in these cases, even rectal enemas are insufficient until the intestines are replaced. How are we to accomplish this? I think posture alone will do it in a great majority of cases, as I said before, if begun early enough, and that means as soon as the case is seen, which may be too late. If pain and tenderness in the lower abdomen have developed, with an elevated temperature taken per rectum, I think it is an immediate surgical case. In the second case, the bed was elevated to a modified Trendelenburg position, about 30° (Trendelenburg's is 45°), and so remained during the night. There, was some flatus passed about five hours after adopting the position. The next morning a high enema brought away a large evacuation of dark fecal matter and an abundance of flatus. After being placed in this posture, the colon at first changed but little, but in the morning it was five inches higher, while in the normal dorsal position, and the flat place below the umbilicus was now round and normal. The patient finally recovered.

The following case is interesting because of the fact that it exemplifies three conditions: splanchnoptosis, results of cured, recurring, appendicitis, and pelvic impaction of the small intestines:

Miss O., aged 30 years, school teacher, slender form, poor musculature, called me February 1st at one o'clock p. m. She was taken ill the morning of the same day with nausea and vomiting, which through the forenoon had increased. She had had several previous attacks, usually with severe pain in right iliac region, and had been in bed with three or four such for two or three weeks each time. Her symptoms when I first saw her were extreme nausea, vomiting every few minutes, pulse 120, temperature 97.6°. She was alone in a boarding house, and I left her to return a few hours later. By this time, 6 o'clock p. m., she was in extremis, every symptom having grown worse. She had not had pain during this attack. I advised immediate operation, which was done at 10 o'clock p. m. (this time being consumed in getting her to the hospital and preparing her), as her condition was bad, and to delay while try-

ing other treatment might have placed her beyond even surgical help; besides, she gave a history of repeated attacks of appendicitis. The operation proved how dangerous delay would have been, and also the fact that, although the entire ileum was impacted within the pelvic cavity because of adhesion extending from the cæcum to the parietes, partially strangulating the intestine, posture would have failed to have saved her life. The usual incision was made for appendicitis, and the first viscus that presented was the pyloric end of the stomach. The right lobe of the liver and the gall bladder could readily be felt about three inches above the upper end of incision. The transverse colon was tossed and the ascending colon and cæcum were very much too low. After incising the adhesions, the small intestines were raised from the pelvic cavity, and about three feet were found to be badly discolored. However, after raising the parts, the circulation returned, and I felt safe in allowing them to remain. The appendix was a mere thread, and had it not been for the mesoappendix, one would not have found it. It was beyond any danger of disease, but the adhesions left resulted in a greater immediate danger than would an acute attack of appendicitis. Generally these patients are in such an extreme condition that any radical operation to cure the enteroptosis cannot be done. This patient was placed in the modified Trendelenburg position, and kept so for five days. She made a good recovery from the acute condition, and was advised to stop teaching school and take long walks, physical exercise, etc., to tone up the musculature.

Posture in the treatment of diseased conditions, either medical or surgical, has long been neglected, but of late it has received some attention. Dr. Fowler, who advocates the jackknife position for inflammation of the lower abdominal and pelvic cavity, states that this localizes the inflamed part and walls it off from the general cavity. Some one, whose name I have forgotten, advocates the opposite, having the upper abdominal cavity the lowest point, because of the greater amount of glands to absorb disease germs. If one takes into account the influence that posture has on the blood pressure of the part inflamed, and which posture will furnish the most leucocytes to the part, I think he can select well that which is best. Frequently we find the abdominal cavity quite filled with fluid, which consists of lymphoid phagocytes. It might be well to use a posture which would cause this fluid to gravitate to the septic parts.

Since writing the above, I may add two cases of enteroptosis cured by posture.

CASE I.—Miss D., 30 years old, was taken sick about January 1st with severe pains in right iliac region, the tenderness extreme at McBurney's point, temperature normal by mouth and 99.5° per rectum, continuous nausea with frequent vom-

iting. Diagnosis, appendicitis; operation refused. On second, third, and fourth day nausea increased, abdominal muscles both sides tense, no elevation of temperature, colon plainly visible below umbilicus, pelvic contents doughy, bowels not moving. High enemas had been tried for three days without any result, but the morning after elevating foot of bed, one was given which had the desired result, and patient made quick recovery.

The last case which I have to recite is such as the surgeon frequently sees. The patient was operated upon in January 14th by an out of town surgeon at the Bradford Hospital. The uterus was suspended, which was the only abdominal work done, yet every means usually employed failed to evacuate the bowels. The patient was nauseated constantly and was vomiting very frequently. Her physician telephoned the surgeon of her condition, and he thought there must be some obstruction, and considered it best to reopen the abdominal cavity. Her attending physician, Dr. W. J. Russell, stated the case to me, as patient's former surgeon could not come to operate. Knowing the patient's relaxed condition well from a recent examination, I suggested the modified Trendelenburg position at 10.30 p. m. The bowels were evacuated thoroughly at 3.30 p. m., and the patient is now rapidly recovering.

It is not alone the posture of which I have been speaking that is useful. The genupectoral is good for immediate action and replacement. Again, in acute inflammatory conditions, such as pelvic peritonitis or appendicitis, Fowler's posture, in which the shoulders and head are raised and thighs flexed on body, is indicated because of the tendency of this posture to localize the inflammation. This is done by the walling off process, aided by the serous fluid, which consists principally of lymphoid phagocytes, and this great reinforcement of fresh troops, as it were, has a disastrous effect on the pathogenic bacteria. In appendicitis, either because of refusal to operate, or because the best time to operate (thirty hours) has passed before the physician sees the case, I would suggest a modified Fowler's posture, that of inclining the body and pelvis to the right side so that the appendical region would be the most dependent.

Thus far I have dealt with only two or three of the abdominal viscera which may have malpositions, and have dealt with these not in detail, but superficially. I have not mentioned malpositions of the stomach, kidney, liver, gall bladder, or any of the pelvic organs, urinary bladder, or ureters. I may say, in considering these conditions as elsewhere, What should be the posture in the treatment of acute septic cholecystitis, i. e., what posture is best to evacuate the gall bladder? Even in cases of stone in the cystic or common duct, posture might help

greatly to dislodge the calculus. Posture during digestion in gastroptosis might be very useful in allowing the contents of the stomach to pass through the pylorus. Am I venturing too far when I say that one particular posture is the best in all diseased conditions of either the organs of the abdominal cavity, thoracic organs, brain, or any of the extremities? In acute tuberculosis of one lung, in pneumonia, pleuritis, pericarditis, one posture must be better than any other. Let us use our best judgment to decide what really is the best posture. I hope some of my medical friends may take up this subject and give us further light.

From what I have said, I do not wish to be understood as championing any treatment for these desperate cases, except that of prompt surgical interference when that can be done, but usually the surgeon does not see the patient for several hours after the conditions have begun, and very frequently, too frequently, several hours after the attending physician has been called. What I wish to state is the possibility of curing the conditions before the surgeon comes, and in case of refusal to allow an operation, to suggest posture as a means of cure. Again, the diagnosis is of vast importance, both to the attending physician and surgeon. Posture in postoperative cases is of great value. By no other method can adhesions, when not wished for, be as well prevented. In extensive pelvic work, it is next to impossible for the surgeon to cover over all denuded parts, because, first, he has not the peritonæum with which to do so, and, second, time is too valuable in these frightful cases to waste it in endless stitching. The modified Trendelenburg posture will allow the intestines to gravitate to the upper abdominal cavity, and if continued for three or four days, they will not adhere when coming again in contact with the denuded parts. Postoperative posture is frequently just as valuable to fasten by adhesion displaced viscera, as is well known. Finally, allow me to say that since I have observed the great benefit of posture, and have so frequently had recourse to it, I do not hesitate to make the statement that the modified Trendelenburg posture is the most positive means that the surgeon has at his command to control postoperative nausea and vomiting. Eight to twenty-four hours in this posture will, in ninety-five per cent. of abdominal sections, prevent this terrible suffering and exhaustion, and usually in twelve hours the patients are retaining whatever fluid they wish, which, of course, is usually cold water, and which they need badly enough. It is really surprising how differently they appear

and feel, as compared with the usual nauseated and vomiting patients that I have had to witness for the past fifteen years, as they lay in the flat, dorsal position. In the Trendelenburg posture gastric hæmorrhage has not occurred, and the promptness with which it controls the vomiting would seem to make it a preventive of that condition rather than a cause.

A CASE OF EXTREME SEPSIS FROM MULTIPLE SINUSITIS, WITH DESCRIPTION OF OPERATION.*

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The following case which came under my observation in Dr. Knight's Clinic at the Manhattan Eye, Ear, and Throat Hospital embraced features so unique, and showed so clearly the general effects of a severe sepsis, having its focus in the sinuses accessory to the nose, that I considered it worthy of being presented for your consideration.

A. M., female, aged 22 years, presented herself for treatment at the Manhattan Eye, Ear, and Throat Hospital in September, 1903. She denied specific history, and said she had been perfectly healthy up to four years before, when she had the grippe; following this she had an almost continuous discharge of pus from the nose for two years, when the right side got well and the trouble was confined to the left side.

Occasionally the discharge would almost stop for two or three days, at which times the left cheek would become swollen and painful and the conjunctiva of the left eye injected; these attacks were always relieved after a large amount of foetid pus had escaped. Patient's general condition was only fair, but her intellect was extremely dull.

At times she suffered with severe occipital and vertical headaches. She had suffered for some time with attacks of facial neuralgia on the left side. She attributed these attacks to a decayed upper molar; this had been extracted without affording relief.

Examination showed pus flowing from the left middle meatus, and polypoid degeneration of the middle turbinate. By posterior rhinoscopy, pus could be seen flowing over the end of the inferior turbinate, and down into the pharynx. Transillumination showed the left antrum to be opaque; the frontal sinuses by this test appeared to be normal.

I removed a portion of the middle turbinate, enlarged the ostium maxillare, and practised irrigation with boric acid solution for two weeks, but as there was no improvement I decided to do a radical operation; so on November 28, 1903, a broad opening was made into the antrum through the canine fossa. This cavity was found filled

* This case was reported at a meeting of the Laryngological Section of the Academy of Medicine. Paper read before the Society at Alumni of Bellevue Hospital.

with pus and the walls covered with granulation tissue, which was scraped away. The inferior turbinate and the inner wall of the antrum down to the floor were removed; the mucous membrane on the nasal side being preserved by introducing the little finger of the left hand into the nostril as a guide, and picking off the spicules of bone with thumb forceps through the maxillary opening. This flap of mucous membrane was afterwards divided and reflected into the antrum, thus furnishing a lining of healthy mucous membrane for a greater part of this cavity.

Recovery from the operation was good, and the case seemed to be progressing satisfactorily until the third day, when the patient began to complain of pain in both knees and the right wrist; these joints became swollen, slightly inflamed, and very sensitive to the touch, but on aspiration were found to contain no fluid. The legs were slightly swollen and oedematous. These articular symptoms did not correspond to those of acute articular rheumatism; there were no acid sweats, no hyperacidity of the urine, and there was no tendency of the inflammation to subside in one joint, while developing with increased severity in another; but all were affected together. None of the complications so frequent in rheumatism were present. She complained also of severe occipital headache and stiffness of the neck. On both cheeks there was a bright hectic flush, more pronounced and attended by some swelling on the affected side. The temperature had a diurnal fluctuation between 99° and 103° F. The tongue was dry and brown, the stomach extremely irritable, and the bowels loose. The vaginal secretion contained no gonococci, the blood examination showed moderate leucocytosis. The urine, which previously had been normal, now contained a small amount of albumin and epithelial and hyaline casts. She was passing only twenty ounces in twenty-four hours, and the amount of urea excreted was much diminished. The condition of the antrum appeared to be satisfactory, but it was evident that the posterior ethmoid cells and possibly the sphenoid were infected, as there was an abundant flow of pus from this region. At this juncture the symptom complex presented by sepsis, nephritis, and multiple arthritis was most bewildering, and it was some time before the relative importance and significance of each of these could be determined. These conditions persisted for about three weeks, during which there was a rapid loss of strength and emaciation became extreme. Then there was a slight amelioration of all the symptoms, and the patient was fairly comfortable for about two weeks, when suddenly on January 5th, five weeks after the operation, a marked exacerbation of all the symptoms occurred; the pain in the shoulders, elbows, wrists, fingers, knees, and ankles was so great that the patient could not move, the articulations of the jaw also were involved. She complained of pain in the left eye, the occiput, and stiffness of the neck, the eyeball appeared to protrude somewhat and the conjunctiva was congested. Mental dulness was increased; when asked a question fully a minute would elapse before the patient realized its sig-

nificance and the answer showed tardy, rather than inaccurate cerebration. The ophthalmoscopic examination showed a normal retina. Urinary symptoms remained unchanged.

On January 9th the patient had a violent chill, the temperature jumped to 106.4° F., pulse 150, and she became unconscious. There were retention of urine, incontinence of feces, and every appearance of profound collapse and impending death. Under vigorous stimulation, including the injection of three pints of normal saline solution into the median basilic vein, the patient rallied. A stimulating and tonic treatment was instituted, and with slightly ameliorated symptoms she gained somewhat in strength. She was now passing 35 ounces of urine, which contained albumin and casts.

On January 23rd, about two months after the last operation, it was thought that she could stand the shock of a radical operation upon the remaining ethmoid cells and the sphenoid, for there was no doubt that here was the focus of infection.

Having slight hope for her recovery on account of her extreme exhaustion and the condition of her kidneys, I operated on her in a manner first suggested by Jansen. Dr. T. Passmore Berens, of New York, has done much to perfect the technique of this operation and has reported a series of cases successfully operated in by this method.

In this operation the ethmoid cells and the sphenoid are approached through the antrum of Highmore, and the diseased area is removed with the bone curette working in cooperation with the little finger of the left hand introduced into the corresponding nasal cavity and acting as a guide. This operation is especially indicated where the antrum as well as the sphenoid is involved. However, it is also applicable where the antrum is in a healthy condition, for when the operation on the ethmoid cells is done entirely through the nose in a thorough manner the antrum is opened, for the ethmoid cells form part of the roof of this cavity.

The distinct advantages to be gained by choosing the maxillary route are:

(1) The operation can be conducted with much greater ease, thoroughness, and safety to the important adjacent structures.

(2) Hemorrhage is more readily controlled, especially if it comes from an injured sphenopalatine artery, as this has to be clamped. (This artery runs across the face of the sphenoid and is very liable to injury. Hemorrhage from this usually cannot be stopped by adrenalin).

(3) The drainage is much better.

(4) We can inspect the wound more easily during the process of repair.

I have performed this operation on several occasions where the chronic discharge of pus from infected and diseased sinuses was interfering more or less seriously with the health and comfort of the patient, and in each instance distinct relief or cure was effected. But on this occasion, where the *life* of the patient was the chief issue at stake, the advantages of the procedure are

much more distinctly emphasized, especially since the patient's long stay in the hospital had afforded ample opportunity to test every other means of relief. I regard the operation with such favor that I think a detailed account of it as performed in this case will not be amiss.

The patient was given gas-ether anæsthesia, the mouth gag was placed on the right side and the choana of the left side was closed by a post-nasal tampon. A stout silk ligature was then passed through the tongue near the tip, to be used in holding it forward during the operation, and a gauze pad placed between the cheek and the junction of the jaws on the affected side, to prevent blood from flowing back into the pharynx. An assistant having drawn the cheek over as far as possible with a blunt retractor, I made an incision through the mucous membrane and periosteum, parallel to and just below the attachment of the cheek, and reaching from the posterior extremity of the alveolus to the anterior border of the canine fossa. The periosteum was then elevated with a periosteotome over the entire anterolateral wall of the antrum, and to within an eighth of an inch of the infra-orbital canal. With a rongeur this area was then resected, the fibrous tissue being first removed from the opening in the bone made at the first operation.

The mucous membrane of the antrum was found in a fairly normal condition, and this cavity was being well drained into the nose through the opening previously made. Using the attachment of the middle turbinate as my guide I curetted away the anterior and posterior ethmoid cells, which were necrotic and filled with pus and granulation tissue. All blood, pus, and necrotic tissue were carefully wiped away, and the field made bloodless by packing the cavity with gauze soaked in adrenalin solution 1 to 1,000. The opening into the sphenoid could now be clearly seen; a posterior ethmoid cell opening directly into it the anterior wall of this cavity was removed down to the floor, it was necrotic and yielded readily to the curette. This sinus was also filled with pus and granulation tissue. After washing away all debris and again packing the cavity with adrenalin gauze to stop the capillary oozing, I could readily inspect the entire operative field. I then smoothed down the rough spicules of bone, washed out the cavity with normal saline solution, and inserted a wick of iodoform gauze into the sphenoid and packed the remainder of the wound lightly with the same material. The operation consumed one hour and ten minutes.

When removed from the table, the patient was in a precarious condition, but she rallied after the injection of three pints of normal salt solution into the median basilic vein. After forty-eight hours the gauze was removed and the wound irrigated with sterile soda-salt solution; this was repeated twice a day for the first ten days, when the irrigations were continued through the nose and the external wound permitted to close, which it did in a very short time.

Following the operation there was a gradual improvement in all the symptoms, and the patient

entered upon a period of convalescence, interrupted only by slight rises in temperature, and was discharged from the hospital February 17th, twenty-five days after the operation. At this time the joints were still quite stiff and the legs were œdematous. She was passing a normal amount of urine, which contained a few casts, but no albumin.

Since this time I have seen the patient repeatedly, and each time she showed some improvement. On one occasion I removed an ethmoid cell that had been overlooked at the time of the operation, and on two occasions removed with the snare an excess of granulation tissue that had formed in the region of the sphenoid. The last time I saw her, several months after the operation, she was feeling very comfortable and had gained greatly in flesh and strength. The urine was normal.

The points I wish to emphasize are:

First. The difficulty in making a diagnosis when the symptom-complex *may* be a result of sepsis, nephritis, and multiple arthritis.

Second. The seemingly entire dependence of all the symptoms on the sinus infection, and their prompt relief after operation.

Third. The efficiency of the maxillary route when dealing with infections in this area, especially when the antrum itself is involved.

69 WEST FIFTIETH STREET.

THE DIAGNOSIS OF CHICKENPOX.

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Varicella, appreciating apparently its clinical insignificance, tries from time to time to maintain dignity and inspire respect by passing itself off for modified smallpox. It is reasonable to suppose that these attempts are partly prompted, also, by the indignity of the diminutive. The name, varicella, may have been all right when variola was at its best, a hundred years ago; at the present time it is a misnomer. Chickenpox can give a much more variously and numerous spotted condition of the skin than is found in many cases of smallpox. Far preferable is the beautifully descriptive synonym, *crystalli*, for the crystal clear vesicle is the most characteristic lesion.

The positive diagnosis of any of the exanthemata must be made from the eruption. This is especially true of chickenpox, for all other symptoms are very variable. There may be, in adults, intense backache and high fever during invasion, or there may be in any case practically no constitutional disturbance. The eruption, however, presents in character of individual lesions and in distribution, certain constants, without the presence of which, or the evidence of such presence formerly, the diagnosis must not be made.

The lesions appear first and are most numerous on the trunk. They are in their initial stage macules, but the macular period of any individual lesion is very brief. One must hurry to reach a case before some vesicles have put in an appearance. Here, as in smallpox, exudation begins as soon as the lesion appears. In smallpox, the exudate is sufficiently deeply seated to require a day or two to form a vesicle; in chickenpox, as many hours suffice. The chickenpox vesicle varies in size and color; in size, from that of a pin head to a split pea; in color, from clear and transparent to pearl gray and opaque, according to the proportion of the exudative products. A smallpox vesicle undergoes umbilication during its progressive development. Exudation is still going on and obliterates the umbilicus in the pustular stage. The chickenpox lesion, during the entire time of its advancement, is convex, rounded out, full. In its retrograde stage, due to either rupture or dessication, the top of the bleb becomes flattened or even depressed. Such a condition is readily distinguishable by sight or touch. Having in most situations a very thin epidermal covering (so thin, indeed, that it is scarcely appreciable to the eye), the vesicle of varicella is easily ruptured—very slight pressure from hands or clothing being sufficient. It results from this condition that a case almost from the first presents many broken down lesions. These lesions are then sores, open to infection from without, and many of them go on to the formation of pus, which will frequently be found forming a white ring around the depressed scab. Unruptured lesions containing purulent exudate occur in severe cases. They are always relatively few in number.

Where the epidermis is thickened, as on palms and soles—both of which varicella frequently invades—the exudate may be unable to raise a blister. The lesions in such situations remain deeply seated and are indistinguishable from correspondingly placed lesions of smallpox. The rest of the eruption must be taken into consideration. Briefly, then, varicella, seen early in its course, presents many clear, convex, fully rounded out blebs; seen late, many of these will be found ruptured, probably pustular, and surrounded by quite extensive areolæ, due to infection from without. It is, perhaps, worth remembering that a chickenpox vesicle may be drained empty through a single pin prick.

The distribution of the lesions is also distinctive. They are always discrete; never being sufficiently numerous to produce a confluent eruption. On the other hand, their number is seldom, if

ever, reduced to three or four. If such cases do occur, these few will surely be found on the trunk. Any case presenting a few lesions on the face, or on the extremities, and nothing elsewhere, is not varicella. In any case of this disease, be the lesions few or many, there will be more lesions on the trunk than elsewhere. In any case of variola, with a discrete or confluent eruption, there will be more lesions on the face than on any other equivalent area; except in those few, but undoubted, cases in which the whole number of lesions is, say, a half dozen or less. These three or four lesions may occur anywhere, segregated or far apart. It is said that the eruption of chickenpox appears in successive crops and that lesions, drying down, in full development, and just appearing, may be found side by side. This is true, but smallpox may present the same conditions—with this difference, however: in smallpox, such grouping may be found in one place, or in two, or three, places; in chickenpox, it may be found on almost any small area where the eruption is abundant. In general, in varicella the lesions are oldest, appeared first, and nearest together on the trunk; in variola, on the face. In varicella, they become further and further apart, as you pass downward on the extremities, so that, save in severe cases, the palms and soles show none; in variola, hands and feet are as freely invaded as elsewhere, the face excepted. There are said to have been cases of varicella in which the lesions were deeply seated throughout, did not break down, showed no marked preference for the trunk, and, almost uniformly, went on to pustulation. I do not believe that such cases would be inconvenienced at all by vaccination.

Between the mildest cases of discrete variola and malignant cases, there is no clinical resemblance whatever, their only bond being that each can produce the other in a person of requisite susceptibility. Cases of varicella, on the other hand, aside from variations in severity—that is, in the "abundance" of the eruption—conform very closely to each other. Any case giving rise to uncertainty should be isolated, as the chances are it is not varicella.

I have said nothing concerning faucial lesions. Both diseases give them small, rounded, white spots, or superficial ulcers. They are indeterminate in this connection. Concerning scars, their distribution must guide us. In chickenpox, aside from the results of outside infection, they are chiefly a matter of discoloration, and temporary. In smallpox, also, the scars may be superficial and temporary.

The foregoing remarks will be found, I think,

a sufficient guide for the differentiation of varicella from diseases of the skin. The one important thing is to avoid the serious and embarrassing mistake of confusing chickenpox with varicella. Such a mistake is a two edged affair, and cuts with about equal sharpness in both directions.

83 LEXINGTON AVENUE.

MENTAL WARDS IN GENERAL HOSPITALS.*

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Considerable attention has been aroused in the step recently taken by the Albany Hospital in making special provision for patients afflicted with mental disorders, which is generally regarded as a departure from existing methods. The plan is not a new one, however, and it is a matter of some moment that the petition for the first American hospital, the Pennsylvania Hospital, was based upon the needs of "Lunatics or Persons distempered in Mind and deprived of their rational Faculties." This was in 1751, and insane patients were treated in the buildings with the sick and injured until 1841, when a separate department under an independent executive was created at a distance. This plan of distinct branches is also followed to the present day in the two existing colonial institutions, the New York Hospital and the Massachusetts General Hospital.

The reasons for the removal of mental cases from the others are not at hand. The attack of mental disease is more prolonged, and not infrequently the acute condition is followed by a defect which necessitates custodial care. The shortening of a broken limb, or the contraction of an inflamed lung does not prohibit the patient's return to his home and the community as does the residual blot upon the brain. We may assume that the accumulation of unrecovered patients probably proved an embarrassment, and the writings of Benjamin Rush bear out the belief that much of the work of the hospital was with chronics.

It is not necessary to review the lessons of the ensuing century and a half in the care of the insane. At the end of this period we are again confronted by a demand upon the general hospital for service in this branch of medicine. The function of urban general hospitals is now the treatment of acute disease. The question arises as to whether there should be any limitations of this duty; that

is, as to whether certain forms of disease should be denied admission. For large cities with numerous hospitals it may be expedient to specialize, and to designate different acute diseases to different hospitals. In smaller cities, of populations varying from fifty thousand to one hundred and fifty thousand, or two hundred thousand, the two or three good hospitals represent the purpose of the members of the community to secure for themselves proper treatment when sick or injured. The contribution of each individual, whether through public or private channels, is his measure of protection for himself or for some one near and dear. If the calamity which sends him to this institution for help is mental in character, he might demand, and he would be justified in demanding, that he be not spurned, when his neighbor with a surgical lesion or an infectious disease, has at his disposal every means known to science for the restoration of his health.

Some such thought as this led to the establishment at the Albany Hospital of a pavilion for mental diseases. The Albany Hospital was opened in 1849 in a building previously used as a jail. In 1898 this time worn plant was abandoned for a new institution on the outskirts of the city, consisting of a series of buildings connected by corridors. An opportunity presented for the construction of an additional pavilion for mental diseases. The physicians of the city and neighboring cities and towns of the county were anxious that this addition should be made, and warmly advocated the plan. Their feelings had been sharply stimulated by the deaths of two of their number in the county jail, in which they had been placed, from mental disorder. The only provision for public cases of insanity was in the State hospital at Poughkeepsie, seventy-five miles away, and every practising physician had been under the disagreeable necessity of transferring mental cases to this distant institution, under the delays of legal procedures, when he knew that prompt and proper treatment under a simpler plan for a few days or a few weeks would result in recovery. It was an operation of necessity, and not of election. Applications for the admission of patients to the new wards were received before the building was completed. The situation at Albany was identical with that of other localities in the State.

It is of greatest importance that the patient should be taken from the situation in which the disease originated and sent to a place specially arranged for his care. If that place is in the city where the patient resides, and under the care of a physician well known in the community, much of the unwillingness to leave the home will disappear. Even when greatly excited or turbulent,

* Read at the sixth conference of the Association of Hospital Superintendents of the United States and Canada, at Atlantic City, N. J., September 22, 1904.

the realization that he is near home and may communicate or visit with his friends, has a strongly reassuring effect.

The reasons for the creation of this department were stated to be (1) transient accommodation of insane patients committed to a State institution, and (2) of patients who need observation before the advisability of commitment to a State institution is determined; provision (3) for mild cases of insanity who might recover in a general hospital, (4) for victims of drug addiction; and, as an emergency resort, for (5) rapidly developing and critical cases of delirium, and (6) the sudden and often dangerous forms of mental disorder which occur in the course of general diseases after the shock of surgical operations or anæsthesia.

How well this pavilion has fulfilled the duty outlined above may be seen from the statistical table of the operations of the first two years, terminating February 29, 1904. Three hundred and thirty-one patients were treated, of whom 110 recovered, 96 improved, 88 unimproved, 25 died, and 14 remained under treatment. Twenty-four patients were transferred from other departments of the hospital. A glance at the table shows that all forms of mental disorder have been represented, and that several purely physical diseases have been treated by reason of complicating mental conditions, such, for example, as Bright's disease and puerperal eclampsia.

The plan of the hospital fortunately permitted the addition of a pavilion which could be constructed for its special purpose. Opportunity was given to provide accommodations for restless patients that the disorder might not disturb other wards or even other parts of the same ward. This construction carries with it an important medical principle. It is possible to manage discreetly an excited patient without recourse to stupefying drugs or other methods of repression. Shouting, rattling of furniture, and pounding on the walls or doors are symptoms of active mental disorder, and should be controlled only within certain bounds when endangering the patient himself. By adapting the building to the needs of the patients, isolation and retirement may be secured. It is now possible to close six doors between a noisy patient and the rooms occupied by others. There is little use for interference with the activity of the patient on other ground than his own safety. The motor restlessness characteristic of active mental disturbance may be permitted. This does away with the need of coercive measures, and the therapeutical plan from the mental standpoint may be said to be entirely conciliatory.

Our strong conviction is that disregard of this architectural feature would practically destroy the efficacy of the ward. The necessity of subduing one patient to promote the comfort of his neighbors leads to resistance and resentment on his part and harshness from his caretakers. This is an outrage upon the patient, and a species of malpractice which may easily bring an institution, however meritorious in other respects, into disrepute. The hospital governors further require that no patient shall be treated in this pavilion except by a physician of known and approved training in the specialty of mental diseases.

It is not to be expected that the work of a hospital for the insane can be done in a general hospital. Nor can the work of a general hospital be done in a hospital for the insane. But there are many forms of mental disorder having the character of an acute illness, with disturbance of bodily function, and there are many forms of acute physical disease, with disturbance of mental function, for which the general hospital should provide. Otherwise, it is not a general hospital. The surgeon has every resource for the immediate contingencies of operations, as shock, collapse, hæmorrhage. He is prepared not only to conduct his work in the direct line, but to repair the mischief of possible complications, except one. He has no protection against mental complications. His assistants, physicians, and nurses are without training and his building is without accommodations. These mental manifestations are even more common to medical diseases and require no less the most intelligent treatment.

In conclusion, I wish to state that it is an important moment in hospital history when the Association of Hospital Superintendents takes up this question. It means a great deal to patients suffering from mental disorders, especially in incipient stages, and it means a great deal to the hospital. We hope it may be said, for the credit of all physicians engaged in hospital work, that perfection in resources is not regarded as complete until this phase of acute disease has been met and combated.

ADDENDUM.

Table showing the forms of disease, and the results of treatment from the opening of Pavilion F, Albany Hospital, February 18, 1902, to February 29, 1904:

Form of disease.	Recov- ered		Im- proved		Unim- proved		Died.		Remain- ing.		Total.	
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.
Acute delirium . . .	8	8	1	1	1	1	1	3	1	1	10	14
Confusional In- sanity	3	1	4	1	1	2	1	1	1	1	7	6
Melancholia . . .	7	9	7	15	5	17	1	1	2	19	44	63
Mania	1	2	5	6	5	4	1	1	2	11	14	25

Primary demen- tia	1	3	1	2	1	..	..	..	5	3	8
Recurrent insan- ity	..	..	3	..	..	..	..	..	..	3	3
Chronic delusion- al insanity	..	..	1	4	3	..	..	..	4	4	8
General paralysis	..	1	..	8	..	1	..	..	10	..	10
Terminal demen- tia	..	4	6	10	10	3	3	2	19	20	39
Imbecility and idiotcy	..	6	2	2	..	..	..	..	8	2	10
Acute alcoholic delirium	14	2	7	2	2	..	4	1	1	58	5 63
Drunkenness	11	4	8	..	1	..	..	1	21	4	25
Drug addiction	..	1	1	1	1	..	..	..	1	3	4
Potomaine poison- ing	1	2	..	..	..	..	..	..	1	2	3
Uremia	..	..	..	..	..	1	..	..	1	..	1
Puerperal eclamp- sia	..	..	..	..	..	1	..	..	..	1	1
Epilepsy	..	1	..	2	..	..	..	..	3	..	3
Neurasthenia	1	..	1	2	1	2	..	1	4	4	8
Hysteria	1	..	..	..	..	..	..	1	1	1	2
Exophthalmic goitre	..	..	1	..	..	..	..	..	1	1	..
Nervousness	1	..	..	..	..	..	..	..	1	1	..
Hypochondriasis	..	2	..	1	..	..	..	..	3	..	3
Pseudoparesis	..	1	..	..	..	..	..	..	1	..	1
Organic brain dis- ease	..	2	1	..	..	1	..	..	2	2	4
Locomotor ataxia	..	..	..	1	..	..	..	..	1	1	..
Hydrophobia	..	..	..	..	1	..	..	..	1	..	1
Malingering	..	..	1	..	..	..	..	..	1	..	1
Exhaustion from jaundice	..	..	..	..	..	1	..	..	1	1	..
No diagnosis	..	..	..	..	..	..	..	..	3	1	4
Totals	77	31	50	46	44	13	12	7	194	137	331

ABORTIVE TREATMENT OF GONORRHOEA IN MAN. REPORT OF A CASE.*

By GEORGE GROSS, M. D.,
SAN FRANCISCO.

Beginning gonorrhoeal urethritis being for a certain time, a very short time only, however, a purely epithelial process, it is during this initial stadium that the abortive treatment can be resorted to, in order to destroy the gonococci before they have reached the deeper layers of tissues. Highly bactericidal chemical solutions which enable us at the same time through their cauterizing action to effect a superficial but homogeneous destruction of the epithelium over the whole mucous membrane of the anterior canal furnish us the means to that end. Such a chemical agent we possess in the old stand by nitrate of silver, employed, however, in a new way, according to the method applied so successfully by Dr. Engelbreth, of Copenhagen.

Strong solutions of permanganate of potassium used according to the Janet method determine reactions characterized more by effects of irritation than those of cauterization, and produce readily an œdema of the mucosa as well as of the glans and præputium, while nitrate of silver not being an irritating agent, has a purely local ac-

tion. But the old method of using this agent in the abortive treatment of gonorrhœa in man by the hand syringe was defective; indeed, with a urethra of a small capacity, an infection of solutions from one to twelve per cent. as made formerly with a hand syringe, is liable to force the sphincter and cause very serious accidents, even death, while that same injection will be quite insufficient to fill a large sized urethra. Hence Engelbreth concluded that the safest method of employing the nitrate of silver was in the form of a Janet lavage limited to the anterior canal, and the concentration of the nitrate solution must be so much weaker in proportion as its action is intensified by the volume used; indeed, 500 c.c. of a 0.25 to 100 solution employed in lavage are equivalent to a two per cent. solution applied in small quantity. Engelbreth decided on a 1 to 200 solution, of which he uses 500 to 600 c.c. under a pressure of one and one quarter inch at a temperature of 37° C., winding up with an application of three per cent. to the fossa and meatus, and he has recourse to this treatment whenever the infection is fresh, characterized by a purely epithelial irritation, with absence of any inflammation at the meatus, and the first portion of the urine is clear with simple mucous flakes. Consecutively to this application we observe the discharge of a pultaceous mass, which contains the desquamated epithelium and pus cells in suspension amid abundant mucus. Four hours after this first treatment the gonococci have disappeared; he then makes a second lavage with a 1 to 500 nitrate solution in the same manner.

The direct effect of the lavage is a cauterization to a gray white of the mucosa and a sensation of a more or less intense scalding, lasting from one half to one hour, but œdema is absent. The discharge later on becomes a serous fluid, slightly tinged with blood, and within six to eight days the cure is complete. Engelbreth publishes statistics of 26 successful cases on a series of 30. In conformity with the above principles and rules I beg leave to relate the following case:

The patient, an adult 28 years old, had two previous attacks of gonorrhœa; the first about six years before, lasting three months; the second, two years before, lasting one month. For the present attack the patient called just three days after coitus; the meatus at the time presented no signs of inflammation, but the drop of yellowish discharge at the microscopical examination showed the usual characteristic clusters of gonococci, extracellular; this was at 11 a. m. of December 4th.

On this first visit I was making an anterior irrigation with a solution of permanganate 4 grains, to 20 ounces of water, with the addition of 20 c.c. of a one per cent. bichloride solution at 45° C.,

* Read before the California Academy of Medicine, December 27, 1904.

when the patient, enlightened by his previous experience, anxiously inquired whether I could not use a quicker method of cure, as he felt that the disease was only at its start.

Taking into consideration the favorable conditions of the case as well as the good will and determination of the patient to submit to a more severe treatment with the prospect of a speedy cure I proposed at once to employ the Engelbreth method, and four hours later, about 3 p. m., I made the first nitrate of silver lavage with 500 c.c. of a 1 to 200 solution at 37° C., using the first half with a pressure of 75 cm. and the balance with a pressure of 125 cm., without previous cocaineization. The patient bore the treatment bravely without complaining much; the mucous membrane at once took a white grayish appearance, showing a thorough cauterization, and I wound up with an application to the fossa and meatus of a three percent. nitrate solution. Some bleeding occurred for a moment, but all through the ordeal was very well borne; I ordered some triticum repens; the patient from his own accord had already taken some methyloids, and I made an appointment for the second lavage six hours later, i. e., 9 p. m.

At the appointed hour the patient returned and declared that he felt perfectly comfortable, had no frequent desire to urinate; the cotton in the protective hood showed the expected creamy thick discharge, which examined at the microscope showed as we had a right to expect, pus cells in abundance, but gonococci nowhere. The patient urinated freely and without distress. We then made the second formal lavage with a 1 to 500 nitrate solution at 37° C., the first half from 75 cm. pressure, the balance from 125 cm. This application, made also without cocaine, became rather painful towards the end, on account of the manipulation of the meatus with the irrigating cannula or end piece, but the young man got through the ordeal bravely and the sensation of scalding faded away, as after the first séance, within from one half to one hour. This second treatment was made at 9 p. m. The patient slept through the whole night without waking up, and called the following morning at 8.30 before having urinated. We observed a copious creamy discharge; the microscopical examination again showed pus cells in abundance, but no trace of gonococci. The micturition was easy. I stopped all further treatment; simply continued the triticum and measures of cleanliness.

In the afternoon of that second day, the micturition became somewhat painful and little blood was passed with some tenesmus at the end of the function, but there was no frequent desire to urinate; the patient passed at least a pint of urine at the time. The night was as good as the one preceding. The patient urinated about 10 p. m., slept until morning and called again at 8.30 before having urinated. Although we entered only the second day there was hardly any more discharge, but a thin layers of mucus between the lips of the meatus; no trace of gonococci under the microscope. Patient urinated freely, and experienced only a little distress toward the end of the operation, when a few more drops of blood

passed. The night was passed in comfortable sleep as before and the patient called again the following morning at 8.30, with the same cotton over the glans he had gone to bed with. This cotton was almost dry, and the meatus was already reassuming its normal appearance; no trace of gonococci. Micturition easy, hardly any more pain, and the first portion of the urine showed but very little desquamation; the second glass is perfectly clear and only a few drops of blood were passed at the end.

The following day, the fourth day, no trace of secretion, the urine first of all was absolutely clear; the meatus was dry and had reassumed its normal appearance; the urination was absolutely normal and easy, the patient felt as well as ever before, and the case was dismissed cured. It remains cured.

326 KEARNY STREET.

Correspondence.

LETTER FROM PARIS.

The Low Birth Rate.—The Third International Tuberculosis Congress.—A Congress on Quackery.—A Legacy by the Late Professor Tillaux.—Lead Poisoning Among Diamond Cutters.—Adulteration.—Goutre and Cretinism in Khokand.—The Domiciliary Records of Paris.

PARIS, April 20, 1905.

A Parisian physician announces that the low birth rate in France is due to alcoholism. The Parisian atmosphere is too pleasant a one to permit me to be unduly captious, yet I think it well to point out that the statement is not true. The brutal truth is that the low birth rate in France is due: (1) To the use of means to prevent conception; (2) to the destruction and removal of the fetus after conception, either instrumentally or by the use of abortifacients. If these causes are considered, we shall see that all other causes may be neglected. Wages are so low here, and the many little luxuries that habit has made necessities bring the expenses of living to such a point, that children are very unwelcome even in the case of those who are veritably married, married *devant le Maire*. How much more unwelcome must the little visitors be in those *menages* where the only ties are those of convenience? In fact, the proportion of births that are illegitimate is more than eighty per cent. If eighty per cent. of the children who are born are illegitimate, it seems clear that more than that percentage of the children who are not born are illegitimately prevented from coming into the world. If wages were higher and if life were less complex, France would be at least as prolific as other countries, for nowhere are the women healthier and better animals than here in France.

Under the patronage of the President of the French Republic, the Third International Tuberculosis Congress will be held in Paris, at the Grand Palais, from October 2nd to October 7th. A credit of one hundred thousand francs has been voted toward the expenses of the congress by the legislature. It is the aim of the congress to consider every aspect of tuberculosis and to make a pressing appeal to every element of society to aid in its effectual extirpation.

On May the 8th a Congress on Quackery is to meet in Paris under the presidency of Professor Brouardel. The programme includes twenty-five subjects for discussion, among them being illegal practice of medicine by bone setters, sorcerers, and empirics, by quacks, magnetizers, and clairvoyants, by lay people and clerics for charitable purposes, or under pretense of charity, by members of societies for the aid of the sick and wounded, by nurses, male and female, by "maso-therapists," schools of massage, manicurists, pedicurists, herbalists, medical electricians, etc.

Dr. Tillaux, one of the most eminent surgeons of Paris, whose death was recently announced, bequeathed 500,000 francs to a fund for providing old age pensions for workmen. He rendered much valuable service to the poor as chief surgeon of the Charity Hospital, where he was greatly beloved by all the students.

In the process of diamond cutting, the practice at present obtains of embedding the diamond to be cut in a temporary setting of lead. So many cases of lead poisoning have resulted that the Dutch government has offered a prize of 6,000 florins in a competition open to the world, with the view of discovering a new method of diamond cutting which shall do away with the danger of lead poisoning, either by the provision of a new medium for the setting and resetting of diamonds to be cut or by the substitution of a different plan of work. The Minister of the Interior has appointed a committee of experts to consider the answers submitted and to award the prize.

Parisians who suspect adulteration in the food or drink that they buy take it to the municipal laboratory and have it analyzed free of charge. The city undertakes the prosecution, if need be, of the offender, who, if the case is proved, is liable not only to fine and imprisonment, but to the exposure in his shop window of a notice of "conviction of adulteration."

According to M. Guillaume Capus, the population of the town of Khokand, in Turkestan, consists for the most part of sufferers from goitre and cretinism. The traveller entering the town is at once struck by the fact that nearly every person

he meets is the bearer of a more or less voluminous goitre. Khokand is the only place in Turkestan in which such a state of things exists, and there appears to be nothing in the place or its surroundings to account for the prevalence of goitre and cretinism. Its sanitary condition is satisfactory. The town is situated at a height of 1,300 feet, and is abundantly supplied with water from a river which, like the others in the same region, comes from the Alai Mountains. When the Russian troops occupied Khokand, in 1878, the medical officers noted that a tenth of the garrison became affected with goitre after a few months' stay. The tumors yielded to the iodine treatment; nevertheless it was decided to abandon Khokand and to transfer the headquarters to Marghillan.

In the annex of the Hôtel de Ville in Paris there are kept the records of the houses of Paris, and everything that has happened in any house of the city for the past ten years, that can have any bearing upon medicine or sanitation, is immediately available. Dr. Lamoureux is the founder of this department of the city government. At the present moment this bureau contains, for each house of the city, a series of cards giving the plan of the house, the number of occupants, a description of the furnishing, with the wells, ditches, and stables, near it, the number of deaths and their causes, the number of disinfections, with the dates and the reasons therefor, and, if any insanitary pursuits have been followed, the manner in which the prescriptions of the Bureau d'Hygiène have been followed. From 1894 to 1900 there were tabulated 73,000 descriptions of houses, and from 1900 to 1905, 7,000 more. From 1894 to 1905 there were 138,766 deaths from contagious diseases, and 283,157 disinfections for typhoid fever, scarlatina, variola, tuberculosis, diphtheria, etc. The bureau is open to properly authorized medical men for the purposes of science; otherwise its contents are held secret. Such facts as that in one house of this city, with sixty occupants, there have been since the bureau started (11 years ago), sixty-seven deaths, are to be found in abundance and tabulated.

Therapeutical Notes.

Treatment of Varicose Ulcers with Peroxide of Zinc.—Beurmann (*Annales de dermat. et de syph.*, December, 1904; *Treatment*, April, 1905) has employed peroxide of zinc in powder, and as a 20 per cent. ointment. This is applied to the ulcer and covered with sterilized gauze, which is left on for three to six days. In all cases the secondary infection of the ulcers disappeared, and granulations and cicatrization developed quicker than by other methods.

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INFLUENZA AND PRECEDING HYSTERIA.

It seems not unreasonable to suppose that the Protean manifestations of influenza are explicable, at least in some instances, as dependent on morbid conditions present before the acute attack. That they may be modified by hysteria is unquestionable. An interesting example of such an influence exerted by hysteria has recently been reported by Dr. P. Menetrier and Dr. Louis Bloch (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, April 20th).

A woman, twenty-two years old, a hospital nurse, was suddenly attacked with influenza, of which disease there were at the time many cases in the hospital. On the afternoon of the fifth day her temperature was 103° F., she lay curled up in bed, at the same time prostrated and agitated, and answered questions in a feeble and jerky voice. There was general lassitude, with muscular pains, and she was suffering greatly with nausea. Her neck was somewhat stiff, and she occasionally ground her teeth. On the following morning, after she had spent a sleepless night, with agitation, mild delirium, and vomiting, her head was thrown back, the neck being so stiff that her body could be lifted like one piece by the head. This rigidity affected the whole trunk, which was in a pronounced state of opisthotonos. The legs and thighs were obstinately flexed, and Kernig's sign was well marked. She was continually sigh-

ing or murmuring unintelligible words. Her face was grinning, her eyeballs and lids were in incessant motion, and every moment her jaws made movements like those of chewing or she ground her teeth. All the time there was extreme headache, so that she could not bear even a moderate light. She complained of rather severe diffuse abdominal pains, but an examination of the abdomen, which was slightly retracted, revealed nothing special. There was general hyperaesthesia, and the reflexes were exaggerated. There was no disturbance of sight or hearing, and the pupillary reactions were normal, though there was slight convergent strabismus at times. The *tache méningitique* was intense and persistent. On the seventh day the temperature had fallen to 99.5°, but there was still extreme agitation, with delirium, and the movements of the limbs were disorderly, though there were no real convulsions.

On the eighth day the picture was changed; excitement had given place to profound depression. The patient lay silent and motionless. There was no longer any rigidity of the arms or trunk, and Kernig's sign and the stiffness of the neck were less pronounced. The legs and thighs were still flexed, however, and the least attempt to straighten them provoked severe pain. The delirium had wholly disappeared, and the patient answered questions, but in a sighing voice and with an almost infantile intonation. There was no longer any vomiting or headache. On the ninth and tenth days the girl's bodily condition was normal except for a little remaining stiffness of the lower limbs, and she was passing urine abundantly. On the other hand, her mental state was quite peculiar, showing the infantilism (*puérilisme mental*) described by Dupré and Camus and by Soullard as encountered in hysteria, "You know, sir," she said to one of the authors, "they promised to give me a little dog, a little black dog"; and the next morning she was found playing with a little toy dog, showing the most childish joy in its possession. This mental state lasted without abatement for two days, and then began to subside slowly. By the eighteenth day the girl was entirely well in both body and mind.

A month later, on inquiring more closely into

her history, the authors learned that her mother was tuberculous at the time, that her father had long been lost to view, and that she was the eldest of six children and had seen all her five brothers and sisters die of tuberculous meningitis at various ages. When she was five years old, she burned one of her knees slightly, and as a consequence had contracture of both lower limbs for six months. At the age of seventeen she apparently had a light malarial attack in Africa, and at eighteen she had a miscarriage, which was followed by pelvic peritonitis. She had been serving as a nurse for three years, and was tall and robust in appearance. There was a bilateral zone of complete anæsthesia at the level of the breasts, and there was a notable curtailment of the visual field. From the psychical point of view, one could elicit in her a sort of childish vanity; she had an immoderate tendency to make a show of herself, and above all she had an insurmountable longing to engage the attention of people. These facts, taken in connection with the old contracture, evidently neuropathic, seemed to the authors to warrant them in looking upon the girl as decidedly hysterical.

Tracing the connection between the patient's previous history and the cerebral turn taken by her acute symptoms, the authors say: "Let us remember that this young woman had been present at the death of five brothers and sisters, all from tuberculous meningitis, and that these deaths, as she herself said, had profoundly impressed her." Furthermore—and this might fittingly be emphasized to those people who think that hospital patients are apt to be ill treated—they say of their omission to resort to lumbar puncture that it would have been very painful to a person affected with this patient's hyperæsthesia, and that, since by reason of her profession she would have divined the object of its performance, it would have accentuated her preconception that she was doomed to die of meningitis.

THE ANTIQUITY OF SYPHILIS IN NORTH AMERICA.

The question of the original habitat of syphilis has been a prolific source of discussion for a long time now, at all events ever since the time of Astruc, and these three theories have been up-

held: 1. That the disease prevailed in both the eastern and the western hemispheres before the time of the discovery of America by Columbus. 2. That it was unknown in Europe until Columbus's men took it back with them. 3. That it originated in the Old World, and was brought to America by those same men. A recent interesting contribution to the study of the subject has been made by Samuel Torrey Orton, B. S., who gives an account of his observations, under the title of *A Study of the Pathological Changes in Some Mound Builders' Bones from the Ohio Valley, with Especial Reference to Syphilis*, in the April number of the *University of Pennsylvania Medical Bulletin*.

The specimens studied by Mr. Orton belong to the Museum of the Ohio State Archæological and Historical Society, in the city of Columbus. They consist of 127 skeletons exhumed at the Baum Village site, situated in the valley of a tributary of the Scioto River. Twenty-one of these skeletons were found to be diseased, and the lesions were judged to be syphilitic. Mr. Orton's judgment on this point is founded on most painstaking diagnostic distinctions. In his thoroughness he even goes so far as to distinguish elaborately between the lesions of syphilis and those of osteitis deformans, a disease which, though rare now, he admits to himself may possibly have been frequent in the days of the Mound Builders.

His material, as he remarks, undoubtedly antedates the voyages of Columbus, and he justifies his diagnosis of syphilis by the following points: So far as long bones were concerned, the changes observed affected chiefly the diaphyses, with a predominance in the bones most exposed to injury, and consisted of large exostoses and osteophytes with concurrent rarefying and condensing osteitis in the same specimens. In sixty per cent. of the syphilitic skeletons the bones affected, in the order of frequency, were the tibia, the ulna, the cranial bones, and the sternum.

While it is not unlikely that some of Columbus's men were syphilitic before they ever laid eyes on America, manifestly we must not assume that they brought the disease to a continent on which it was before unknown. On the other hand, it is by no means improbable that, as Mr.

Orton suggests, those men found here a "strain" of syphilis so potent that, when they took the infection back to Europe with them, it gave rise to that virulence of the Neapolitan outbreak on which so much stress has been laid as showing the American origin of the disease.

THE NAVAL MEDICAL SERVICE.

The difficulty experienced for a number of years in inducing properly qualified young medical men to enter the medical corps of the navy has doubtless been materially reduced of late, and probably it will be wholly overcome before long. If there still remains something of the haughtiness with which for a considerable period the medical officer was looked upon by the line officer, it must speedily disappear, for it has no substantial basis. When it vanishes for good and all, the medical man's career in the navy will be as satisfactory as that of the man who is wedded to deeds of arms. Moreover, it is an error to suppose that a physician who is devoted to his profession is doomed to stagnation if he enters the navy. In the first place, there is the opportunity of taking the excellent course of advanced study pursued in the Naval Medical School, the advantages of which are very lucidly set forth by Dr. James Nevins Hyde in the May number of the *Journal of the Association of Military Surgeons of the United States*. The course, as Dr. Hyde points out, is such as to improve the young medical officer's physical condition as well as to enhance his professional acquirements.

Then there is the satisfaction of belonging to a corps that has such an honorable history, a sketch of some of the salient points of which is given in Dr. Hyde's article. From John Paul Jones's surgeon on the *Ranger*, Dr. Ezra Green, down to the assistant surgeon of the present day, the successor of the old time "surgeon's mate," the achievements of our naval medical officers have been such as to stimulate emulation in those who may hereafter join the corps. It is not in time of war only that the naval medical officer has a rich field for the application of his attainments. Hygiene, preventive medicine, and especially the study of tropical medicine, almost a novelty to us Americans, will amply employ his

abilities and gratify his taste for investigation. A more useful career than that of the naval surgeon could hardly be imagined.

THE LOCAL DRY HOT AIR APPLICATION IN GENERAL PRACTICE.

One of the most useful of that group of remedial measures which have become so prominent during the past seven or eight years, the so called physiological therapeutic agents, is dry hot air. It is also one that, in spite of the many articles that have been written regarding it, is still unappreciated so far as many of its most helpful curative and palliative properties are concerned. So far as the average general practitioner is concerned, the general, or body, dry hot air application may be at once eliminated from this discussion; the necessary equipmental accessories in the way of rooms, skilled attendants, bathing and lounging facilities, etc., are so elaborate as to render unreasonable an expectation that he should have them at his personal command. The local application, however, is sufficiently simple, as regards both the apparatus and the technique involved, to bring it within the reach of any general practitioner, and the therapeutical results attainable with it are satisfactory.

A prime requisite, as regards construction of the local apparatus intended for use by the general practitioner, is that it be easily transportable from place to place; hence lightness, compactness, and simplicity are valuable attributes. These machines are furnished complete, with flexible attachments for directing the heat upon the various regions of the body, by the manufacturer; also attachments specially adapted for the use of gasoline, gas, alcohol, or electricity as the source of heat. Gasoline and gas are most generally used, and both are practically efficient when the conditions, as regards volume of supply available, etc., are adequate. If one is never going to apply this agent outside of his own specially equipped operating room, gas will, under ordinary conditions, be the most satisfactory of any, but the general practitioner will frequently need to apply it at his patient's bedside in a house wherein gas is not available in sufficient quantity or under sufficient pressure to give the required degree of heat. For

these reasons gasoline constitutes the agent *par excellence* for the general practitioner to employ as a source of heat, and if a proper degree of care is brought to bear upon its manipulation, explosions or other accidents contingent upon the nature of the fluid need never occur.

Among the more important conditions commonly encountered in general practice in the treatment of which local applications of dry hot air render valuable service are sprains, acute articular rheumatism, various forms of early septic infection, and pneumonia.

Sprains.—The local dry hot air treatment, administered at 350° F., will completely relieve the pain accompanying a sprain in half an hour; if the pain is not so relieved it is very safe to conclude that a fracture is present. If the injured joint is placed under treatment by this agent within five or six hours after the accident, complete recovery will have supervened within forty-eight hours in the vast majority of cases. The employment of dry hot air at any stage of the trouble may be relied upon to shorten the period of convalescence at least fifty per cent.

Acute Articular Rheumatism.—By this term is meant true rheumatic fever, not the various inflammatory, degenerative, and irritative processes affecting bone, nerve, and muscle structures which are so often miscalled by this term. The results of its use in this condition may be briefly summarized as follows: 1. Immediate relief of pain, which relief may be rendered continuous by repeating the treatment as often as the pain manifests a tendency to return. 2. A marked shortening of the duration of the attack, which usually lasts from five to ten days only when dry hot air and salicylic acid are employed in combination. 3. Diminished probability of cardiac involvement, because of the rapid control obtained over the pathological conditions, whereby the time during which the infection is apt to involve other structures is shortened.

Local Septic Infection.—In the majority of instances met with in general practice the infection takes place in the distal portion of some one of the extremities. If the case is got under treatment with dry hot air before the process has involved that portion of the limb immediately contiguous

to the trunk, the pathological phenomena will usually be abruptly arrested and the inauguration of convalescence will coincide with the first treatment. If glands or other tissues have not been "poisoned" beyond the possibility of redemption, they will be regenerated and the ominous picture will fade uneventfully away; if the destructive influence has gone far enough to render suppuration inevitable, however, the latter process will be hastened and at the same time sharply localized about the focus of disintegration, when a stroke of the knife will end the condition most satisfactorily.

Pneumonia.—In the rapidly fatal cases characterized by profound, general, systemic toxæmia the local dry hot air application is of little use, but no measure is more conducive to the comfort of the patient or more helpful in obtaining a favorable termination in this disease as it is ordinarily encountered. The pleuritic pain, together with that proportion of the respiratory acceleration and nervous irritation dependent thereupon, can be relieved in a few minutes, and the pleurisy itself with the resultant cough will have disappeared in a few hours. How much this means in many cases can readily be appreciated. The most striking effect of local dry hot air applications in this disease, however, is observed in connection with the phenomenon of consolidation. A treatment every ten or twelve hours will remove the physical signs of consolidation in from two to five days; the danger of heart failure from massive exudate, but not from toxæmia, of course, is thus practically done away with. The patient usually begins to improve immediately after the first application, and although the course of the disease is not shortened, the severity of the symptoms is greatly lessened.

Many other pathological conditions in which local dry hot air treatment is valuable might be cited, but the foregoing are sufficient to indicate its helpfulness in general practice. The physiological action of the measure, from which may be deduced its clinical applicability, may be summarized as follows: 1. Immediate relief of circulatory stasis. 2. Greatly increased blood supply to the part treated. 3. Marked acceleration of the nutritive processes of the

part treated, due to reflex stimulation of the trophic nerve supply. 4. An increase in the temperature of the part treated, whereby the chemical reactions constituting local metabolism are markedly facilitated. It is probably through intensification of local physiological resistance, brought about by these four effects, that the inhibitive influence upon the development of pathogenic microorganisms that may be present in the part is secured. 5. The withdrawal of a large amount of fluid from the part treated by reason of the profuse perspiration induced, which carries out with it a certain proportion of toxins that may be in process of elaboration.

In addition to the ascertained physiological effects, the clinical experience thus far recorded, both in this country and abroad, demonstrates that the efficiently administered local dry hot air application is a therapeutical element of marked value, that it accomplishes some results that cannot be accomplished by any other measure, and produces some effects in a better and more efficient manner than other measures, wherefore it merits extended study and a prominent place in the modern management of disease.

CLARENCE EDWARD SKINNER.

POSTGRADUATES.

Dr. Ely Van de Warker, in his article in this issue of the *Journal* on The Surgical Paradox, recommends that students of postgraduate institutions be compelled to pass special State board examinations before being loosed on the community as specially qualified surgeons and gynecologists. The suggestion is an excellent one, but the examination should be of a practical nature, as a written test which, as we have frequently pointed out, it requires only a good memory to sustain triumphantly, would not safeguard the public in the slightest degree.

THE LUNCH COUNTER TOWEL.

There can be little doubt that the towel sometimes observed hanging from a lunch counter is among the more mischievous of the avoidable means of conveying contagion. Fortunately it is not so common as it was a few years ago, but it ought not to be tolerated at all. In the best establishments an individual napkin is furnished even with a glass of beer, and by insisting on it the public can obtain its provision everywhere.

News Items.

Society Meetings for the Coming Week:

TUESDAY, May 30th.—Rome, N. Y., Medical Society; Boston Society of Medical Sciences (private).

WEDNESDAY, May 31st.—Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

THURSDAY, June 1st.—New York Academy of Medicine; Brooklyn Surgical Society; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington); Medical Society of City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, June 2nd.—Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Clinical Society; Baltimore Clinical Society.

SATURDAY, June 3rd.—Manhattan Medical and Surgical Society, New York (private); Miller's River, Mass., Medical Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 20, 1905:

	May 20.		May 13.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	760	10	742	14
Diphtheria and croup	345	36	312	36
Scarlet fever	201	13	235	13
Smallpox	1	1	6	1
Chickenpox	152		129	
Tuberculosis	410	155	474	195
Typhoid fever	23	9	37	3
Cerebrospinal meningitis	99	72	136	88
	2,000	296	2,071	350

Personal.—Dr. Jacob Sobel has been appointed adjunct pædiatrist to the Sydenham Hospital.

The New York Eye and Ear Infirmary.—Consulting physicians have recently been appointed as follows: Dr. Walter B. James, Dr. George T. Elliott, and Dr. Walter Lester Carr.

Memorial Hospital Training School for Nurses.—This Brooklyn institution graduated the following nurses on May 24th: Bertina S. Scott, N. Elleda Pollock, Rita Louise Pearwin, Elizabeth Scott, Ethel Mitchell Scott, Bessie Louise Ramsay, and Milly Larson.

St. Vincent's Hospital has graduated the following young women as nurses: Lillian A. O'Farrell, Mary A. Gillis, Isabel O'Donovan Rossa. Susie A. Lant, Anna R. McPartland, Margaret M. McNichol, Lucy B. Lee, Josephine M. Lindsay, Alice M. Kelly, Matilda M. Burke, Grace E. Leonard, Adelaide F. Sullivan, Katherine E. Shea, Mary A. Shannon, Katherine C. Sullivan, Josephine A. Allison, Bridget T. McKeon, Julia A. Sheehan, and Katherine M. Kentler.

St. Mary's Hospital, Brooklyn, Training School has granted diplomas to the following trained nurses: Gertrude Dilger, Mary Elizabeth MacCurry, Mary Alice Burke, Margaret Cummings, Mary Ethel Daly, Emily Fajans, Katherine Daffin, Mary Manning, Sara Clendinning, Margaret Kastania, Mary Walsh, Jeannette Hargan, Arra Thurtell, Mary Carlin, Helen Warburton, and Gertrude Curley.

Kingston Avenue Hospital, Brooklyn.—Health Commissioner Darlington opened on May 14th

the new wing at the Kingston Avenue Hospital, Brooklyn, which will be used exclusively for the treatment of scarlet fever cases. The new structure is one of the best equipped buildings of its kind in the country. "In spite of my issuing more than 2,000 invitations," said Dr. Darlington, "less than fifty persons were present. I suppose the good people of Brooklyn and Manhattan were afraid of the smallpox scare, but ample precaution was taken to make their presence perfectly safe. I consider this new department to be the finest connected with any contagious hospital in the world and its equipments are as near perfect as it is possible to procure. More than eighty patients can be housed without overcrowding."

The Postgraduate School and Hospital.—At the annual meeting of the faculty of the Postgraduate Medical School and Hospital, held on May 10th, the announcement was made that its members had pledged themselves to raise \$40,000 for the institution before next Thanksgiving. This \$40,000 will go toward making up the \$100,000 which must be raised by popular subscription before an anonymous gift of \$100,000 recently made to the institution, and already announced, will become available. At the meeting Dr. D. G. St. John Roosa was reelected president, and Professor James N. West was elected secretary, to succeed Dr. Forbes Hawkes, resigned. Eight instructors were appointed. Announcement was made that the new obstetrical department of ten beds would be established, and the former announcement of the establishment of a new school of anatomy was confirmed. The board of directors held a meeting and ratified the faculty election.

Twenty Thousand Dollars for Mount Sinai Nurses.—With the object of offering an inducement to the pupils of the Mount Sinai Training School for Nurses to obtain the highest possible proficiency, Mr. Murry Guggenheim has established a fund of \$20,000, the income from which shall be applied to create twelve scholarships of one hundred dollars each annually, subject to the following regulations and conditions: First, six of these scholarships to be assigned to junior pupils, three to senior pupils and three to members of the graduating class. By the attainment of suitable proficiency any nurse can secure all three scholarships during the term of her tuition. Second, the scholarships to be awarded at the annual graduation exercises, taking place in May of each year, together with a pin for each graduating nurse securing one or more scholarships, engraved Murry Guggenheim Scholarship, together with the numerals indicating the year or years in which the scholarship was secured. Third, scholarships to be awarded to those nurses in each class who shall have displayed the highest degree of proficiency in accordance with the existing method of rating. Fourth, the fund to be known as the Murry Guggenheim Scholarship Fund.

PHILADELPHIA.

Scientific Society Meetings for the Week Ending June 3, 1905.—Thursday, June 1st, Obstet-

rical Society. Friday, June 2nd, American Philosophical Society.

Marriage.—Dr. T. K. Means, of Geneva, N. Y., and Miss Anna Marie Wolfe were married on May 16th.

The Philadelphia College of Pharmacy held its commencement exercises on May 14th, 15th, and 16th. On the 14th Dr. David M. Steele delivered the baccalaureate sermon and on the 15th the alumni association gave a reception to the graduating class, at which Dr. Henry Beates, Jr., delivered an address, and the alumni prizes were awarded. The class numbered 127.

Entertainments in Aid of Charities.—A public tea and reception were given on the grounds of the Jewish Hospital on May 17th for the purpose of allowing inspection of the grounds and buildings.

The Enterprise Dramatic Club gave an amateur theatrical entertainment on May 16th for the benefit of St. Agnes's Hospital.

Charitable Bequests.—By the will of Joseph Louchheim, probated May 16th, the Jewish Maternity Home receives \$1,000; the Jewish Hospital, \$1,000; the United Hebrew Charities, \$500; the Jewish Foster Home, \$500. These bequests are made on consideration of the foundation of a free bed, memorial, or other remembrance of the testator.

Jewish Maternity Hospital Nurses Graduate.—On May 17th Miss Monterey Elizabeth McIntosh, of Wilmington, N. C.; Miss Catherine Burns, Miss Henrietta Mumford MacClellan, and Miss Daisy Margaret Burke, of Philadelphia; and Miss Lillie Margaret Clover, of Paterson, N. J., graduated from the training school of the Jewish Maternity Hospital. Dr. David Riesman delivered the address.

The Health of the City.—During the week ending May 13, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Typhoid fever.....	155	23
Scarlet fever.....	31	0
Chickenpox.....	67	0
Diphtheria.....	54	11
Cerebrospinal meningitis.....	5	2
Measles.....	73	0
Whooping cough.....	1	0
Tuberculosis of the lungs.....	37	61
Traumatism.....	26	28
Erysipelas.....	7	1
Tetanus.....	2	0

The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 9; diarrhoea and enteritis, under two years, 14. The total deaths were 455, in an estimated population of 1,438,318; corresponding to an annual death rate of 16.45 per 1,000 population. The total infant mortality was 82; 71 under one year, and 11 between one and two years. There were 32 still births, 14 males and 18 females. No unusual meteorological phenomena were reported by the weather bureau.

Woman's Medical College.—The fifty-third annual commencement of the Woman's Medical College of Pennsylvania was held on May 17th. Fifty-two women from all parts of the world, in-

cluding Armenia and China, received diplomas. Miss Li Bi Cu, of Huighua, China, received high honors. On the 16th the graduating class gave a dinner in the gymnasium of the college. The following is the list of graduates:

Edith V. Beall, Matta L. Berry, Agnes M. Carothers, Margaret S. Crockett, Mary E. Conser, Li Bi Cu, Eveleen A. Doudredou, Mary R. Findlater, C. B. H. Gilmore, Agavine Glibakian, Elsie Graf, Lucinda B. Hatch, Blanca H. Hillman, Millicent B. Hopkins, Alice E. Johnson, Mary E. Jones, Edith C. Kline, Florence E. Kraker, Marie G. Langdon, Elizabeth F. Lewis, S. M. Lichtenwalner, Ethel M. Lyon, Margaret Mace, Myrtelee M. Moore, Winnie K. Mount, Genevieve A. Neil, Abbie M. O'Keefe, Mathilda Osborne, Helen P. Proctor, Jacobina S. Reddie, Annie M. Robinson, Maude W. Sathell, Marcella L. Schweitzer, Katharine B. Scott, Mary F. Shedwick, Rose B. Sheridan, Alice W. Smith, Florence I. Staunton, Alice A. Steffian, Annie H. Thomas, Edith T. Waldie, Lucy M. Warner.

Appropriations for Charitable Purposes Approved by Governor Pennypacker.—The practice of appropriating public money for the support of private charities in Pennsylvania has grown until it is now considered a part of the duty of each legislature to pass bills aggregating many millions of dollars for the partial support of hospitals, etc. The legislature received a report from the State Board of Charities early in the year, in which appropriations were recommended for various institutions of the kind mentioned. The list of Philadelphia hospitals and homes with the recommended appropriation for each will be found on page 241 of our issue of February 4th. The legislature frequently appropriates more money to some institutions than the State Board of Charities recommends and the Governor has to reduce the appropriation made to correspond with the income of the Commonwealth. As the *Public Ledger* said editorially, in its issue of May 14th:

"... The Governor has done his 'scaling down,' according to his best judgment . . . , but such an exercise of judgment ought not to be required of any one man." We give a list of Philadelphia medical charities and the amount of public money each will receive after the cut made by the Governor has been deducted from the legislative appropriation:

University of Pennsylvania and Hospital, \$350,000; Jefferson Medical College Hospital, \$260,000; Medico-Chirurgical College Hospital, \$225,000; Philadelphia Polyclinic Hospital, \$65,000; Woman's Medical College Hospital, \$25,000; St. Timothy's Hospital, \$24,500; Kensington Hospital for Women, \$5,000; Rush Hospital for Consumptives, \$50,000; St. Mary's Hospital, \$15,000; St. Joseph's Hospital, \$22,000; St. Agnes's Hospital, \$40,000; St. Christopher's Hospital, \$15,000; Philadelphia Lying-in Charity, \$12,500; Orthopaedic Hospital, \$27,000; Maternity Hospital, \$5,000; Gynæcean Hospital, \$25,000; Samaritan Hospital, \$80,000; German Hospital, \$50,000; Howard Hospital, \$7,000; West Philadelphia Hospital for Women, \$7,500; Wills's Eye Hospital, \$40,000; Frankford Hospital, \$50,000; Jewish Hospital, \$15,000; Frederick Douglass Hospital (for colored patients), \$12,000; Woman's Hospital, \$35,000; Northern Home for the Friendless, \$11,500; Nazarene Home, \$7,500; Rosine Home, \$4,000; Friends' Home for Children, \$4,000; Philadelphia Working Home for Blind Men, \$35,000; Home for Aged Veterans, \$7,500; Home for the Aged, \$4,000; Old Ladies' Home, \$7,000; Hayes Mechanics' Home, \$4,000; Evangelical Home, \$2,000; Philadelphia Protectory, \$50,000; Home for Incurables, \$10,000; House of the Good Shepherd, \$13,000; St. Vincent's Home, \$2,500; Pennsylvania Anti-Cruelty Society, \$5,000.

It has been said that Governor Pennypacker has made his cuts without apparent reason, ex-

cept for his personal interests in the objects for which money was appropriated; but a comparison of this list with the list published in February will show that the moneys to be received by the various institutions corresponds fairly well with the amounts recommended by the State Board of Charities. Hospitals throughout the State appear to have done quite as well in the matter of liberal appropriations as the Philadelphia institutions.

GENERAL.

The Steuben County, N. Y., Medical Society has elected the following officers: President, Dr. F. H. Starr, of Corning; vice-president, Dr. Herbert B. Smith, of Corning; secretary and treasurer, Dr. W. W. Smith, of Avoca.

The Greene County, N. Y., Medical Society elected the following officers at their meeting in Cairo on May 9th: President, Dr. Percy G. Waller, of New Baltimore; vice-president, Dr. L. B. Honeyford, of Cairo; secretary, Dr. Robert Selden, of Catskill; treasurer, Dr. C. E. Willard, of Catskill.

The Association of American Physicians elected the following officers at Washington on May 17th: President, Dr. Frank Billings, of Chicago; vice-president, Dr. F. Kennicutt, of New York; secretary, Dr. Henry Hun, of Albany; recorder, Dr. Solomon Solis-Cohen; treasurer, Dr. J. P. Crozer Griffith, of Philadelphia; and councilor, Dr. T. Mitchell Prudden, of New York.

The Cleveland College of Physicians and Surgeons graduated the following on May 3rd:

Samuel Sargis Badal, B. S.; Charles Calderine Crawford, Ph. G.; Albert Mealy Dunlap, James Gordon Grimm, Philip Abraham Jacobs, Albert H. Lanzer, Charles Henry McFarland, Jr., Charles H. Merrill, Herbert Leslie Plannette, Armand John Prudhomme, Milo Pember Rindge, Arthur Pflieger Schulze, Eugene Ariel Spenzer, Ph. G.; William Colegrove Tuckerman, A. B.; Harry Holliday Ward, Ph. C., and Franklin Reuben Walters.

Chicago Neurological Society.—A meeting of this society was held at the Sherman House, Thursday, May 25th, at 6.30 p. m. Dr. Hugh T. Patrick presented a case of ataxic paraplegia; Dr. Julius Grinker, a case of traumatic dementia, a case of syphilis of the peripheral nervous system, and a brain from a case of syphilitic hemiplegia; Dr. D'Orsay Hecht read *A Study in Dementia Præcox*. L. Harrison Mettler, M. D., secretary and treasurer.

The Louisiana State Medical Society, at its meeting in New Orleans on May 11th, elected officers for the ensuing year as follows: President, Dr. C. J. Ducote, of Avoyelles; first vice-president, Dr. J. F. Oechsner, of Orleans; second vice-president, Dr. J. J. Ayo, of Lafourche; third vice-president, Dr. D. R. Sartor, of Richland; councillors: Second congressional district, Dr. E. S. Graner, of Orleans; third congressional district, Dr. H. L. Ducrocq, of Lafourche; fourth congressional district, Dr. N. K. Vance, of Caddo; fifth congressional district, Dr. R. F. Harrell, of Lincoln; sixth congressional district, Dr. C. M. Sitman, of St. Helena; seventh congressional district, Dr. C. A. Gardiner, of St. Landry.

State Board of Medical Examiners of New Jersey.—The regular examination for the State medical license of New Jersey will be held at Trenton, June 20th to 21st. Applications for the examination must be filed with the secretary prior to June 10th. Applicants who cannot present a high school diploma, or its equivalent, may take a county examination for teachers on the first Friday and Saturday in May, or the State examination for teachers on the second Thursday, Friday, and Saturday in June.

National Fraternal Sanitarium for Consumptives.—Fraternal City, New Mexico, the location of the National Fraternal Sanitarium for Consumptives, the largest hospital for the treatment of tuberculosis, was founded on May 10th in St. Louis by the officers of the fraternal organizations that have undertaken the work. The formal announcement of the new city, which will be located six miles west of Las Vegas, was made at a banquet at the Planters Hotel. A gift of \$1,000,000 in property, including the Montezuma Hotel, a smaller hotel and a dairy farm, a hospital and 1,000 acres of land was presented to the sanitarium by the Atchison, Topeka, and Santa Fé Railroad. The city of Las Vegas gave 10,000 acres of the most fertile land in New Mexico and by next fall, when Fraternal City will be dedicated, accommodations will be ready for 5,000 sufferers, be they rich or poor, regardless of creed. Patients will be supported without thought of commercialism by per capita contributions made by the great fraternal and religious orders of the country which have brought the sanitarium to its present status after three years of incessant effort. The formal papers, insuring the gift of the Santa Fé, were signed on May 15th in the office of the sanitarium in the Chemical Building. President William R. Eidson, of the Associated Fraternities, and Secretary Charles F. Hatfield represented the sanitarium; W. B. Janson, assistant to the president of the railroad, represented the Santa Fé, and F. H. Pierce the city of Las Vegas. The sanitarium now includes fifteen square miles of cultivated land at an average elevation of 6,000 feet. In the centre of the tract is the Montezuma Hotel, erected by the Santa Fé at a cost of \$500,000. It is built of brick and stone, four stories high, with 350 rooms and 750 feet of veranda.

Conference of Health Officials in Michigan.—The eighth general conference of these officials will be held under the auspices of the Michigan State Board of Health, in Ann Arbor, June 1st and 2nd, with the following programme of papers:

A Statement of the Objects of the Conference, by Dr. Victor C. Vaughan; Municipal Water Supplies, by Mr. Gardner S. Williams; The Status of Typhoid Fever at Escanaba, by Dr. Oscar C. Breitenbach; Report on the Sanitary Analyses of Drinking Water Made in the Hygienic Laboratory of the University of Michigan from January 1, 1904, to June 1, 1905, by Professor John F. Eastwood; Report on the Year's Work in the Pasteur Institute, University of Michigan, by Dr. Thomas B. Cooley; Disinfection with Formaldehyde Saturated with Potassium Permanganate, by Dr. James G. Cummings; Modern Sanitation, by Dr. Malcolm C. Sinclair; The Benefits of a State Sanatorium for Tuberculosis, by Dr. Angus McLean; Organized Effort in Restricting Tuberculosis, by Dr. Thomas M. Koon; General

Discussion on Tuberculosis, opened by Dr. Frank W. Shumway; The Heating and Ventilation of Residences, by Mr. John R. Allen; Restriction of Smallpox, by Dr. Thomas B. Cooley; The Milk Problem, by Dr. Guy L. Kiefer; Discussion of the Milk Problem, by Professor Charles E. Marshall; Street Flushing the Most Rational Means of Abating the Dust Nuisance, by Dr. A. H. Côté; The Malarial Parasites of Birds, by Dr. F. G. Novy; General Discussion on the Powers and Duties of Health Officers.

The objects of the conference are: The presentation of facts and the general comparison of views by the health officers and other delegates of local boards of health, among themselves, with the members of the State Board of Health and with those in charge of the State Laboratory of Hygiene, and especially with reference to the duties of supervisors and other presidents of local boards of health, health officers, and other officials, relative to the restriction of the dangerous communicable diseases and relative to other subjects bearing upon the public health service of the State.

This will not be a medical conference; it is for all health officers and delegates, professional and non-professional. It is expected to have the most advanced scientific presentation of facts in important branches of sanitary science; and it is hoped that public health administration will be dealt with by health officers and others who have had experience, or have given those subjects much thought. Such discussions are not restricted except by the shortness of time at the disposal of the conference. A programme will be issued later. Frank W. Shumway, M. D., secretary, Michigan State Board of Health.

American Laryngological, Rhinological, and Otological Society.—The eleventh annual meeting of this society will be held in Boston, June 5th, 6th, 7th, and 8th, when it is expected that the following papers will be presented:

Killian's Inspection of the Trachea and Esophagus, by Dr. H. P. Mosher, of Boston; The Otoprojectoscope: Demonstration of a New Apparatus and Its Application, by Dr. Max A. Goldstein, of St. Louis; Presentation of Instrument, by Dr. Walter A. Wells, of Washington; Stenosis of the Eustachian Tube a Factor in Postoperative Mastoid Fistula and in Chronic Suppuration of the Middle Ear, by Dr. Thomas Hubbard, of Toledo; Report of a Case of Carcinoma of the Larynx, by Dr. S. E. Solly, of Colorado Springs; An Unusual Case of Laryngeal Syphilis Requiring Tracheotomy, by Dr. Clement F. Theisen, of Albany; "Symposium"—Intracranial Complications of Middle Ear Suppuration: Symptomatology Diagnosis and Treatment of Meningitis, by Dr. S. MacCuen Smith, of Philadelphia; Symptomatology, Diagnosis, and Treatment of Encephalitis and Brain Abscess, by Dr. F. L. Jack, of Boston; Symptomatology, Diagnosis, and Treatment of Sinus Thrombosis, by Dr. James F. McKernon, of New York; Pathological Findings, by Dr. Thomas J. Harris, of New York; Tinnitus Aurium and Hallucinations of Hearing, by Dr. William S. Bryant, of New York; "Symposium"—Diseases of the Accessory Sinuses: Frontal Sinusitis, Diagnosis, Treatment, and Results, by Dr. C. G. Coakley, of New York; Ethmoid, Maxillary Antrum, and Sphenoidal Sinus Operations and Results, by the Nasal Route, by Dr. Walter A. Wells, of Washington; By the Maxillary Route, by Dr. T. P. Berens, of New York; By the External Method, by Dr. Lewis A. Coffin, of New York; Two Cases of Successful Obliteration of the Frontal Sinus After Repeated Operations, by Dr. H. Holbrook Curtis, of New York; Further Experience with Radical Operations for Empyema of the Frontal Sinus, by Dr. W. Freudenenthal, of New York; Report of a Case Simulating Abscess of the Antrum of Highmore, Caused by an Odontome, by Dr. William H. Haskin, of New York; The Significance of Oedema, by Dr. J. E. Schadle, of St. Paul, Minn.; Nose, Throat, and Ear Complications of the Exanthemata, by Dr. John H. McCollom, of Boston (by invitation); Prize Essay. The H. Holbrook Curtis Prize of \$100. Topic: The Etiology and Treatment of Mycosis Occurring in the Upper Respiratory Tract, by Dr. John Sendziak, of Warsaw, Russia; The Indications for Operating in Acute Mastoiditis, by Dr. Philip D. Kerrison, of New York; The Larynx in Typhoid Fever, by Dr. Chevalier Jackson, of Pittsburgh; Acute Suppurative Otitis Media in Typhoid Fever. Report of a Case with Autopsy, by Dr. Ewing W. Day, of Pittsburgh; The Serum Treatment of Hay Fever, by Dr. H. W. Loeb, of St. Louis; Report of Seven Cases

of Intracranial Operations During 1904, by Dr. George F. Cott, of Buffalo; "Symposium"—Syphilitic Manifestations in the Upper Air Passages: Nose and Accessory Sinuses, by Dr. James E. Logan, of Kansas City, Mo.; Nasopharynx, Ear, and Buccal Cavity, by Dr. J. A. Stucky, of Lexington, Ky.; Larynx and Trachea, by Dr. Francis R. Packard, of Philadelphia; Scarletinal Otitis, by Dr. F. B. Sprague, of Providence, R. I.; Report of a Case of Brain Abscess, following Acute Otitis Media. Operation—Recovery, by Dr. T. H. Halsted, of Syracuse; Orbital and Meningeal Infection from the Ethmoid Cells. Death. Report of a Case, by Dr. James F. McCaw, of Watertown, N. Y.; Report of a Case of Suppurative Infection of the Maxillary Sinus, by Dr. Irving E. Kimball.

Statement of Mortality in Chicago for the Week Ending May 13, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	May 13, 1905.	May 6, 1905.	May 14, 1904.
Total deaths, all causes.....	450	530	531
Death rate per annum per 1,000.....	11.79	13.88	14.35
By sexes—			
Males.....	254	311	310
Females.....	196	219	221
By ages—			
Under 1 year.....	70	93	73
Between 1 and 5 years.....	35	68	33
Over 60 years.....	103	88	118
Principal causes of death—			
Acute intestinal diseases.....	14	22	25
Apoplexy.....	13	12	21
Bright's disease.....	42	38	40
Bronchitis.....	14	14	10
Consumption.....	62	74	60
Cancer.....	17	15	20
Convulsions.....	9	15	10
Diphtheria.....	1	9	5
Heart diseases.....	45	46	37
Influenza.....	0	3	0
Measles.....	9	11	1
Nervous diseases.....	15	20	0
Pneumonia.....	62	85	122
Typhoid fever.....	3	5	6
Scarlet fever.....	2	1	4
Smallpox.....	7	3	0
Suicide.....	10	11	9
Violence (other than suicide).....	26	40	31
Whooping cough.....	14	13	0
All other causes.....	82	94	108

For the first time this year the mortality among children under five years of age has been lower than the average of the season. The ten year May average of this age group has been 27.9 per cent. of the total mortality. For the week of May 13th it was 23.3 per cent. of the total, or more than 16 per cent. less than the average. Of the eighty fewer deaths than reported during the previous week from all causes and at all ages fifty-six were of those under five years of age, and the unusual mortality among infants and young children that has obtained since the first of the year seems to be abating. Pneumonia and consumption are again tied—sixty-two deaths each—as leaders of important causes of death, and show reductions from the previous week of twelve and twenty-three, respectively. The seventh death from cerebrospinal fever since the first of the year occurred in the County Hospital on the 9th inst. The victim was another Italian immigrant, 20 years old; ill on arrival, May 7th, removed from train to hospital same day and died forty-eight hours later. Chief Medical Inspector Spalding reports thirty-three cases of smallpox removed to the Isolation Hospital during the week. Not one of these had ever been revaccinated and twenty had never been vaccinated at all. Three were school children in attendance on false certificates of vaccination and five were children under the school age—the victims of parental criminal neglect.

St. Louis University.—The following graduated from the medical department of this university on May 8th:

William Arthur Atkins, of Mentor, Mo.; Shelby Atkinson, of Ruston, La.; Philip Morris Baker, of Memphis, Mo.; Clarence Melvin Barr, of Beason, Ill.; Floyd William Bennett, of Elwood, Mo.; John Dalus Boggs, of Fairfield, Ill.; Jack Winton Brown, of La Junta, Colo.; Orville Harry Brown, of Sabetha, Kas.; William Jonathan Browning, of Ogden, Utah; Henry Fred Busse, of Red Bud, Ill.; Charles Eugene Caffee, of Verona, Miss.; Charles Burr Caldwell, of Monticello, Ill.; Samuel Kelly Campbell, of Warrensburg, Mo.; Henry Oliver Carlton, of Macedonia, Ill.; George Alfred Carreras, of St. Louis, Mo.; Samuel Davidson Carrigan, of Odin, Ill.; William Joseph Carter, of Gays, Ill.; Joseph Quintin Cooper, of Columbia, Mo.; Elmer Eaton Curtis, of Beloit, Kas.; Edgar Frank DeVilbiss, of Spring Garden, Mo.; Eugene George Dinges, of Red Bud, Ill.; Thomas David Doan, of Hopeadel, Ill.; Theodore Jordan Drisdell, of Everton, Mo.; William Albion Dulaney, of Marlow, Ill.; Oscar Allen Duncan, of Conway Springs, Kas.; John William Dunn, of Dietrich, Ill.; August Dutzi, of St. Louis, Mo.; Joseph John Ehresmann, of New Munich, Minn.; John Wesley Ellis, of Lampasas, Tex.; Frank Bertie Farrington, of Clarksburg, Mo.; Charles Hamilton Farthing, of Odin, Ill.; Ulysses Charles Fattebert, of San Luis Potosi, Mexico; Joseph Allan Fisher, of Ganntown, Ill.; Caspar Hartman Foote, of St. Elmo, Ill.; Hannibal Claude Fortune, of Pleasant Hill, Ill.; William Henry Foster, of Mount Auburn, Ill.; Joseph Henry Gann, of Ganntown, Ill.; Oliver Crockett Gebhart, of St. Joseph, Mo.; Charles Oscar Giese, of Mount Pleasant, Ia.; Elmer Newton Glascock, of Raleigh, Ill.; George Butler Godfrey, of Pomona, Tenn.; Henry Philip Graul, of St. Louis, Mo.; William Fred Henry Grote, of St. Louis, Mo.; Mayfield Delmar Hamm, of Sweet Springs, Mo.; Charles Foster Henderson, of Paris, Mo.; William Terry Henderson, of Ruston, La.; Charles Fred Henke, of St. Louis, Mo.; Elmer Eugene Hinckley, of Fillmore City, Utah; Walter A. Hodges, of Hillsboro, Ill.; Walter Louveria Hougland, of Mattoon, Ill.; Harry Samuel Hughes, of Hillsboro, Ill.; Leo Francis Hummer, of Iowa City, Ia.; George Alexander Johnson, of Bethwell, Ontario; Charles Roy Johnstone, of Arrowsmith, Ill.; Charles Dilworth King, of Hillsboro, Ill.; Herbert Daniel Kistler, of Clinton, Mo.; Friedrich Emil Heinrich Krug, of St. Louis, Mo.; Gustav Adolf Lau, of St. Joseph, Mo.; Thomas Eliel Licklider, of Cuba, Mo.; John William Lindsay, of Orla, Mo.; Harry Lambert Logan, of Elba, Ill.; William Randolph Lovelace, of St. James, Mo.; Kenneth Kent McAlpine, of Vancouver, British Columbia; Melvin Edgar McCaskill, of Eminence, Mo.; John Snider McElvain, of Clarkston, Wash.; Charles Andrew McNeil, of Ottaville, Mo.; John William Macdonald, of Dubuque, Ia.; John Joseph Mahoney, M. D., of St. Louis, Mo.; Roy Earl Mason, of Albia, Ia.; J. Aaron Meiner, of Arrowsmith, Ill.; Louis August Theodore Meyer, of Hermann, Mo.; William Frank Meyer, of St. Louis, Mo.; James Malcom Miller, of West Lebanon, Ind.; Robert Mayberry Miller, of Carrollton, Mo.; Robert C. Montgomery, of Grand Forks, N. D.; Walter Scott Moonlight, of Leavenworth, Kas.; Edward Moore, of Bloomfield, Mo.; William Harrison Moore, of St. Louis, Mo.; Halford J. Morlan, of Fairfield, Ill.; John Charles Murphy, of Eldorado, Ill.; Lew Paul Murphy, of Omaha, Neb.; Robert Burdett Nyberg, of Harrisburg, Ill.; Isaac Hugh Odell, of Dillard, Mo.; Albin Monroe Painter, of Council Grove, Kas.; Henry Hiram Pantan, of Ponca City, Ok.; Joseph Keck Phipps, of Grant City, Mo.; Monteville Edward Poland, M. D., of Olney, Ill.; Walter Boscum Reeves, of Lone Oak, Tex.; William Hall Richardson, of Lexington, Ky.; Clarence Anderson Smith, of Liberal, Mo.; Silas Sterling Stahl, of Albion, Ill.; Edmund Felix Taake, of Florissant, Mo.; Walter Tallman, of Downs, Kas.; Arthur Edward Walters, of Springfield, Ill.; Enfer Clinton Webster, of Bible Grove, Ill.; Edward John Wehman, of Burlington, Ia.; Charles Alfred West, of Irving, Kas.; Arthur Rand Whitefort, of St. Elmo, Ill.; John Albert Wilkenes, of Leopold, Mo.; Charles Stewart Wilson, of Gibbs, Mo.; John Theodore Wolf, of St. Louis, Mo.; Harry Wood, of El Dara, Ill.; John Logan Young, of Fairfield, Ill.; Herbert Felix Taake, of Florissant, Mo. Post-graduate instruction: John J. Breaker, M. D.; Robert E. Donnell, M. D.; Gonzales Porter Dumanan, M. D.; David Milton Huffman, M. D.; David H. Simmons, M. D.

Pith of Current Literature

PRESSE MEDICALE

April 19, 1905.

The Rôle of Sugar in Alimentation, By G. H. LEMOINE.

Sugar in Alimentation.—Lemoine cites the results of experiments made by several observers which indicate that saccharose has a high force producing power when taken by healthy persons undergoing fatigue. Other experiments on healthy individuals resulted in a loss of strength and dyspeptic troubles. The author seems to agree with Kaufmann that sugar is a material peculiarly adapted to furnish energy for immediate need.

April 22, 1905.

1. Spontaneous Improvement in a Case of Osteomalacia, By Professor BERGER.

2. Treatment of Fungoid Mycosis by Radiotherapy,

By J. BELOT.

1. **Spontaneous Amelioration in a Case of Osteomalacia.**—Berger reports the case of a man who at the age of 16 years developed a genu valgum for which osteotomy was performed in 1896. After the operation symptoms of osteomalacia appeared first in the right lower extremity, then in the left, then in the pelvis. In the following year, 1897, the upper limbs, the bones of the trunk, and of the head and face were involved. In 1898 the deformities which resulted had assumed an extreme degree. Each new extension of the disease was preceded by great pain, which was increased by the least touch or movement. The slightest muscular effort caused pain, accompanied by paroxysms, which resembled those of Jacksonian epilepsy. The general health was bad and he also suffered from vesical and renal lithiasis. Treatment seemed to be of no benefit, and he left the hospital in 1899 apparently near his end. In November, 1904, he reappeared. The same deformities were present, but his general condition was better and the bones were firm.

2. **Treatment of Fungoid Mycosis.**—Belot reports a severe case of fungoid mycosis in a woman, 39 years of age, which was successfully treated by exposure to the x rays.

LYON MEDICAL.

April 23, 1905.

1. Tracheobronchial Adenopathy with a Tuberculous Cavity in a Child, By RABOT and DE VILLIERS.

2. Epidemic of Measles with Gastrointestinal Complications, By GILLARD.

3. Formic Fever, By R. BELBEZE.

1. **Tracheobronchial Adenopathy.**—Rabot and de Villiers report a case in which a child, four years old, suffered from a frequent and violent cough, together with dysphagia. After having been under observation for about a month the child died. Autopsy revealed a chain of enlarged glands running along each side of the trachea, a large mass of glands below the bifurcation of the trachea, and a mass of glands which enveloped the two large bronchi from their origin to their entrance into the hilum pulmonalis. In the right lung was a cavity large enough to hold a walnut.

2. **Epidemic of Measles.**—Gillard gives brief histories of eighteen out of 25 cases of measles treated by him in the hospital at Tours, all of which were complicated by acute gastroenteritis of varying severity. The diarrhoea usually began two or three hours after the appearance of the eruption, the movements were green in color, of a peculiarly fetid odor, and varied in frequency, the average being twelve in twenty-four hours. Vomiting occurred in eight cases. Four patients died with symptoms of bronchopneumonia.

April 30, 1905.

1. The Horizontal Position in Treatment, By CH. VINAY.

2. A Rare Modification of the Urine in the Course of Typhoid Fever, By F. MOUISSET and S. BONNAMOUR.

1. **The Horizontal Position.**—Vinay speaks of the value of repose in the horizontal position as an important branch of the treatment of many diseases, among which he enumerates tuberculosis, psychoneuroses, circulatory disturbances, abdominal diseases, and phlebitis of the lower limb. He says there are only two objections advanced against this form of treatment, the danger of losing strength, which he considers an imaginary rather than a real objection, and the ennui a patient suffers from inaction.

2. **Rare Modification of the Urine in Typhoid Fever.**—Mouisset and Bonnamour report in very full detail the history of an attack of typhoid fever in a man, twenty-seven years of age, who had previously suffered from symptoms of cystitis. His urine was of normal color at the time of emission, but became blood red after exposure to the air. Albuminuria was constantly present. A probable diagnosis of alcaptonuria was made.

SEMAINE MEDICALE.

April 12, 1905.

1. The Idea of Heredity in Its Social Applications.

2. Pityriasis Versicolor of the Thorax an Indirect Sign of the Beginning of Pulmonary Tuberculosis,

By L. E. BERTRAND.

2. **Pityriasis Versicolor of the Thorax a Sign of Tuberculosis.**—Bertrand thinks that in every case of pityriasis versicolor of the thorax the possibility of the onset of pulmonary tuberculosis should be borne in mind and treatment instituted accordingly.

April 19, 1905.

Diffuse Ecchymosis of the Face Following Compression of the Body, By F. LEJARS.

Ecchymosis of the Face Following Bodily Compression.—Lejars quotes extensively from the literature on this subject, but advances little if anything that is new.

RIFORMA MEDICA.

April 15, 1905.

1. Contribution to the Treatment of Intestinal Obstruction (*To be continued*), By FERDINANDO GANGOTANO.

2. Variations in Blood Pressure in the Lying and the Sitting Posture in Different Diseases,

By CARLO GENNARI.

3. Blepharoplasty with a Median Frontal Flap,

By EZIO MORETTI.

2. **Blood Pressure and the Position of the**

Body.—Gennari says that the two factors which cause lowering of the blood pressure when a person changes from the lying to the sitting or the erect position are the influence of gravity and the anæmia of the brain produced by this change of position. Gravity favors the circulation of the blood in most regions of the body when the patient is standing up, and thus favors the lowering of the blood pressure. In healthy persons the vasoconstriction occurring in sitting up is not always marked enough to counteract the influence of the anæmia, and thus the blood pressure is slightly lowered in the sitting position as compared to the prone or supine position. In debilitated persons, in neurasthenics, in certain forms of cardiac neurosis, in feeble persons with cardiac disease, in whom the vascular tonicity is diminished, the vasoconstriction is less marked, and the lowering of blood pressure on sitting up is more prominent. At the same time these persons show a dicrotic pulse in the sitting or standing position, which is due, according to Frey, to an increase in the frequency of the heart beats. On the other hand, in patients with high tension pulse, such as nephritics, in arteriosclerosis, in aortic insufficiency, etc., the pressure is not altered by sitting up, or standing, because the vasoconstriction is so great that it counteracts any tendency of gravity to lower the pressure. In such patients, therefore, the blood pressure is stable in either position. An interesting fact is, however, that the blood pressure is also stable in compensated heart disease, in which vasoconstriction is sufficient to counteract any other influence lowering the pressure, when the patient sits or stands after lying down. Morphine acts well in cardiac asthma, because it diminishes the vasoconstriction and lowers the blood pressure, contrary to the statements found in some text books. It must be given, however, in small doses.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 18, 1905.

1. The Satisfactory Prostatectomy,

By BENJAMIN TENNEY.

2. The Paramount Value of Localized Râles as a Sign of Incipient Phthisis,

By H. B. WHITNEY.

3. The Therapeutical Value of Some Digestive Preparations, and the Indications for the Use of Pepsin, in Diseases of the Stomach,

By RICHARD F. CHASE.

4. Infections of the Respiratory Tract with Influenza Bacilli and Other Organisms, Their Clinical and Pathological Similarity, and Confusion with Tuberculosis,

By FREDERICK T. LORD.

1. Prostatectomy.—Tenney favors prostatectomy by the suprapubic route for all cases except those in which there is a hard and fibrous prostate to be dealt with. The greatest objection to the suprapubic route is its greater mortality as compared with the perineal route. The author believes that this objection can be overcome by doing the operation in two stages: (1) The bladder first opened under local anæsthesia. (2) Some days later the prostate is enucleated under ether, through the vesical opening. Ten to twelve minutes will suffice for this. The author has operated twice by the method he proposes and in both cases the results were satisfactory.

2. Localized Râles.—Whitney concludes that the great and predominant value of localized râles in the diagnosis of incipient tuberculosis consists first, in their almost constant presence at a time when other local signs are absent or at most indefinite. Second, in their practically unmistakable character, thus differing widely from other signs which represent merely deviations from the normal. Third, in the fact that when occurring at an apex they are almost pathognomonic, other conditions which might produce them being exceedingly rare. While, therefore, other local signs are of great value, especially for the few experts who by long experience have learned their limitations and the frequent difficulty of interpretation, the presence of localized râles must ever remain the essential guide to early diagnosis for the rank and file of the profession.

3. Digestive Preparations.—Chase discusses the digestive value of the following preparations: (1) An essence pepsin, (2) an ess. pepsine, (3) a scale pepsin, (4) an elixir and tablets lactopeptine, (5) liquor diastas, (6) tablets pepsin and pancreatin, (7) tablets panzyme, (8) tablets peptenzyme, (9) an elixir of digestive ferments, (10) and papain. He concludes that they are practically useless for the object for which they are generally employed.

4. Infections of the Respiratory Tract.—Lord concludes: "(1) Of 186 non-tuberculous infections of the respiratory tract, observed clinically, for the most part, bronchitis: (a) A mixed infection with various organisms has been found in 120 (64 per cent.). (b) A comparatively pure infection with one group of organisms was found in 66 cases (36 per cent.). Of these pure infections those due to influenza bacilli comprise the largest group, with a smaller number of cases of pure infection with the pneumococcus, micrococcus catarrhalis, etc. (2) The pure infections, however, tend to become mixed, as the case progresses, and the observer must then remain in doubt, in the presence in the sputum of two or more groups of organisms, as to the relative importance of any one of the infecting agents. (3) In the clinical picture, the symptoms of onset, the course, and duration of the different pure infections, there seems to be nothing distinctive. They all tend to set up diffuse or local bronchitis and a varying degree of bronchopneumonia. The amount of prostration may be as great in one as in the other. (4) The pathological picture in cases of bronchopneumonia, due to the different organisms, likewise seems to be similar in the character of the exudate, its varying extent and intensity and the tendency, in a small proportion of cases, to end in permanent damage to the pulmonary substance. (5) These results of pulmonary invasion are not infrequently mistaken clinically for pulmonary tuberculosis. Of 85 cases of pneumonia, associated with various organisms, well marked localized pulmonary abscesses or induration, or both, were found in 8. No tuberculosis could be demonstrated at autopsy. (6) From the clinical resemblance of such cases to pulmonary tuberculosis, the presence of

the tubercle bacillus in the sputum must be regarded as the only infallible indication of this condition."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 20, 1905.

1. Ankylosis. Arthroplasty—Clinical and Experimental
(To be continued). By JOHN B. MURPHY.
2. The Treatment of Bone Cavities,
By JAMES E. MOORE.
3. Modern Treatment of Tuberculosis, By C. O. PROBST.
4. The Importance of an Early Diagnosis in Cancer of the
Uterus, By JOHN A. SAMFSON.
5. Cæsarean Section for Placenta Prævia an Improper
Procedure. The Statistical Study of 25 Reported
Cases, with the Comparative Mortalities of 1,257
Cases of Cæsarean Section and 4,731 Cases of Placenta
Prævia Treated Obstetrically,
By RUDOLPH WIESER HOLMES.
6. The Universal Method of Clinical Writing by Means
of Clinography, By V. PENSUTI.
7. Tuberculous Meningitis. Report of Three Cases,
By WILLIAM FITCH CHENEY.
8. Physicians in Fiction. Physicians as Seen by Henry
Fielding, By C. D. SPIVAK.
9. Immunity. Chapter XV (Concluded).

2. **The Treatment of Bone Cavities.**—Moore has had some very favorable results with von Mosetig's bone plug. Four of his recent cases are reported in detail. Briefly the method consists in completely filling bone cavities, resulting from operation, with a preparation of wax and iodoform. For success to be attained the following conditions must be fulfilled: The cavity must be sterile; it must be dry; all dead and diseased bone must be removed. The material for plugging consists of sixty parts iodoform, forty parts spermaceti and forty parts of oleum sesami. These ingredients are slowly heated to 100° C., and when allowed to cool form a soft solid which remains solid at the temperature of the body. For use it is heated to 50° C., being constantly stirred to keep the iodoform evenly distributed. At this temperature it can be poured into the cavity, where it immediately solidifies. This material does not act as a foreign body, nor does it act as a culture medium. It possesses the inhibitory and medicinal properties of iodoform without causing iodoform intoxication. Its physical properties are such that it is gradually absorbed and replaced by granulations and finally by new bone.

5. **Placenta Prævia.**—Holmes reaches the following conclusions: (1) Cæsarean section for placenta prævia lowers the foetal mortality 30 per cent. and raises the maternal death rate nearly threefold. Approximately the life of one mother is taken to save the uncertain existence of one baby. (2) Unquestionably some maternal deaths have been suppressed, as in Cæsarean sections for pelvic indications. (3) A rigid os is one of the rarest complications of placenta prævia. Undoubtedly most cases of so called rigid os are simply instances of cervixes unprepared for dilatation, or a misconception based on too brusque and rapid attempts to dilate or to extract. A true cicatricial cervix, and rigid cervixes of old primi-

paræ, may offer an indication for Cæsarean section in placenta prævia. (4) Pelvic contractions are indications for Cæsarean section in the presence of a prævia hæmorrhage; the pelvic contraction, not the prævia, is the determining indication. The earlier the interruption of gestation, *cæteris paribus*, the more may pelvic deformity be disregarded. (5) In general, the presence of a placenta prævia will not be recognized before hæmorrhages appear. (6) Cæsarean section for placenta prævia never will have so low a maternal mortality as when performed for a pelvic indication. Repeated examinations by the physician and his consultants must be made for diagnostic purposes; often a vaginal tampon must be introduced as a temporizing measure, at least until the woman may be transported to a hospital or preparations made at home for the laparotomy. The acute anæmia and finally the anatomical conditions post partum all render the operation a peculiarly dangerous one. (7) Placenta prævia cases appropriate for Cæsarean section generally will demand the procedure irrespective of the foetal condition, as the primal motive should be to save the mother. (8) Cæsarean section for placenta prævia should only be considered a *dernier ressort*. (9) If an abdominal operation is forced on the obstetrician, he should remove the uterus as a prophylactic against hæmorrhage and infection. (10) The profession should await the adjudication of the field for Cæsarean section in placenta prævia by obstetric authorities before resorting to the operation.

7. **Tuberculous Meningitis.**—Cheney discusses the difficulties which not infrequently arise in attempting to reach a diagnosis in suspected cases of tuberculous meningitis. The three cases he reports at length serve as illustrations to his theme.

MEDICAL RECORD.

May 20, 1905.

1. Cystoscopy and Renal Lavage, By FRANK M. JOHNSON.
2. The Disorders of the Nervous System Arising in the
Course of Chronic Nephritis,
By WILLIAM M. LESZYNSKY.
3. The Treatment of Eczema and Impetigo in Children,
By CHARLES W. ALLEN.
4. The Relation of the Medical Profession to the Restriction
of Tuberculosis, By S. P. WISE.
5. A Case of Hodgkin's Disease with But Slight Enlargement
of the Superficial Lymph Glands,
By HENRY FARNUM STOLL.
6. Ventral Decubitus as an Aid to Drainage for Diffuse
Purulent Peritonitis, By R. M. HARBIN.
7. Sanitation of the Summer Camp,
By HARVEY B. BASHORE.

1. **Cystoscopy.**—Johnson sets forth: (1) The indications demanding cystoscopy and renal lavage. (2) Rules it is wise to observe in preparing for cystoscopy. (3) Description of the *modus operandi*. (4) Difficulties likely to be encountered in the procedure. (5) Descriptive cases illustrating the beneficial effects of this method of treatment. The paper is fairly comprehensive and makes note of many practical points. Yet those who have had no experience with cystoscopy will be left in doubt on many points, and

those who have had some experience will probably find the article a trifle elementary.

2. **The Nervous System in Chronic Nephritis.**—Leszynsky's paper deals chiefly with the symptoms referable to disorders of the nervous system that are not infrequently observed in chronic nephritis. All of the following manifestations may be expressions of kidney insufficiency: Cephalic paræsthesia; headache in various degrees to true attacks of migraine; insomnia; numbness in the extremities; neuralgic pains in different parts of the body; vomiting; muscular twitching; monospasm or hemispasm to general epileptic convulsions; amaurosis; deafness; transitory attacks of aphasia; facial paralysis; paresis or paralysis of one extremity; hemiparesis, hemiplegia, or paraplegia; gradual or sudden coma; delirium; stupor; insanity; and permanent hemiplegia with or without aphasia. The author discusses most of them in detail and reports summaries of a few cases in order to emphasize the deplorable fact that sufficient attention is not paid to determining the significance of nervous symptoms. He has seen, in consultation, many cases of chronic nephritis with nervous manifestations which were incorrectly diagnosed by the attending physicians. In some of the cases the urine had not even been examined.

3. **Eczema and Impetigo.**—Allen makes the following original suggestions: (1) In eczema, as a general local measure, nothing equals a three to five per cent. solution of methylene blue. As soon as the solution has well dried upon the affected area it should be painted over with a thin layer of collodion. This should be repeated before the peeling collodion becomes itself a source of irritation. (2) Impetigo contagiosa is frequently, in the author's experience, associated with pediculosis capitis. He asserts his belief that the pediculi cause the condition. Treatment: First search for pediculi as possible disseminators or distributors and perpetrators of the affection. Remove crusts if necessary with potato flour poultice and apply a ten per cent. ammoniated mercury ointment, or wash with green soap solution and then with 1 to 1,000 bichloride of mercury. For small areas, paint with 50 per cent. ichthylol in water, or 5 to 10 per cent. ichthylol in collodion. Salol diluted will answer as a dusting powder, or apply 1 per cent. Beta naphthol with 5 per cent. boric acid in vaseline. As a rule, however, ointments are not so good as washes. For the scalp: 10 per cent. sulphur sublimite, $\frac{1}{2}$ to 1 per cent. red sulphide of mercury in vaseline. In infants at the breast, milder ointments, such as salicylic acid and bismuth or Lassar paste, spread on cheesecloth and applied, will serve. It is only in the rarest instances that any internal measures will be called for.

5. **Hodgkin's Disease.**—Stoll's case of Hodgkin's disease presented the following points of interest: The first symptoms of disease consisted in enlargement of the glands in the neck. These were thought to be tuberculous. Four years later acute symptoms associated with a skin eruption manifested themselves. The glandular enlargement

was always moderate. There were periodical attacks of abdominal tenderness and distention and alternating periods of pyrexia and apyrexia. The patient exhibited a marked anæmia. Before death occurred the glandular enlargements disappeared.

6. **Ventral Decubitus.**—Harbin advocates ventral decubitus in certain cases of peritonitis. He reports one case of appendicitis in which the abdominal wound was left open and the patient was periodically turned on his face. Drainage is said to have been extraordinarily good.

AMERICAN MEDICINE.

May 20, 1905.

1. Remarks on Mitral Stenosis, By FREDERICK P. HENRY.
2. Artificial Dilatation of the Cervix in Obstetrics, By RICHARD C. NORRIS.
3. Graves's Disease and Parathyroid Therapy, By JAMES J. WALSH.
4. The Surgical Treatment of Prolapsus Uteri, with Special Reference to the Operation of Colpectomy, By CHARLES GREENE CUMSTON.
5. Infection of the Urinary Tract by the Colon Bacillus, Simulating Uræmia, By JAMES RAE ARNEILL.
6. Intestinal Obstruction, By DYER F. TALLEY.
7. The New Asiatic Blood Fluke (Schistosoma Japonicum, 1904; Schistosoma Cattoi, 1905) of Man and Cats, By CHARLES WARDELL STILES.
8. The Hospital and the Dispensary in the Warfare Against Tuberculosis, By LAWRENCE F. FLICK.
9. A Working Programme for Associations for the Prevention of Tuberculosis—National, State, and Local, By EDWARD T. DEVINE.

1. **Mitral Stenosis.**—Henry follows Broadbent in his method of studying mitral stenosis, that is, he divides the disease into three stages. The diagnosis in the first stage is comparatively easy. At that time there is a presystolic murmur easily recognized as such by the fact that it is followed by the first and second sounds, both audible at the apex. The second stage is indicated by disappearance of the second sound at the apex, this being due to dilatation and hypertrophy of the right ventricle and feeble propulsion of blood into the aorta. The presystolic murmur continues. The onset of the third stage is marked by disappearance of the presystolic murmur and the establishment of signs of tricuspid regurgitation. The author calls attention to what he believes is another phase of mitral disease, and one to which no distinct allusion is made by authorities on diseases of the heart. It is an extreme arrhythmia which may persist without intermission for months or even for years. The clinical syndrome of these cases is the following: Marked anæmia, with somewhat dusky skin and cyanotic lips, a tendency to bronchial catarrh, marked periods of improvement, with little or no diminution of the arrhythmia, and no œdema whatever, or none until shortly before death. The author has notes of three such cases. In none could the slightest murmur be detected by any of a number of qualified observers. Autopsy proved that the diagnosis of mitral stenosis was correct.

2. **Dilatation of the Cervix.**—Norris reviews the different methods that have been proposed

for artificially dilating the cervix in the practice of obstetrics. He bases his remarks on his personal experience and not on a review of the literature. He concludes: "(1) The necessity for the induction of a premature labor by a method requiring less than twelve hours, is extremely rare. (2) The method most frequently employed, and most satisfactory in my experience, has been a combination of partial mechanical dilatation, followed immediately by the insertion of a bougie and an extraordinarily large Voorhees bag incompletely filled. (3) For the relatively rare cases in pregnancy or labor requiring accouchement forcé, the choice of rapid mechanical dilatation depends especially upon the character of the cervix, the general state of the patient, and the firm determination not to attempt too rapid dilatation. Bossi's or De Seigneux's instrument is cleaner, less tiresome, applicable to the same class of cases, and is not more dangerous than manual forcible dilatation. (4) Dührssen's vaginal section is a most valuable operation in the hands of an expert obstetric surgeon, and should be preferred to rapid metallic dilatation, except when conditions favorable to the latter are unmistakably present. (5) For the treatment of the gravest form of placenta prævia and of accidental hæmorrhage, Dührssen's hysterotomy, in the hands of an expert vaginal operator, should prove the best method of treatment ever offered."

3. Graves's Disease.—Walsh has treated a limited number of cases of Graves's disease with desiccated parathyroid glands. While he admits that his experience is too limited to warrant his drawing conclusions, yet he admits that personally he has lost all hope regarding the efficiency of this method of treatment.

4. Colpectomy.—Cumston has performed colpectomy three times within the past year and, up to the present, is satisfied with the operation. As advised by the author, colpectomy, for prolapse of the uterus, consists in excising the vagina, leaving the balance of the genital apparatus intact. The operation may be performed under cocaine and takes from twenty to twenty-five minutes.

MEDICAL NEWS.

May 20, 1905.

- Recent Advances in Our Knowledge of the Chemical Processes of Digestion, By LAFAYETTE B. MENDEL.
- Laennec and His Stethoscope, By C. N. B. CAMAC.
- Recent Advances in the Knowledge of the Movements and Innervation of the Alimentary Canal, By WALTER B. CANNON.
- A Case of Pneumococcus Infection of the Hip, By LEONARD W. ELY.
- Pneumonia.—Etiology and Epidemiology, By EDWARD F. WELLS.
- A Few Remarks on the Proper Cleansing of a Running Ear, By H. A. ALDERTON.
- 3. Movements and Innervation of the Alimentary Canal.**—Cannon considers in succession the mechanical activities of the different portions of the alimentary canal, that is to say of the œsophagus, stomach, small intestine, and large intestine, and of the sphincters. The paper covers

too many distinct topics to permit of its being abstracted.

4. Pneumococcus Infection of the Hip.—Ely reports the case of a child, four years old, who four weeks after a pneumonia developed an abscess of the left hip. The joint was laid open and the pus evacuated. This pus contained a microorganism that morphologically resembled the pneumococcus. The patient eventually died. No autopsy.

5. Pneumonia.—Wells holds that pneumonia is due to the pneumococcus, that this organism is present in the respiratory tract of many healthy people, that different strands of the coccus vary in virulence, and that such variations are due to environment. The author has observed that, in his experience at least, a person who has once had pneumonia will harbor the microorganism in his upper respiratory tract for all (?) time. This is probably the reason why the disease is on the increase. A table of the epidemics of pneumonia which have occurred between 1873 and 1903 is given. Some of the most notable outbreaks of the disease are briefly discussed.

ANNALS OF SURGERY.

May, 1905.

- Actinomycosis, By BEVAN.
- Cerebral Tumor, By OWENS.
- Retrosternal Accessory Thyroid Tumor, By COLLINS.
- Thorasthoracic Resection of the Lower End of the Esophagus, By MEYER.
- Gastroenterostomy and Pyloroplasty, By CANNON and BLAKE.
- Resection of the Middle Third of the Stomach for Carcinoma of the Greater Curvature, By SCUDDER.
- Some Surgical Considerations Pertaining to Gastric Dilatation, By FORD.
- Gunshot Wound of the Pancreas, By CONNELL.
- Hydrocele in the Female, By HALSTEAD and CLARK.
- Tuberculosis of the Testicle, By HAYNES.
- Rupture of the Tendon of the Biceps Flexor Cubiti, By KEEN.

1. Actinomycosis.—Bevan states that actinomycosis appears clinically under four different forms, from four different routes of infection: 1. Head and neck actinomycosis, with infection from mouth and pharynx, 50 per cent.; 2, chest actinomycosis through the respiratory tract, 15 to 20 per cent.; 3, abdominal actinomycosis with infection through the alimentary canal, or in the female through the genital tract, 20 to 25 per cent.; 4, actinomycosis of the skin, 2 per cent. The disease is not a rare one, its cause in man is the ray fungus, and this may enter through the mucosa, leaving no discernible lesion at the point of entrance. The primary lesion consists of granulation tissue and it extends in all directions, rarely by the lymphatics. The pyæmic form may result from breaking through a vein, multiple foci being established in the lungs, liver, spleen, etc. The prognosis is now much better than formerly, some cases recovering spontaneously. If surgical treatment is not possible, the prognosis is grave, but not always hopeless. If the diseased tissue can be reached it should be incised, scraped,

cauterized with nitrate of silver stick, the cavity packed with iodoform gauze, and iodide of potassium given internally in large doses. The x ray should subsequently be used.

5. Gastroenterostomy and Pyloroplasty.—

Cannon and Blake in summarizing their investigations observe that during digestion the cardiac end of the stomach slowly presses its contents to the pyloric end. At the latter end the food is churned about mixed with gastric juice and then forced, as chyme, into the intestine. During this process the stomach is shortened along its greater curvature, the pylorus then being the lowest point. Pressure within the abdomen is atmospheric pressure at any part of the alimentary canal, and depends on the weight of the overlying abdominal organs. If the canal is inactive the food is practically surrounded by water. The intragastric pressure is three or four times greater at the pyloric than at the cardiac end. Circulation of food from pylorus to duodenum and back to stomach through an anastomosis has often been observed without symptoms of the vicious circle, but such symptoms occur when there is a kink in the intestine distal to the anastomosis. Such kinks cannot be straightened by peristaltic activity. Food should be mixed with the secretions poured into the duodenum, thus neutralizing the acid chyme. Food which leaves the stomach by an artificial stoma is not mixed with these secretions. Jejunal ulcers following gastroenterostomy may be due to the presence of inorganic acid where it does not normally occur. An artificial stoma should therefore be as near the pylorus as possible, overeating should be avoided, and kinks should be prevented by attaching a narrow band of distal gut to the stomach for several centimetres beyond the stoma, favoring peristalsis. In pyloroplasty the objections to leaving the pylorus open are avoided. Too rapid exit of food through the pylorus is prevented by rhythmic segmentation of the food in the duodenum, replacing the functions of the pylorus, and tending to mix the food with the pancreatic juice and the bile.

6. Resection of the Middle Third of the Stomach for Carcinoma of the Greater Curvature.—

Scudder regards his case as important, because, 1, carcinoma of the greater curvature is unusual, 58 per cent., according to Fenwick, being pyloric, while only 2.8 per cent. involve the greater curvature; 2, the growth did not infiltrate the submucosa, as is usual with pyloric carcinoma; 3, it had attained considerable size without causing symptoms of gastric disturbance, neither the pyloric nor the cardiac ends of the stomach being involved; 4, the transverse colon was not involved; 5, an end to end anastomosis was done with an interrupted Connell suture; 6, the technics of the operation was facilitated by using clamps, according to the methods of Kocher, Hartmann, Mayo, and Moynihan.

7. Some Surgical Considerations Pertaining to Gastric Dilatation.—

Pond refers to dilatation as the result of a change which has taken place in

the elemental dynamics of digestion. The cause may have persisted for weeks or for years, and may be either mechanical or pathological. The mechanical cause may be within the stomach or without. The latter may consist in the pressure of a tumor or a misplaced organ, the former may consist of the scar of a corrosion or ulcer, spasmodic action of the pylorus, or carcinoma of the pylorus. The pathological causes may be atonic or atrophic. The symptoms are pain, either dull or acute according to the physical conditions, spasm of the pylorus, vomiting, etc. The operation of choice is gastroenterostomy, unless sufficient dilatation can be had by invagination. The simplest procedure that promises the greatest benefit to the patient is gastroplication. The objection to this operation has been that it leaves the mucous membrane in rugæ or in one large fold which permits the retention of fermenting contents of the stomach and causes recurrence of the symptoms. The author has so modified the operation that these objections are overcome.

8. Gunshot Wound of the Pancreas.—

Connell finds twenty recorded cases of this injury in nine of which there was recovery. Twelve were operated in with seven recoveries, the operation being performed from one to nine hours after the injury. There are no pathognomonic or even suggestive symptoms of injury of the pancreas in gunshot wounds of the abdomen. The probable course of the bullet is the chief guide. In wounds of the lesser omentum and the posterior wall of the stomach injury of the pancreas must be excluded before the abdomen is closed.

9. Hydrocele in the Female.—Halstead and Clark adopt Rignoli's classification of this lesion into five groups: 1, Diffuse hydrocele or hydrocele of the cellular tissue about the round ligament; 2, fluid in the canal of Nuck communicating with the free peritoneal cavity; 3, fluid in the vaginal process, not communicating with the peritoneal cavity, encysted hydrocele; 4, encysted hydrocele in the connective tissue about the round ligament; 5, fluid in the remains of an old hernial sac. A mistaken diagnosis of hernia is often made in this condition. If the possibility of an hydrocele is kept in mind the condition may be determined without operation. The presence of a tense, elastic, fluctuating swelling in the inguinal canal, or extending below the external ring, which has developed slowly, without known cause and gives no impulse on coughing will suggest hydrocele. Operation will reveal the presence of fluid in the sac. A hydrocele and a hernia may coexist. The safest diagnostic procedure is incision, and this is also the most rational therapeutical measure.

AMERICAN JOURNAL OF OBSTETRICS.

May, 1905.

1. The Technics of Abdominal and Vaginal Operations for the Relief of Fibromyomatous Tumors of the Uterus, By GOFFE.
2. The Care and Feeding of Premature Infants, By MORSE.
3. Sarcoma of the Uterus, with Remarks on Radiotherapy, By GRAD.
4. Persistent Mentoposterior Positions, By REED.

5. The Yeast Treatment of Acute and Chronic Vaginitis and Endocervicitis, By SCHILLER.
6. Vaginal Atresia Complicating Labor, By HIRST.
7. Secondary Metastatic Implantation of Carcinoma in the Vagina, By SCHUMANN.
8. Hæmatoma of the Ovary, By TATE.
9. The Uterine Curette, By KELLY.

1. The Technics of Operations for Relief of Uterine Fibroids.—Goffe narrates the history of such operations and describes his technics for abdominal hysterectomy as follows: The incision having been made the ovary and tube on one side are ligated, securing the ovarian artery. With the long end of the same ligature the broad ligament is again tied just above the uterine artery. A temporary ligature is then placed near the horn of the uterus. The broad ligament is then cut to the level of the lower ligature. This procedure is then repeated on the remaining broad ligament, the tumor is delivered, and the two wounds connected by anterior and posterior incisions upon the uterus. The peritonæum is then dissected back, anteriorly and posteriorly, and the uterine artery tied on either side. The tumor is then cut away at the level of the os internum, and the flaps stitched over the top of the stumps of the uterus and broad ligaments. He thinks the advantages of this technics are: 1, There is little hæmorrhage; 2, it is easy of execution; 3, it is generally applicable; 4, it requires less time than total extirpation; 5, convalescence is rapid and free from complications. He prefers to leave one or both ovaries if possible. With suppurative or cancer he prefers to remove the entire uterus. Myomectomy is usually preferable with women of the child-bearing age, when it is possible. The dangers either in myomectomy or hysterectomy are: 1, The possible injury to the bladder in making the abdominal incision; 2, injury to the bladder in dissecting it from the tumor or the uterus; 3, wounding the ureter while ligating the uterine artery; 4, wounding the ureter when it is in an abdominal or unusual position; 5, insufficiency of peritoneal tissue in the flaps, which cover the uterine stump; 6, wounding the intestine in separating adhesions.

2. The Care and Feeding of Premature Infants.—Morse states that there are few authentic cases of survival of infants born before the twenty-seventh week of pregnancy. A premature baby being an undeveloped baby must receive much greater care and attention than a mature infant. They lose heat rapidly and cannot bear low temperatures or exposure, they also offer very little resistance to infection. The first object with a premature baby is to keep it alive, the second is to develop its organism to the stage normally reached at term. Incubators maintain an even temperature, but none of them supplies a sufficient supply of pure fresh warm air. A substitute for an incubator is a padded crib or basket, which must be carefully protected from draughts. The food should be breast milk if possible, otherwise a modification of cow's milk. The older the infant the better the prognosis, and the prognosis is bad if the weight is under two pounds, but good if over four pounds. There may be no gain in

weight for many weeks, even though development is progressing favorably.

4. Persistent Mentoposterior Positions.—Reed reviews the history of this subject and reaches the following conclusions: 1, Engagement of the face in mentoposterior positions does occur, and the face may reach the pelvic floor without anterior rotation; 2, in most cases anterior rotation occurs spontaneously; 3, failure of the chin to rotate anteriorly indicates interference; 4, in entering the pelvis, the length of the child's neck may permit the head to sink well into the pelvis before the thorax is involved; 5, delivery of the unrotated chin is rare, but not impossible; 6, in 75 cases of impacted mentoposterior position the maternal mortality was 11.6 per cent., while it is 12 per cent. with placenta prævia under aseptic conditions; 7, the foetal mortality is about the same as in intra partum eclampsia; 8, the position should be corrected if rotation does not occur spontaneously; 9, version is the operation of election if the head is not engaged and manual flexion has failed; 10, version is contraindicated after engagement; 11, manual correction should always be attempted; 12, forceps should be used cautiously if at all; 13, if symphyseotomy is performed it should be while the child is vigorous enough to justify it; 14, asepsis will lower the general mortality figures.

8. Hæmatoma of the Ovary.—Tate has made a study of the literature of this subject and finds as a result that the follicular variety is the most common one. He does not believe the disease is a rare one, though the number of reported cases is not large. There may be a number of small hæmorrhages, or a single hæmorrhage may be so large as to destroy the ovarian stroma. The hæmatomata may vary in size from a hazel nut to a large orange. Pain is a symptom which is almost constantly present, and it may be severe if the ovary is fixed. In uncomplicated cases there is no fever. Schultze and Riedel have found hæmatomata in newly born infants. Winckel has found them as a result of petroleum burns, phosphorus poisoning, typhoid fever, tuberculosis, and heart failure. They may rupture and cause hæmatocele or peritonitis. They may be associated with abnormal menstruation, dysmenorrhœa, ovarian abscess, salpingitis, purpura, or epilepsy. They usually occur between the ages of 15 and 40 years, and in the left ovary more frequently than in the right.

THE PRACTITIONER

May, 1905.

1. Some Cases of Aneurysm, By GIBSON.
2. The Operative Treatment of Fracture of the Patella, By RIGBY.
3. Functional Insanity, By JONES.
4. Cessation of Epilepsy Consequent on Removal of Adenoids, By THOMSON.
5. The Dietetic Treatment of Dyspepsia, By HUTCHISON.
6. The Pathology and Treatment of Puerperal Eclampsia in the Light of Recent Work, By SIKES.
7. Some Aspects of the Serum Treatment of Diphtheria, By ROLLESTON.

8. A Review of Recent Investigations on the Physiology and Pathology of Secretory Tissues, By SHAW.
9. Recent Advances in Dermatology: 1, Tuberculosis Cutis, 2, The X Ray Treatment of Ringworm of the Scalp, By MACLEOD.

2. **The Operative Treatment of Fracture of the Patella.**—Rigby advocates the treatment of this condition by open operation, because, 1, there is a gain in time of about six months by this method of treatment; 2, the operation ensures sound bony union with a perfect functional result. The fragments of the patella may be wired or sutured together by the open or the subcutaneous operation. The arguments against the latter method of treatment are: 1, The wires must be removed in three or four weeks; 2, early passive movements cannot be thoroughly carried out; 3, the fractured surfaces cannot be freshened; 4, the blood and effusion in the joint remain untreated; 5, the torn tendinous expansions of the vasti are untreated; 6, exact coaptation of the fragments is out of the question. The open method practised by the author consists in: 1, Exposing the fragments by a vertical, transverse, or semilunar incision; 2, emptying the joint of blood clot, serum and torn tissue; 3, freshening the surfaces of the fragments; 4, passing wires through holes bored by a drill; 5, suturing lateral tears in the expansions of the quadriceps. Two silver wires should be passed, preferably through a semilunar incision. The wires should be buried, and in the author's experience do not cause irritation. Massage and passive movement of the joint should be begun in about twelve days, and two days later the patient should be allowed to get up. A table of twenty-one cases with clinical details concludes this article.

5. **The Dietetic Treatment of Dyspepsia.**—Hutchison considers two groups of dyspepsia cases: 1, Those in which there is organic lesion of the stomach; 2, purely functional cases. Digestible food for either group means that which is easily dissolved. The secretion of gastric juice is influenced by the chemical constituents of the meal and by the psychical condition of the patient. Of the organic diseases ulcer, dilatation, and acute and chronic gastritis are considered. In ulcer rest and unirritating food in small quantities are indicated. In dilatation the meals should be small, fermenting substances should be avoided, and the object should be to supply food which can be readily passed into the intestine. In gastritis rest and unirritating food are again the indications. In the functional dyspepsias there may be excess of acid, deficiency of acid with impaired motility, or flatulency. For the acid dyspepsia the author advises such foods as are most capable of absorbing and fixing hydrochloric acid, that is, a diet rich in proteids. Fats may also be taken freely. If the acid production is excessive milk alone may be indicated. If the acid secretion is deficient soups, salts, alcohol, and condiments should be taken freely while proteids should be avoided. In the cases in which flatulency is the chief symptom fermenting substances must be avoided, and the food should be as dry as possible. Hot water may be taken freely.

6. **The Pathology and Treatment of Puerperal Eclampsia in the Light of Recent Work.**—Sikes brings together a mass of evidence showing that the heart and liver, as well as the kidneys, are very often deranged with eclampsia. If albuminuria is absent the liver is the organ chiefly involved. Zweifel says, however, that albuminuria is always present with eclampsia. After delivery the albuminuria quickly disappears. Degeneration of the cardiac muscle is occasionally present, and results from the condition of the blood. After delivery the blood pressure falls, and this explains the occasional occurrence of stasis and thrombi. Some writers consider eclampsia a general intoxication, due to absorption of bacterial products from the placenta. Others ascribe it to defective metabolism on the part of the fœtus, the mother, or both. In general, it may be said it is due to non-elimination and deficient oxidation. As to treatment most writers agree that the blood pressure should be lowered. This is best accomplished by saline aperients or by these added to venesection. Chloroform and morphine serve a useful purpose as narcotics, but they sometimes merely postpone the convulsions. Diaphoresis is, of course, very useful, hot air baths, wet packs, etc., being indicated. The general principle should be to end the pregnancy as soon as possible after the fits have begun, by Cæsarean section if necessary. In other words, the active treatment is as a rule more successful than the expectant.

7. **Some Aspects of the Serum Treatment of Diphtheria.**—Rolleston speaks of severe pains at the site of the injection which may persist hours or days. If the dose is very large, there is usually no pain and the serum acts as a sedative, drowsiness being present two or three days. Hamatoma may develop at the site of the injection, also petechiæ. An eruption of the skin is of frequent occurrence, depending directly upon the size of the dose, and inversely upon the character of the attack. The principal varieties of eruption are: 1, The scarlatiniform; 2, the urticarial; 3, the circinate erythematous. Other forms are too infrequent to require notice. The eruption generally appears within a fortnight from the injection of the serum. It continues from a few hours to several days. Other symptoms are joint pains, adenitis, secondary eruptions, abscesses, hyperidrosis, etc. Albuminuria is often present, especially in very bad cases. Oliguria lasting two or three days with relative increase of urates and phosphates is a very common result. As a general rule the more marked the antitoxine reaction the better the prognosis.

BRITISH MEDICAL JOURNAL.

May 6, 1905.

1. Introduction to a Discussion on Influenza, By T. C. ALBUTT.
2. The Epidemiology of Influenza, By H. F. PARSONS.
3. A Record of a Year's (1904) Operations in Clarence Ward (Gynecological) of the Royal Victoria Hospital, Belfast, By J. W. BYERS and R. J. JOHNSTONE.

4. The Diazo Reaction in Tuberculosis.

By C. W. BUDDEN:

5. Tetany as a Complication of Gastric Tetany, with Notes of a Case, By A. TRIMBLE.

6. Preliminary Note Upon a Leucocytozoan of the Dog, By C. A. BENTLEY.

7. Acute Poisoning by a Single Castor Oil Seed, By A. G. GULLAN.

1, 2. Influenza.—Albutt states that influenza is apparently a very old disease, and it has been known of since the twelfth century. It seems to be endemic in Northern Central Asia, just as cholera is endemic on the Ganges. The outpost from which it is definitely traced to us is Bokhara, and it follows the three chief trade routes in Asia westwards in a very remarkable way. It travels in the time corresponding to the most rapid means of locomotion. Within the main flood of an epidemic there are subsidiary or secondary areas of intensity, due to the recrudescence of germs of the disease that may have become latent. The terrible suddenness of the disease is accounted for by the very short incubation, apparently sometimes even less than twenty-four hours, and nearly always less than forty-eight. The contagion is carried upon clothes, upon things as well as in human beings, although probably only for a very short time, perhaps a few days only. The disease is propagated in the sputum and spray from the respiratory tract; and those cases in which the respiratory tract is unaffected, are non-contagious. There is no doubt as to the specific character of the Pfeiffer bacillus—but of its habits, where it is generated, whence it comes, and how it usually survives, we are entirely ignorant. It may be a constant denizen of the mouth. Young children are not very susceptible, and except for the ear, do not suffer much from sequels. The malady in them passes off quickly, and convalescence is rapid. Five or six months' immunization is usually conferred by an attack, even on the most susceptible; twelve months is the more usual respite. As regards the morbid anatomy the lesions are inflammations of an erysipelatous type. If there be lobar inflammation of the lung, it is almost always associated with lobular patches, and is very seldom confined to one lung. In influenzal pneumonia the sputum is mucous or mucopurulent, and not rusty. Like pulmonary tuberculosis influenza may excavate the lung; the patient may be badly wrecked yet ultimately recover. It is a most calamitous event when influenza falls upon a lung already tuberculous. Influenzal pleuritic effusions do badly, and pericardial still worse—also empyemas, where streptococci are usually also present. The heart may get into a very perilous condition, yet post mortem of the changes may be very slight, the danger lying in the nervous endowment of the heart rather than in the muscular fibre. The author lays great stress from a diagnostic point of view, on the extreme suddenness of the onset—ordinary colds creep on. The prostrating effect upon the nervomuscular system is frequently terrific. In convalescence the malaise very often departs as suddenly as it comes on—a brusque recovery

from a protracted convalescence. The temperature is not high or very prolonged, but often falls considerably below normal. The disease may be divided into four forms—respiratory, nervous, gastrointestinal, and continuous. Contrary to the general rule in almost all acute febrile diseases, the urine in influenza is not high colored nor lateritious. Convalescence is terribly slow and its duration is in no proportion to the attack. Neuritic and paralytic attacks are not so frequent as formerly. Angina pectoris and phlebitis are not uncommon. Minor and tedious perversions of the heart's action are very abundant. Murmurs are not the rule. Chloroform should be avoided. Dyspepsia persists for a very long time, and also the obstinate recurrence of profuse paroxysmal sweats. The patient should go to bed the moment influenza is suspected, and remain there until the acute phase is past. The disease is very much shortened by a non-toxic diet. Parsons, in discussing the epidemiology of the disease, tells us that it spreads by personal infection. The striking distance of influenza is longer than in some other diseases—the bacillus may be carried several feet through the air by the acts of coughing, sneezing, etc. The outbreak of the disease cannot be ascribed to any particular kind of weather, but the epidemics are more fatal in weather when the temperature is below the average. It is more fatal in the later periods of life, and in agricultural and residential districts. Bad sanitary conditions, such as favor the prevalence of diarrhoea and typhoid fever, seem in some way inimical to influenza.

4. Diazo Reaction in Tuberculosis.—Budden from his observations concludes that the diazo reaction is not of any value in the prognosis of chronic tuberculosis. The positive cases have died, but they were the cases without hope. The appearance of the reaction corresponds with the exacerbations of the tuberculous process, but it follows the onset of the graver symptoms, and though it disappears with improvement, such disappearance again follows the suspension of the alarming signs; while again it may disappear because the patient is growing weaker. It is probable that every fatal case of tuberculosis will yield the reaction at some period of its course; we cannot say any case is negative unless it has been tested continuously for long periods. Of seventeen cases which were negative and yet proved fatal, six succumbed to intercurrent diseases. The author followed the reaction in 3,000 cases. Of these, 600 were healthy individuals, and not one yielded a positive reaction. In tuberculosis, 96 out of 672 were positive; measles, 18 out of 25; typhoid fever, 17 out of 21; typhus, 5 out of 5; pneumonia, 5 out of 57; and puerperal septicæmia, 4 out of 4. In the remaining cases, comprising almost every acute malady of common occurrence, the reaction was uniformly negative.

5. Tetany.—Trimble reports a fatal case of gastric dilatation complicated with tetany occurring in a man aged forty-five years, in which death took place on the seventh day. Points of interest in the case were: 1. Hiccough which was

persistent and constant towards the end, resisting all treatment. 2. The peculiar mental condition. When the first paroxysm of tetany passed off the patient's mind was perfectly clear, but gradually he became more and more delirious and incoherent until the stage of complete coma was reached on the seventh day. The pathology of tetany in gastric dilatation might be pictured thus: The stomach, narrowed at its pyloric end by the cicatrization of an old ulcer, is gradually dilated into a mere bag, with scarcely any digestive power, and thus becomes a suitable nidus for fermentative toxins which gradually become absorbed into the system, producing a condition of nervous irritability both directly and reflexly—directly by acting on the delicate sensory nerve ends of the extremities, and reflexly as a result of this on the motor nerve cells in the cord producing the characteristic spasm of the extremities, upon any determining cause sufficient to upset the unstable equilibrium of the nervous system. Lavage has fallen into disrepute as a mode of treatment. If the patient survives the attack, Robson strongly recommends operation for the relief of the pyloric stenosis, which is the primary cause of the disease, and is present in about 92 per cent. of the cases. This is the only treatment which has up to the present given any hopeful results.

LANCET.

May 6, 1905.

1. Some Old and New Remedies, By W. CARTER.
2. Nutrition and Malnutrition (*Lumleian Lectures, II*),
By W. H. ALLCHIN.
3. Ten Abdominal Sections for Abnormal Pregnancies and
Obstructed Labors, By J. S. RIDDELL.
4. Blood Changes in Meningitis in Children,
By S. W. CURL.
5. Two Cases of Trichromatic Vision,
By F. W. EDRIDGE-GREEN.
6. Observations on the Blood, By C. W. CUNNINGTON.
7. Tetanus and Chloral Hydrate, By J. MOBERLY.
8. The Therapeutics of Aspirin and Mesotan,
By J. BURNET.
9. A Case of Hæmatoma of the Ovary Simulating an
Attack of Appendicitis, By H. W. WILSON.

2. **Nutrition.**—Allchin, in the second of his Lumleian lectures, considers in detail the changes undergone during digestion and subsequent absorption of the different alimentary principles. He finds that the general result of the hydrolysis is to convert the normal substances into bodies somewhat less complex in character, but becoming at the same time more diffusible. Such changes are destructive or analytic in nature. Inasmuch, however, as it is most certain that the materials as presented for assimilation by the bioplasm are not (with few exceptions, chiefly among the inorganic ingesta) in the form in which they occur in the food, nor even as they are after undergoing digestion in the alimentary canal, some further changes must be undergone by them, somewhere between the surface of the gastrointestinal epithelium and the living cell into which they will be incorporated, and these changes for the most part are of a synthetic character. The

changes which take place in the alimentary canal are well understood and readily imitated in the laboratory. But those changes which commence with the gastrointestinal epithelium, though probably of the same nature, are not so readily imitated. With the absorption of the digested material the direct influence of living protoplasm is for the first time brought to bear on the aliment. At the same time it is admitted that the digestive processes themselves are effected by the products of bioplastic activity—viz., the ferments—and it may well be that after all the subsequent elaboration of the nutriment is effected by similar agencies. The intestinal epithelial cells, to which formerly was attributed the sole function of permitting the passage of the diffusible gastrointestinal contents, are possessed of powers of high metabolic value apart even from those scarcely less important which are concerned with the production of such a stimulus to pancreatic secretion as secretion or the actual formation of a special fluid, the succus entericus, with its specific powers. These tissue elements break up the proteids into simpler substances, and reform the fats, which in order to be absorbed have been broken up into acids and glycerin.

4. **Blood in Meningitis.**—Curl has studied the blood changes which occur in meningitis in children, and concludes as follows: 1. The red corpuscles are usually present in normal or increased numbers. 2. The majority of cases show no leucocytosis. This may be explained in four possible ways: (a) The tubercle bacillus may enter the body and exert its characteristic effects without producing leucocytosis. (b) There may be no leucocytosis because the irritation of the tissues by the tubercle bacillus and its toxins is either too mild in nature or too severe. (c) The tissues being constantly exposed to the toxins of the tubercle bacillus may in time come to be endowed with a relative immunity to them and therefore will no longer exhibit any reaction on further exposure to the irritant. (d) The most active and powerful toxine produced by the tubercle bacillus may arise in the body of the bacillus itself, but owing to the nature of the bacterial cell is unable to escape in sufficient quantities to exert its irritant action on the body tissues. 3. The eosinophile cells are reduced in number. 4. The large lymphocytes and transitional cells are generally present in increased proportions.

5. **Trichromatic Vision.**—Edridge-Green reports two cases of trichromatic vision, using the term "trichromatic" as a statement of the fact that persons having this vision see only three colors in the bright spectrum, whilst the normal sighted see six and may, therefore, be designated as hexachromatic.

6. **Eosinophiles.**—Cunnington, from his observations on the blood, concludes that the granulations of the eosinophile leucocytes are antitoxic or bactericidal in nature, that they are discharged into the blood at the onset of an infection, and that after the toxins have been neutralized the blood becomes richer in antibodies. When this cell is present in the blood to the extent of one

per cent. or more, it is almost certain that there is no active suppuration taking place. This cell may be quite absent, although there is no abscess.

EDINBURGH MEDICAL JOURNAL.

May, 1905.

1. Some of the Uses of Oxydized Pyrogallic Acid (Pyraloxin) in Dermatology, By JAMIESON.
2. Insanity, By MACPHERSON.
3. The Prognosis and Treatment of Early Pulmonary Tuberculosis, By PRICE.
4. Poisoning in Scotland to the Year 1625, By STEWART.
5. Chronic Cyanosis, with Polycythæmia and Enlarged Spleen, By BEGG.

2. **Insanity.**—Macpherson thinks that in the present state of our knowledge a clinical classification of insanity is the only possible one, for pathology is not yet sufficiently advanced to afford a basis of division, nor is there any hope that in the immediate future our knowledge of the minute anatomy of the nervous system will be sufficient to form the basis for a classification. Starting with mental defect as his first class, he proceeds to confusional insanity as his second. The delirium of fevers is the type of this class. Other forms are alcoholism, puerperal insanity, dementia præcox, and general paralysis. Delirium, confusion, and stupor are the prominent symptoms. In all forms of confusional insanity there is the effect of a poison on the nervous system, especially the brain, the cortex being more or less severely injured. The recurrent insanities are mania, melancholia, the neuroses, obsessions and impulses, and paranoia. They are degenerative in origin, occurring in those who have inherited a neuroathic constitution. They occur in early adult life, they manifest emotional disturbance, and have a tendency to recur. Dementia forms the next class and implies a weakening of the expression or ordinary mental processes. It is usually the result of confusional insanity. Finally there are presenile and senile forms of insanity. Climacteric melancholia is one of the well known forms. Late in life, in senile insanity, the symptoms are loss of memory with emotional disturbance, illusions, hallucinations, or vague systematized delusions.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of April 12, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

Resection of the Elbow.—Dr. G. G. DAVIS exhibited a patient, a girl of thirteen, who at the age of seven years had sustained an injury of the elbow resulting in stiffness. Two years ago there were pain and discharge. On account of the excessive pain the ulnar nerve was freed, but the pain continued. Later Dr. Davis saw the case and a skiagraph showed ankylosis of the bones of the forearm with those of the arm. He did a

resection, and the result was ability to do light house work and to use the arm in sewing. The apparatus used to secure motion was also shown. This was an attachment to the forearm with a light weight allowed to hang at the back.

Dr. HENRY E. WETHERILL thought the light weight employed by Dr. Davis an improvement over the heavy one of a flat iron sometimes used to maintain motion.

An Auscultatory Device.—Dr. WETHERILL showed a small device which he had had cut from wood, upon the plan of the stethoscope, for measuring the amplification of sound of the aortic and other valves. The instrument was flutelike in appearance. One end was to be placed in the ear, and the fingers were to be taken off of the holes one after another until the sound was not heard. The roaring, a troublesome feature of the ordinary stethoscope, was avoided by the use of a pinhole. The instrument had proved itself of practical value.

An Encysted Calculus Removed by Suprapubic Cystotomy, with Skiagraph.—Dr. EDMUND W. HOLMES reported a case of encysted calculus removed by suprapubic cystotomy in a patient aged forty-five presenting the classical symptoms of stone in the urinary bladder. Under ethyl chloride as a general anæsthetic the bladder was washed out with a Bigelow evacuator, and a careful systematic search made with a sound. Dr. W. T. Menges, of the Jefferson Hospital, made a shadowgraph and reported the presence of a small calculus. Suprapubic section revealed the calculus encysted in the lower posterior wall of the bladder. The specimen was found to correspond almost exactly in size to the black spot on the picture. Its complete encapsulation had caused failure of detection by the sound.

The patient had an ankylosis of the hip joint due to a pathological condition of childhood. The thickening was shown in the x ray picture.

Enlarged Prostate.—Dr. HOLMES further reported a case of enlarged prostate removed by perineal prostatectomy in a man aged seventy-two. The first attack of retention of urine had occurred five years ago, requiring catheterism for about two weeks. In August, 1904, there was a second attack, during which catheterism became difficult and painful. Dr. Holmes saw the case in consultation, and subsequently did a perineal prostatectomy, which operation occupied thirty-one minutes, including the anæsthetization. Later the patient refused catheterism, and the fistula remained in the perinæum (eight months after the operation). The man now had complete control over urination, the urine passing out altogether through the opening in the perinæum. He was in good health and conducting a successful business.

Posterior Gastrojejunostomy for Benign Stenosis of the Stomach.—Dr. WILLIAM H. MORRISON presented the following case: A man, aged forty-four years, came under observation in August, 1904, with evidences of almost complete stenosis of the pylorus and great dilatation of the stomach. During the previous four years there had been

three attacks of gastric hæmorrhage. He vomited almost daily, and in the vomited matters were frequently found articles that had been eaten one or two days previously. There were great weakness and emaciation. No tumor could be detected.

Posterior gastrojejunostomy with the Murphy button was done on November 4, 1904. Recovery from the operation was rapid and complete. All symptoms of digestive disorder disappeared and the patient was able to eat and digest all varieties of food. Strength and flesh were rapidly regained, and in four months the weight increased forty pounds. The button was not found.

Dr. WILLIAM L. RODMAN regarded the case as a proper one for gastrojejunostomy, and agreed with Dr. Holmes that the Murphy button still had its place in gastric surgery. The operation of anterior gastrojejunostomy, he believed, was passing out of use.

Cerebrospinal Fever, or Epidemic Cerebrospinal Meningitis.—Dr. JAMES C. WILSON, in this paper, called attention to the importance of the recent epidemics of the disease in New York and elsewhere in this country. The affection, he said, tended to become naturalized and prevail in the form of sporadic cases in those localities in which epidemics had occurred. He quoted the statement of Councilman that the *Diplococcus intracellularis meningitidis* was a feeble organism outside of the human body, had little resisting power to light and drying, and was incapable of a saprophytic existence so far as was known. It was probable therefore that the existence of the disease was maintained by the sporadic cases.

Dr. WILSON considered the symptomatology and diagnosis of the disease at considerable length, and called attention to a form of it not generally recognized in which there were, early in the attack, symptoms of acute nephritis. As prophylactic measures, isolation of the patient and thorough disinfection were recommended. The old treatment with opium or its derivatives was described, and some of the more recent therapeutic procedures, namely, the intraspinal injection of a 1 per cent. solution of lysol and the use of diphtheria antitoxine serum, were spoken of as under investigation at the present time.

Dr. JAMES TYSON said that his experience with cerebrospinal fever during the past winter had been confined to a few cases seen at the Pennsylvania Hospital in the hands of his colleagues. He recalled the epidemic during which Dr. Stillé's classical paper was written. There was a tradition, he said, that the epidemic which occurred during the War of the Rebellion was introduced by returning soldiers, and there was also a popular belief that the cause of the disease lay in mouldy hay. Since that time cerebrospinal fever had never entirely disappeared from Philadelphia. The most important question was that of its contagiousness. While Dr. Wilson had adduced remarkable cases, apparently dependent one upon another, he recalled the paper by Dr. A. C. Abbott before the Philosophical Society, citing cases largely isolated and occurring one after another in the most remote districts. Dr. Tyson believed

that the disease was to a certain extent contagious, but not virulently so as compared with typhoid fever.

He was favorably inclined toward the submer-sion treatment of the paralytic phenomena. In a case of almost total paralysis this treatment, in conjunction with massage, had brought about almost entire recovery. The principle of the treatment, he explained, was to place the patient in the bath of warm water and to encourage voluntary motion, which was accomplished with greater facility than in the open air.

Book Notices.

Clinical Hematology. A Practical Guide to the Examination of the Blood with Reference to Diagnosis. By JOHN C. DACOSTA, JR., M. D., Demonstrator of Clinical Medicine, Jefferson Medical College. Second Edition, Revised and Enlarged. Containing 9 full page Colored Plates, 3 Charts, and 64 Other Illustrations. Philadelphia: P. Blakiston's Son & Co., 1905. Pp. 591. (\$5.00.)

In the three years that have passed since the publication of the first edition of this work there have been important advances in hæmatology. By the study of the blood, trypanosomiasis, kola-azar, Montana fever, and cyanotic polycythæmia have been identified as clinical entities; the blood changes incident to chloroma, hydatid infection, multiple periostitis, pancreatitis, variola, arthritis deformans, sprue, leucæmia, burns, and x ray therapy have been investigated; and the bacteriæmic character of Malta fever and scarlet fever has been proved. The literature of the subject has been gleaned carefully, and all advances of any importance have been incorporated in this volume. The author has also made a large number of original investigations in his hospital work, and has summarized the results of his research. No reference is made to the presence of large quantities of cholin in the blood in general paresis and other neuroses in which there is disintegration of nervous tissue. This symptom is likely to be of diagnostic value.

The aim of the book is to interpret the state of the blood as a rational aid to diagnosis, and the advance in hæmatology has made a working knowledge of the subject indispensable to every practitioner who would keep in touch with medical progress. The illustrations are excellent, and the colored plates are particularly fine.

Miscellany.

Dr. Osler's Farewell Speech in New York.—The last public address made in New York by Dr. Osler before leaving for England was at the annual dinner of the Society of McGill Graduates of New York, at the Imperial Hotel on May 4th. In the course of his address, Dr. Osler said:

"You should always remember your old alma mater, and always strive to do something for her. He who leads a worthy life and who rises to good standing in the line to which his life work is de-

voted does something for his university. And in remembering your university you who are resident here should not be unmindful of the country which gives you the opportunities. A great university requires a certain maturity. There must be a leisure class in the making of a great university. Too much teaching must not be required of the professors. The best work in a university is done by a sort of academic loafer. It does not matter if the professor meets the students but little. In fact, it is better if he does not meet them at all. The professor is there not merely to teach, but to think, and he can't think hard and teach hard at the same time. One of the best professors at Johns Hopkins, Professor Rowland, rarely met the students. He met them as little as possible. He loathed to meet them. But see him in the laboratory with a group of the higher students about him, and his presence was an inspiration. There are many of McGill's sons in this country, and they have many of them made their mark here. We have literally taken the stranger within our gates. Talk about annexing Canada! Why should Canada be annexed when Canadians are annexing so much themselves? But I am sorry so many Canadians come here. I am sorry for the cause of it. It is a delicate matter with you all here to speak of the cause of it. But *cherchez la femme*. And there is one thing in particular I want to speak about. I want you to stop the Canadian girls from coming over here—stop bringing the girls over here. It is a great shame the way they are coming. I met a young man from St. Thomas not long ago. He came to see me in Baltimore. He was a fresh faced, vigorous looking young man, but he seemed rather dejected. I said to him, 'You ought to be happy and contented. You are seven or eight and twenty, you ought to be married and settled and happy.' 'That's just it,' he replied, 'she's over here. That's why I came over here myself—came to see her. I only took you in on my way back.' You must urge the girls to stay at home. You ought to. I learn that the birth rate in Ontario is falling off—is rapidly diminishing."

"You mean Quebec," interrupted a voice from the chairman's table.

"Not a bit of it," continued Dr. Osler, amid prolonged laughter. "I mean Ontario. I don't mean Quebec. You can't diminish the birth rate up there." [Long laughter and applause.]

Apropos of the Quebec Provincial Birth Rate.

—It appears that in the year 1890 the late Honorable H. Mercier, then Prime Minister of the Province, had a law passed by the Provincial legislature granting one hundred acres of the public lands to each father and mother of twelve living children, and last year a return was made to the house of those who had taken advantage of this act. This return shows that there were more than 3,400 families of twelve living children in the Province, while some boasted of 17, 18, 19, and one even ran up to 23.

According to the last report of the Provincial compiler of vital statistics, that is to say, for 1903, 60,419 births were registered, which gives a birth rate of 36.75 per 1,000 of the population.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended May 20, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington.	May 6-13.	6	2
Florida—Jacksonville.	May 6-13.	12	1
Illinois—Chicago.	May 6-13.	33	1
Illinois—Galesburg.	May 6-13.	1	1
Louisiana—New Orleans.	Apr. 29-May 13.	23	1
Two cases imported			
Massachusetts—Lowell.	May 6-13.	2	2
Massachusetts—Quincy.	Apr. 29-May 6.	2	2
Michigan—Detroit.	Apr. 29-May 13.	5	1
Michigan—Grand Rapids.	May 6-13.	15	1
Missouri—St. Louis.	May 6-13.	12	1
New Hampshire.	Apr. 29-May 13.	3	1
New York—New York.	May 6-13.	6	1
Ohio—Cincinnati.	Apr. 28-May 5.	8	1
Pennsylvania—Lebanon.	May 6-13.	1	1
Pennsylvania—York.	Apr. 29-May 13.	29	1
Rhode Island—Providence.	May 6-13.	1	1
South Carolina—Charleston.	Apr. 29-May 6.	2	1
South Carolina—Greenville.	Apr. 20-May 6.	4	1
Tennessee—Memphis.	Apr. 20-May 13.	12	1
Tennessee—Nashville.	May 6-13.	2	1
Wisconsin—Milwaukee.	Apr. 29-May 13.	10	1
Smallpox—Insular.			
Philippine Islands—Manila.	Mar. 11-Apr. 8.	3	1
Smallpox—Foreign.			
Belgium—Ghent.	Mar. 25-Apr. 1.	1	1
China—Nanking.	Apr. 8.	Present.	1
China—Shanghai.	Mar. 11-Apr. 8.	3 among foreigners, 14 deaths natives.	2
Ecuador—Guayaquil.	Apr. 18-27.	4	3
Great Britain—Edinburgh.	Apr. 15-22.	1	1
Great Britain—Nottingham.	Apr. 22-29.	4	2
Great Britain—Southampton.	Apr. 15-29.	1	2
India—Bombay.	Apr. 11-13.	95	14
India—Calcutta.	Apr. 8-15.	14	1
India—Karachi.	Apr. 9-16.	5	3
India—Madras.	Apr. 7-14.	2	3
Italy—Ancona.	Apr. 1-20.	2	4
Italy—Catanzaro.	Apr. 13-20.	4	2
Italy—Catania Province.	Apr. 13-20.	23	1
Italy—Cosenza Province.	Apr. 13-20.	3	1
Italy—Lecce Province.	Apr. 13-20.	3	1
Italy—Messina.	Apr. 13-20.	3	1
Italy—Palermo.	Apr. 15-22.	6	1
Italy—Perugia Province.	Apr. 15-22.	3	1
Japan—Tokyo.	Apr. 8.	3	1
Turkey—Constantinople.	Apr. 16-23.	3	3
West Indies—Grenada.	Apr. 6-14.	9	1
Yellow Fever.			
Mexico—Tierra Blanca, State of Vera Cruz.	Apr. 23-May 6.	6	3
Panama—Colon.	Jan. 23-Apr. 6.	6	20
Panama—Panama.	Jan. 1-Apr. 29.	50	23
Cholera.			
India—Calcutta.	Apr. 8-15.	38	1
Plague—Insular.			
Philippine Islands—Manila.	Mar. 11-Apr. 8.	8	7
Plague—Foreign.			
Africa—East London.	Apr. 1-8.	1	1
Australia—Brisbane.	Apr. 1.	2	1
Australia—New Castle.	Apr. 3.	2	1
China—Amoy.	May 10.	Present.	1
Egypt—Alexandria.	Apr. 1-8.	1	1
Egypt—Cairo.	Apr. 1-8.	1	1
Egypt—Tukh.	Apr. 1-15.	4	4
India—General.	Mar. 18-25.	61,688	53,895
India—Bombay.	Apr. 9-18.	979	979
India—Calcutta.	Apr. 8-15.	762	762
India—Karachi.	Apr. 9-16.	191	182
Japan—Formosa.	Apr. 10.	19	6
Japan—Hiroshima.	Apr. 12.	1	1
Peru—Chiclayo.	Apr. 9-16.	6	5
Peru—Lambayeque.	Apr. 12.	1	1
Peru—Lima.	Apr. 9-16.	4	3
Peru—Chopen.	Apr. 9-16.	1	1
Peru—Mollendo.	Apr. 9-16.	7	1
Straits Settlements—Singapore.	Mar. 25-Apr. 1.	1	1

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 17, 1905:

GASSAWAY, J. M., Surgeon. Granted leave of absence for four days from May 23rd.

LIGHT, S. D. W., Acting Assistant Surgeon. Granted leave of absence for six days from May 2nd.

MALONY, J., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 1st.

GIBSON, F. L., Pharmacist. Department letter granting Pharmacist Gibson leave of absence for twelve days from May 6, 1905, revoked.

Board Convened.

Board convened to meet at Baltimore, Maryland, May 12, 1905, for the physical examination of cadets, Revenue Cutter Service. Detail for the board—Surgeon L. L. WILLIAMS, chairman. Assistant Surgeon W. H. FROST, recorder.

Appointment.

Dr. SIMON P. BROOKS appointed acting assistant surgeon for duty at Memphis, Tenn.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 30, 1905:

ADAIR, GEORGE W., Colonel and Assistant Surgeon General. Promoted to the rank of colonel and assistant surgeon general, to date from April 6, 1905.

BRUNS, E. H., First Lieutenant and Assistant Surgeon. Ordered to proceed from Brockville, Ind., and report to the commanding general of the Department of California, for duty at Sequoia, or National Park, Cal.

COLE, CLARENCE L., First Lieutenant and Assistant Surgeon. Appointed first lieutenant and assistant surgeon, to rank from May 10, 1905.

DE LOFFRE, SAMUEL M., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Assiniboine, Mont., and ordered to Fort Schuyler, N. Y., for duty.

DUNCAN, WILLIAM A., First Lieutenant and Assistant Surgeon. Recently appointed, and ordered to Fort Leavenworth, Kan., for temporary duty.

EKWUNZEL, GEORGE M., First Lieutenant and Assistant Surgeon. Detailed a member of a board of medical officers to meet at West Point, N. Y., June 1, 1905, for the physical examination of the cadets of the graduating class at the United States Military Academy, and such other cadets and such candidates for admission to the academy as may be ordered to appear before it.

GRAY, WILLIAM W., Lieutenant Colonel and Deputy Surgeon General. Promoted to the rank of lieutenant colonel and deputy surgeon general, to date from April 6, 1905.

GIBNER, HERBERT C., First Lieutenant and Assistant Surgeon. Ordered to proceed from Bridgeport, Conn., and report to the commanding general of the Department of California, for duty at Sequoia, or National Park, Cal.

HALL, JOHN D., Colonel and Assistant Surgeon General. Granted thirty days' leave of absence.

KEAN, J. R., Major and Surgeon. Ordered to proceed to Panama to confer with Colonel Gorgas, Assistant Surgeon General, pertaining to the purchase of medical supplies for the Department of Health of the Government of the Isthmian Zone.

MASON, CHARLES F., Major and Surgeon. Detailed a member of a board of medical officers to meet at West Point, N. Y., June 1, 1905, for the physical examination of the cadets of the graduating class at the United States Military Academy, and such other cadets and such candidates for admission to the academy as may be ordered to appear before it.

MOSELEY, E. B., Lieutenant Colonel and Deputy Surgeon General. Ordered to make medical and sanitary inspection of several posts in the Department of Colorado.

PALMER, FRED W., First Lieutenant and Assistant Surgeon. Left the United States Rifle Range, Arcadia, Mo., on ten days' leave of absence.

RHOADS, THOMAS L., First Lieutenant and Assistant Surgeon. Detailed a member of a board of medical officers to meet at West Point, N. Y., June 1, 1905, for the physical examination of the cadets of the graduating

class at the United States Military Academy, and such other cadets and such candidates for admission to the academy as may be ordered to appear before it.

WOODSON, R. S., Major and Surgeon. Promoted to the rank of major and surgeon, to date from April 6, 1905.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 20, 1905:

BERTOLETTE, D. N., Medical Director. Commissioned a medical director, with the rank of captain, from April 5, 1905.

BEYER, H. G., Medical Inspector. Commissioned a medical inspector, with the rank of commander, from April 5, 1905.

DE VALIN, C. M., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from January 31, 1903.

DUNN, H. A., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from June 7, 1904.

GUEST, M. S., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 3, 1903.

HOEN, W. S., Assistant Surgeon. Detached from the *Oregon* and ordered home.

STALNAKER, P. R., Assistant Surgeon. Commissioned an assistant surgeon, with the rank of lieutenant (junior grade), from May 3, 1905.

TOLFREE, H. M., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from June 14, 1904.

VICKERY, E. A., Assistant Surgeon. Detached from the *Southerly* and ordered to the *Franklin*.

WARNER, R. A., Assistant Surgeon. Commissioned an assistant surgeon, with the rank of lieutenant (junior grade), from May 3, 1905.

WEBB, U. R., Passed Assistant Surgeon. Commissioned a passed assistant surgeon, with the rank of lieutenant, from October 11, 1904.

WILSON, H. D., Surgeon. Commissioned a surgeon, with the rank of lieutenant commander, from March 31, 1903.

Births, Marriages, and Deaths.

Married.

COTTON—ROSSITER.—In Manila, Philippine Islands, on Wednesday, April 26th, Dr. Cotton, of New York, and Miss Florence Rossiter.

DONCASTER—BOOTH.—In Cincinnati, Ohio, on Tuesday, May 9th, Mr. James W. Doncaster and Dr. Georgia R. Booth.

MEANS—WOLFE.—In Philadelphia, on Tuesday, May 16th, Dr. T. K. Means and Miss Anna Marie Wolfe.

SMITH—CANTERBURY.—In Boston, Massachusetts, on Monday, April 3rd, Dr. Winfield Smith and Miss Gertrude Canterbury.

Died.

BAYNE.—In Washington, D. C., on Wednesday, May 17th, Dr. John W. Bayne, in the sixtieth year of his age.

DEANE.—In Washington, D. C., Saturday, May 6th, Dr. Julian W. Deane.

FARIS.—In Hickman, Kentucky, on Friday, May 12th, Dr. Alexander Faris, in the sixty-sixth year of his age.

HYSELL.—In Pomeroy, Ohio, on Thursday, May 11th, Dr. James H. Hysell, in the sixty-eighth year of his age.

LOWENTHAL.—In Hoboken, New Jersey, on Sunday, May 14th, Dr. Ernst J. Lowenthal, in the ninety-second year of his age.

ROGERS.—In Paterson, New Jersey, on Sunday, May 14th, Dr. Alexander W. Rogers, in the ninety-first year of his age.

TAYLOR.—In Brooklyn, N. Y., on Tuesday, May 9th, Dr. Walter L. Taylor, in the eighty-sixth year of his age.

New York Medical Journal AND Philadelphia Medical Journal.

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SATURDAY, JUNE 3, 1905

WHOLE No. 1383.

Original Communications.

THE MEDICAL AND SURGICAL TREATMENT OF GASTRIC ULCER.*

By BEVERLEY ROBINSON, M. D.,

NEW YORK.

In a rather lengthy paper entitled Problems Relating to Simple Ulcer of the Stomach which I read at a meeting of the New York Clinical Society last October, and which subsequently appeared in the *New York Medical Record*, my views on this subject were fully set forth, and at the very outset I would say that I have now but little new or different to offer. That paper was largely based upon my personal experience in the treatment of ulcer of the stomach, and, among others, included twenty-nine cases the histories of which had been obtained for me by Dr. J. Emil Traub, of this city, from the records of St. Luke's Hospital for the past twenty years.

Theoretically, with past experience to guide us, the treatment of gastric ulcer belongs essentially to the physician, and there are few diseases, even today, that have more direct and positive interest for him than simple or round ulcer of the stomach. This depends mainly upon the fact that the disease can be cured, as I believe, by timely, judicious, skilled intervention, and at a time and under conditions when delay and ignorance, on the one hand, or too great zeal, on the other, do great harm.

There are many instances, no doubt, where, under proper prophylactic measures, simple ulcer of the stomach may never develop; or, if already present, it may not progress nor give rise to threatening symptoms. If it has developed, and pain and dyspeptic symptoms are very marked, frequent, or continuous, and even after one or more hæmorrhages have occurred, a cure may follow a purely medical course of treatment. If, on the other hand, these means have been faithfully and carefully tried for many weeks, and the symptoms still persist with stationary or increased severity, surgical aid should be invoked, and in some cases surgery alone will bring about complete recovery, and even, in certain

instances, save life. Those are the cases of acute ulcer, in which the hæmorrhage is sudden, profuse, and repeated, and the menace to life too great to await the slower results of medicinal remedies, or of hygiene and time; also those of chronic ulcer, in which the recurrent hæmorrhages show that the degenerated, gaping artery of the diseased surface may be obstructed for a time with a clot, but will soon through its removal bleed afresh. Here there is but one way to obtain a cure and that is through an operation. Otherwise, when the stomach dilates, the orifice of the vessel becomes enlarged, hæmorrhage recurs, and death will ultimately ensue.

In cases of perforation of the stomach from any form of ulcer of any duration, the formal indication is to operate, and the sooner the operation is done the better the chances of saving life. Instances of cure without operation are known, but they are very infrequent, and unless special conditions prevailed, such as an empty stomach, a very small perforation, chronic adhesions to adjacent organs, etc., even those instances would not have been possible.

Of the twenty-nine cases of ulcer of the stomach collected by Dr. Traub from the records of St. Luke's Hospital for the past twenty years, twenty-four occurred in females and five in males. Of the men, three died; one was cured; one improved. Of the twenty-four female patients, one died, two were improved, and nineteen were cured. Only one of the twenty-nine cases was treated surgically. In that case, in a man, gastroenterostomy was done, and the patient died on the following day.

In order to obtain interesting facts up to date, especially in New York hospitals, I have written to prominent representatives of these institutions and made the following inquiries:

1. How many cases of ulcer of the stomach are in your hospital records during the past five or ten years?
2. How many have been operated in and the nature of the operation?
3. Results of operation?
4. Results of medical treatment?
5. Have you made any examinations of stomachal contents *before* and *after* operation?

* Read before a meeting of the New York Academy of Medicine.

I have also written to two physicians in charge of important private laboratories and to several well known hospital physicians and surgeons in New York, Baltimore, and Philadelphia. The reports I have received would take some time to read and separately are not sufficiently interesting to justify at present that expenditure. Collectively, even, they have not given me as much that is important as proceeds from facts contained in the latest published papers on this subject. (See reports.)

"During the past ten years there have been 52 cases of gastric ulcer admitted to the New York Hospital. Of these 35 were treated in the medical and 17 in the surgical wards. Of the 52 patients 11 died, which is a mortality of 21.75 per cent. There were 4 cases of relapse. Of 17 cases admitted, or transferred to the surgical division, 14 cases were operated in. Six of these patients died and 8 recovered. The statistical facts of these few cases do not allow of any particular generalization," writes Dr. Samuel W. Lambert, "except to emphatically point out the fact that surgical procedure offers in certain cases the only road to recovery."¹

Dr. Joseph A. Blake's personal experience at the Roosevelt Hospital with *perforating* gastric and duodenal ulcers is limited to 6 cases. Three patients died after operation; 3 recovered. In one, so called, recovered case the patient "now, one and one half years since the operation, has some symptoms of motor insufficiency, and I have recommended gastroenterostomy," writes Dr. Blake. In 5 cases operated in for *hemorrhage* by Dr. Blake there were 2 deaths and 3 recoveries. In two of the latter "only three months" have elapsed since the operations. "The treatment of *acute* gastric ulcer," writes Dr. Blake, "is essentially medical, since in these cases the results are extremely good. The story in chronic ulcer is different," and Blake proceeds to show from numerous statistics, that surgical treatment has "a distinctly lesser mortality."² A question of considerable interest, as Dr. Blake states, is whether the "hyperchlorhydria which accompanies ulcer is not a result instead of a cause of ulcer. Several cases are reported where relief from hyperchlorhydria followed operation.

According to Dr. C. P. Howard, of Baltimore, "hardly a sufficient number of cases treated by surgical interference have been followed for a sufficient period to justify a comparison with the results of medical treatment. Mayo Robson had a mortality in 1901 of 5 per cent.; W. J. Mayo, of Rochester, Minn., 6.5 per cent.; Peterson and Merchol, 11 per cent. Moynihan, in 1904, among 100 cases treated by gastroenterostomy alone, had a mortality of but 2 per cent." "These figures all compare favorably," writes Howard,³ "with those resulting from medical treatment, the mortality of which varies between 10 and 20 per cent."

Unfortunately, we are *not* told at what dates subsequent to operation, the first percentages were estimated. The after result of 26 cases from Johns

Hopkins Hospital, for an average period of five years is: Deaths, 23 per cent.; recurrences, 26.8 per cent.; permanent cures, 50 per cent., for periods ranging from six months to thirteen years. In a letter to me from Dr. Howard, of March 7, 1905, he states that he is almost sure that in none of these 26 cases was an operation performed. Dr. Howard's twelfth conclusion reads: "The mortality of the series" (82 cases), "was 29.3 per cent.; in the patients, however, who received treatment, there was a mortality of only 18.8 per cent.; in those receiving medical treatment *alone*, 8.6 per cent."

In the personal letter referred to, Dr. Howard reports the following facts taken from the records of Dr. Halsted's surgical service in Johns Hopkins Hospital. "Six patients discharged well, 2 improved, one of whom died on the thirty-fifth day; 6 died as an immediate result of operation. In addition to these, Dr. Finney has had quite a series of more successful issue, in which he has operated in private or in the Union Protestant Infirmary. As to the cases receiving *medical treatment only*, of 58 patients, 11 were discharged well, 38 improved, 3 unimproved, and 5 died. That is to say, a mortality of 8.6 per cent.

REPORTS.

It is only fair to add that from some hospitals, as from some physicians and surgeons, for one reason or another, I could get *no report* in response to my inquiries.

Reports; Combined Reports of Cases and Results: Total number of cases, 35; total number of operations, 18; total number of cases under medical treatment, 17.

Results of Operations: 10 deaths, 7 recoveries, 1 unknown.

Results of Medical Treatment: No deaths, 10 cured, 1 improved, 6 unknown.

Nature of Operation: 5 gastroenterostomies, 4 posterior, 1 anterior. Most of the other operations were for emergency cases by Dr. John F. Erdmann and consisted in "sutures of the ulcer area only."

The after results both of medical and surgical treatment are unknown.

The results as reported must almost invariably be referred to period of discharge. To this statement there are two exceptions: One in a case of duodenal ulcer of Dr. W. B. Coley's, one in a case of acute hemorrhage of Dr. F. B. Curtis's, in which, two months later, the patient was much improved.

In view of a letter received from Dr. Erdmann, March 15th, I can add 3 other cases of after-history after operation. These 3 are Dr. Erdmann's own operative recoveries. "Both males are still living and have had no trouble up to last report. The female is out of the hospital for some time now, but has not passed over a sufficiently long postoperative period to give the postoperative data any weight."

Thanks to the courtesy of Dr. I. Adler, I received this day from the German Hospital a report from which I take the following facts: From 1900 to 1905, in all 43 cases of ulcer of the stomach. Of these there were 39 medical and 4 surgical cases. Of the medical cases 26 were cured (in one no treat-

¹ *Am. J. Med. Sc.*, December, 1905, p. 984.

² *Am. J. Med. Sc.*, December, 1904, p. 985, et seq.

³ *Am. J. Med. Sc.*, December, 1904, p. 962.

ment); improved, 10; unimproved, 1; died, 1; unknown, 1.

Many of these cases were treated with subnitrate of bismuth, calcined magnesia or bicarbonate of sodium by the mouth and one third of them had nutrient enemata. Diet and after-results are not stated.

The 4 surgical cases:

Operations: 1 McGraw ligature, 1 excision of ulcer, 1 exploratory, 1 gastroenterostomy, all cured at discharge.

In Dr. Adler's letter to me of to-day, he speaks of the "very incomplete and unsatisfactory notes," owing to general upset condition of the hospital at present.

Dr. George P. Biggs's report to me from the New York Hospital, March 14th, is not very unlike what I have taken from Dr. S. W. Lambert's published paper. He, Dr. Biggs, has only had time to run over hurriedly records for the five years from January 1, 1900, to January 1, 1905. The medical cases number 34, the surgical 12. The figures are approximately correct. Dr. Biggs finds no cases showing study of gastric contents after operation. A single examination, a few days after operation, gives rather more acidity than before in one case. In the collected reports are included the data obtained from the City and Bellevue hospitals.

No facts unfortunately were obtained from Mount Sinai, Presbyterian, Postgraduate, and several other New York hospitals.

Total number of cases from these reports reads, 78; total number of operations, 22; total number of medical cases, 56.

Results of Operations: 10 deaths, 11 recoveries, 1 unknown.

Results of Medical Treatment: 1 death, 36 cured, 11 improved, 1 unimproved, 7 unknown.

Nature of Operation: 6 gastroenterostomies, 1 excision of ulcer, 1 McGraw ligature, 1 exploratory. The remaining operations were sutures of the ulcer.

As regards treatment, I am of the opinion that in this disease as in others, the results we obtain in hospitals are no proper index of those we get in private practice. It must be remembered that hospital patients are often badly cared for before they enter the hospital. In the first place, they do not seek medical advice soon enough, and when they get it, it is not always the most careful and the best. Again, the necessities of their existence, their mode of life, their poor, wretchedly prepared and ill advised dietary are often likely to increase rather than to diminish the symptoms of the disease from which they are suffering. Admitting, then, that an ulcer of the stomach becomes fully developed and chronic, as it frequently does in hospital patients, the dietary and medical treatment at this stage are oftentimes not so successful as we should desire. Hence, surgical interference in this class of patients is more often indicated and even absolutely essential.

On the other hand, the patient in affluent circumstances, who seeks and obtains the best medical advice at the outset, is immediately put upon the most appropriate dietary, and proper remedies are at once prescribed. In my observation, such patients sooner or later get well without surgical interference. They may suffer, more or less, from obstinate dyspepsia for quite a prolonged period, but their hemorrhages are infrequent and relatively slight, and perforation very rarely occurs. These patients are usually intelligent, and when they have put before them the nature and threatening possibilities of their disease, they follow willingly and rigidly the rules laid down for them by their medical adviser as regards diet, medicine, and occupation, and the ultimate result is satisfactory in many instances. Of course, there may be and frequently is a recurrence of the painful and unpleasant symptoms of stomachal intolerance for a brief period, but this is usually shortlived if properly treated and disappears very rapidly.

In the present state of our knowledge regarding gastric ulcer, it is the part of wisdom and duty to endeavor to decide which cases belong to the surgeon, and at what stage of the pathological process the aid of surgery should be invoked. It is probable that in too many of these instances, laparotomy has been delayed too long, owing to more than one good reason. Of these, I might particularly mention lack of operative experience, faulty surgical technique, and a decided opposition on the part of medical men to permit operations upon their patients which they consider unjustifiable, when the fatal or serious outcome of many of them is fairly estimated.

The cardinal principles governing the medical treatment of declared gastric ulcer are (1) absolute or relative rest, mental and bodily, if possible. (2) The use of rectal feeding in a measure or altogether, and the partial or complete relief of stomachal digestion, at least for a time. Gradual return to feeding, with much care and many limitations, should later be counseled and enforced, and whenever anæmia is notably a factor in the make-up of the disease, its special treatment should not be ignored.

I place great emphasis on the latter part of the treatment, when pain has disappeared and the ulcer is almost or entirely cicatrized, because I believe the nervous system is often affected as regards its function, and it cannot be fully restored unless the formation of healthy blood is effected, whether the anæmia be a primary or merely a complicating factor. The nervous system, after all, receives its sustenance, in the main, from the blood, and unless this is normal both in quantity and quality, the

derangements of the former are more likely to continue and become worse.

There is a great difference between the medicinal treatment of acute and chronic ulcer of the stomach. This was pointed out specially by Fenwick, who emphasized the truth of it, and showed how closely it was based upon anatomical and pathological conditions essentially distinctive. In very many cases, an acute ulcer will be improved and perhaps cured by a relatively short course of treatment with diet, rest, and the use of a few medicinal agents. No such happy outcome should be looked for in chronic ulcer of the stomach. Here months, and indeed years may elapse before the patients become completely restored to health.

The two complications of gastric ulcer most to be dreaded are: (1) hæmorrhage; (2) perforation. The former may be very profuse and alarming, and yet rarely does a fatal result immediately follow. Absolute rest and quiet in bed should, of course, be insisted on, and no nutriment permitted excepting by the bowel. Cold applications to the epigastrium are indicated. I have but little faith in the use of gelatin hypodermically. On the other hand, we have to-day in the repeated use of a solution of adrenalin after this manner a most potent remedy. When not given subcutaneously, it may of course be administered by the mouth several times a day in doses of from ten to twenty drops of a 1 to 1,000 solution. Ewald's suggestion of washing out the stomach with iced water does not appeal to me.

If the hæmorrhage is not arrested by these means, we must consider the propriety of a surgical operation. The indication to operate may also be present if the hæmorrhage is frequently repeated, even though it may not be profuse. In some cases, even though the hæmorrhage may be slight and rarely repeated, if the stomachal distress is great and continuous despite well ordered and judicious treatment continued for several weeks or months, an operation may be advisable.

The two operations hitherto brought forward in this condition are resection of the gastric ulcer, with suture of the wall of the stomach, and gastroenterostomy. The former has had a very high mortality, and surgeons to-day are generally in favor of making an artificial anastomosis between the stomach and the intestine by a posterior gastroenterostomy or by Finney's method of pyloroplasty. In many instances, one of the latter operations will give complete relief to the symptoms, and the explanation of this fact seems to be that the stomachal digestion becomes more rapid, and the food, being held in the stomach a shorter time, is less exposed to the prolonged action of the hydrochloric acid, which is oftentimes secreted in excess.

Unfortunately, in many instances, there is a return of the characteristic symptoms of ulcer. There may again be hæmatemesis, gastric distress, and even perforation. These symptoms are due to the formation of fresh ulcers. In point of fact when one ulcer is present others are likely to occur. Indeed, unless the underlying cause or causes of ulcer of the stomach are overcome or continuously neutralized, it is improbable that a permanent cure will follow. The lower segment of the stomach, after an anastomosis with the duodenum or ileum has been effected, takes on a similar rôle to the pylorus, and hence ulceration at this site is in an equal degree likely to occur if other conditions remain about the same. It is true that since the surgeons have abandoned anterior gastroenterostomy, renewed and grave symptoms of ulcer after operation have not occurred as frequently as previously; still, the mortality in these cases is very high in the aggregate. Even the latest report of operations for gastric hæmorrhage at the Boston City Hospital and the Massachusetts General Hospital, from 1898 to 1903, inclusive, reads: "Ten cases; ten deaths." The physicians should not be blamed, therefore, for their lack of enthusiasm for operation in such cases, even the most threatening, at least for the present. It is to be hoped and expected that with larger experience and improved technique, surgical results will be more favorable.

I am not aware that careful reports have been recorded of stomach examinations made on patients suffering from simple ulcer of the stomach before and after operation. Such examinations would be equally and even more valuable than those made by Dr. Friedenwald in five cases of dilated stomach operated upon by the Finney method of pyloroplasty, in all of which the gastric secretion was much improved.⁴

When the surgeons ask us urgently to turn over our cases to them sooner for operation, alleging that their success would then be greatly and speedily increased, we fail in a measure to recognize the validity of their reasoning. Their strong ground of argument is that to be successful they must operate while the patient is still in fairly good shape, and not unduly weakened by repeated hæmorrhages and insufficient food. On our side we maintain that if patients with gastric hæmorrhages receive careful and judicious medical treatment, they will rarely reach the stage where an operation is imperatively

⁴ *Medical News*, February 4, 1905, p. 238.

NOTE.—Three of Friedenwald's cases, as I have learned from him since, were cases of ulcer. In two there was dilatation; in all three superacidity. After operation the condition was perfectly normal. (Letter of February 14, 1905.) From Johns Hopkins Hospital there are "only two records of analyses of the stomach contents after operation in gastric ulcer. In both total acidity was less and also free HCl. The latter in one case had disappeared."—C. P. HOWARD.

needed, and we should not prejudice, as it were, the curative effects of hygiene and medicine in any particular case until it has proved, beyond peradventure, to be useless. Alas for the uncontrolled tendency of the day, which would seek to cure all human ailments with the knife, and allow less and less to the sanest, most instructed, and broadest way of regarding departures from health and well being. It should be borne in mind, also, even with a very profuse initial hæmorrhage, that it may not occur again, and even if it does occur, it may be in far less amount. Moreover, such cases are susceptible of cure by mild medicinal and hygienic treatment. Again, such ulcers, although sometimes existing singly in a given case, may exist with one or more ulcers at different sites. If this is true, it is too dangerous to excise and ligate all of them. Finally, even if search is made for numerous bleeding points, they cannot invariably be found—at all events, not soon enough to offer chances of a thorough and successful operation. In those cases where the stomach is, as it were, "weeping blood," nothing more can be done than a gastroenterostomy, and this operation, as we know, is of uncertain value in such a condition.

In chronic perforations, where adhesions with adjacent organs have already been formed, which limit the extent to which the extruded gastric contents are carried, and consequently localize the subsequent peritonitis, operation may be deferred for a time, or until the evidences of an abscess cavity are undoubted by reason of the physical signs or the result of exploratory puncture.

In considering cases of rapid or sudden death following an operation for profuse or repeated gastric hæmorrhage, presumably caused by ulcer, I am of the opinion that some lives might have been saved if, preliminary to the operation, artificial serum in sufficient quantity had been immediately injected, either subcutaneously or by the intravenous route, and repeated as often as indicated. In the first place, we should thus give rapid tone to the heart and blood vessels; and, secondly, we should help reform blood corpuscles as rapidly as possible. The patient would then be in far better shape, doubtless, to submit to an operation, and to obtain a successful result. The objection which might be urged to the serum injections, on the ground of promoting an immediate return of the bleeding through increased blood pressure, does not impress me as valid, in the face of an imminent situation, and in view of recorded results where the operation was proceeded with without preliminary or intercurrent serous injections.

I have not had occasion, as yet, either to resort to or to advise these serous injections in hæmor-

rhages from gastric ulcer, but from the standpoint of what I have now learned I should certainly advocate them in the future, unless it is proved to me that my judgment has been at fault. To those who, for one reason or another, will not use serous injections, either intravenous or subcutaneous, I am confident that repeated large saline enemata, or prolonged irrigation of the lower bowel, might prove a valuable substitute.

There is little doubt in my mind that many cases of acute ulcer of the stomach begin as an erosive ulceration. The cases reported by F. J. Smith, Monsell Moullin, and Sir Dyce Duckworth, as well as one of my own, prove this statement. These patients should first be treated medically. If the hæmorrhage was continuous, "and would almost certainly prove fatal unless active measures were taken to arrest it," and if the patient was in fair condition, and delay perhaps meant "rapid decline and death," it might or might not be judicious to operate. In Duckworth's case, operated on by Butlin, the result was recovery. In my own case, operated on by Blake, the result was death. Butlin sutured "unsound places" in the stomach; Blake performed posterior gastroenterostomy.

In conclusion, I would insist upon certain facts:

1. That probably no known treatment will prevent the formation of fresh gastric ulcers (Rutherford Morrison⁵).
2. That uncertainty of diagnosis often leads to clinical error (Francine,⁶ Howard⁷).
3. That acute gastric ulcer must be recognized clinically, for it usually heals, and the treatment is purely medical. A considerable minority fail to do so and constitute a share of the chronic ulcers. A chronic ulcer is frequently, if not usually, chronic from its inception (Mayo⁸).
4. That despite the brilliant results of gastroenterostomy in the treatment of gastric ulcers, it should be remembered that there may be forcible objections to it: "Is it probable that such a revolution of the chemical and physical processes of digestion as is involved in a successful gastroenterostomy is likely to be followed by no evils?" It is desirable to know a great deal more than is yet known of the after-history of patients operated on (R. Morri-son⁹).
5. That any form of gastroenterostomy is a grave operation, even the most approved and the newest, on account of opening internal organs and stitching them together in unusual positions (J. G. Mumford¹⁰).
6. That conservative clinical diagnoses, in addition

⁵ *Lancet*, February 11, 1905, p. 351.

⁶ *Am. J. Med. Sc.*, March, 1905.

⁷ *Med. News*, October 8, 1904.

⁸ *Med. News*, April 16, 1904.

⁹ *ibid.*

¹⁰ *Boston Med. and Surg. J.*, March 2, 1905, p. 261.

to correctly interpreted autopsy findings, will enable us to form safe judgments of cases of ulcer of the stomach, as to the medical or surgical treatment.

7. That in emergency cases, whether of hæmorrhage or perforation,¹¹ frequently no previous symptoms existed which would permit even a probable diagnosis, hence no rational preventive medical treatment could be carried out.

THE MEDICAL TREATMENT OF GASTRIC ULCER.*

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The names of a number of eminent clinicians have been associated with the treatment of ulcer of the stomach. It was Cruveilhier who first advised an exclusive milk diet in the treatment of this condition and Brinton who first pointed out clearly the advantages of the rest treatment. The names of Wilson Fox, von Ziemssen, Leube, Fleiner, Riegel, and Boas must be mentioned too, who have done much to develop the treatment of ulcer of the stomach.

It is generally admitted by most authorities that the rest treatment should always be instituted in all cases of ulcer of the stomach in order to attain as far as possible those conditions most favorable for rapid healing. The patient should be put to bed at rest for a variable period of time depending upon the severity of the symptoms, ordinarily from two to five weeks, and kept strictly upon a liquid diet, mainly of milk. The rest in bed as well as the rigid diet not only assists in the healing of the ulcer but also in a measure guards against the onset of such accidents as perforation and hæmorrhage. The additional advantage of the rest lies in the fact that a patient when in bed requires but a sixth of the number of calories that he requires when about and, therefore, much less nourishment is needed under these conditions, thus entailing less labor upon the diseased stomach. The stomach should be spared all possible irritation, the food being taken neither too hot nor too cold and, as already stated, only in the liquid form. The excess of acid in the stomach should as far as possible be lessened and all irritation from drugs should be avoided. Milk can ordinarily be given without being peptonized, best diluted with lime water; beginning with small quantities at two hour intervals, one to two quarts of milk may be gradually consumed in twenty-four hours. After the first week, when the nausea and pain have

¹¹ None of Dr. J. F. Erdmann's emergency cases, "as far as the histories were obtainable, presented any previous history to that of sharp pain at the time of perforation."

* Read, by invitation, at the Journal Club, February 25, 1905.

subsided, some well cooked wheat preparation or strained barley or oatmeal or somatose may be added to the milk to increase its nutritive value, or clear broth or broth with an egg thoroughly broken up may be added to the diet; if the patient has improved and is free from nausea or vomiting a soft diet such as rice cooked in milk, milk toast, or soft boiled eggs may be allowed at the beginning of the third week. At the beginning of the fourth week solid food in easily digestible form, such as raw scraped beef, stewed chicken, broiled sweetbreads, calves' brains, baked potatoes, may be allowed and finally the usual diet may be given; but raw fruit, salads, pastry, and the heavy vegetables should be avoided for a long period of time. The patient should remain in bed from two to four weeks according to the severity of the symptoms; ordinarily at the beginning of the third week he may be allowed to recline on a couch and toward the end of this week to sit up for a short time and finally for a longer time each day. In the fourth week the patient is usually permitted to walk about. Hot poultices are applied to the abdomen for several weeks during the early part of the treatment and 200 to 300 c.c. of hot Carlsbad water are taken morning and evening. In all cases of ulcer of the stomach of a severe type, which are accompanied by excessive nausea, vomiting, and pain, or accompanied by vomiting of blood, all nourishment by mouth should be withheld for a period varying from five to ten days, the patient being fed by means of nutrient enemata given from three to five times daily. During this period the thirst may be partly allayed by allowing bits of crushed ice or permitting the patient to rinse his mouth with water. McCall, Anderson and Donkin first called attention to this plan in the treatment of ulcer of the stomach. Whenever it is possible it is best to begin treatment in all cases of ulcer according to this method for four or five days, then gradually allowing small quantities of milk and finally continuing the rest cure diet as has already been described. It is a much more simple matter now to determine the length of time a patient should remain on a strict milk diet and at rest in bed than formerly. According to the recent investigation of Boas, small invisible hæmorrhages frequently occur in cases of ulcer which can be detected only by special chemical examinations (the guaiac or aloin tests) of the fecal discharge. These hæmorrhages are known as "occult." By means of the examinations for "occult hæmorrhages," we are enabled to establish the individual term of treatment, dismissing the patient only when repeated tests fail to disclose further occult hæmorrhages.

While this plan of treatment is usually recommended it must not be forgotten that there are some

objections to an exclusive milk diet extending over a number of weeks. The anæmia frequently found accompanying this condition is often very extreme and the small quantities of milk which are consumed cannot prevent the onset of rapid emaciation. For this reason Fuetterer recommends the juice expressed from five pounds of beef to be taken daily to combat this condition. Lenhartz, too, has recently cautioned against the strict abstinence diet in the treatment of ulcer, even in those instances in which there is hæmorrhage. He bases his conclusions on the fact that since ulcer of the stomach is most frequently accompanied by superacidity and also by a generally enfeebled condition it is best to give proteid food early to overcome the acidity as well as to build up the system. The accompanying table illustrates his method of feeding. The eggs and milk are given ice cold and in teaspoonful doses. By means of this method he has treated 60 cases with gratifying results. In those cases where there has been hæmorrhage the patient is kept in bed for fourteen days, and an ice bag is placed on the abdomen for ten days.

Day after last hæmorrhage	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eggs	2	3	4	5	6	7	8	8	8	8	8	8	8	8
Sugar	..	..	20	20	30	30	40	40	50	50	50	50	50	50
Milk	200	300	400	500	600	700	800	900	1,000	1,000	1,000	1,000	1,000	1,000
Raw scraped beef	..	..	..	..	..	35	2 × 35	2 × 35	2 × 35	2 × 35	2 × 35	2 × 35	2 × 35	2 × 35
Milk cooked with rice	..	..	..	..	..	..	100	100	200	200	300	300	300	300
Zwieback	..	..	..	..	..	..	..	20	40	40	60	60	80	100
Ham (raw)	..	..	..	..	..	..	..	..	50	50	50	50	50	50
Butter	..	..	..	..	..	..	..	..	20	40	40	40	40	40
Calories	280	420	637	779	955	1,135	1,588	1,721	2,138	2,478	2,941	2,941	3,007	3,073

There are a number of mild cases of ulcer of the stomach in which it is impossible to carry out the rest treatment. Under these conditions the ambulatory form of treatment may be undertaken according to one of three methods. In all cases the patient is permitted only to take liquid or semisolid food.

(1) Nitrate of silver is prescribed in solution in one sixth to one third grain doses for a period of three weeks, or

(2) Bismuth subnitrate may be administered in large doses (one teaspoonful) three times a day. Fleiner recommends giving the bismuth suspended in water after previous lavage of the stomach. After the stomach has been thoroughly cleansed, 10 to 20 grammes of subnitrate of bismuth, suspended in 100 to 200 c.c. of water, are passed into the stomach through the tube, after which the patient is required to lie on his right side for a half hour. In those instances in which there is any contraindication to the use of the tube, Fleiner advises the administration of 10 grammes of bismuth subnitrate suspended in a glass of water in the morning before breakfast.

(3) The oil cure has been recently recommended

by Cohnheim in the treatment of ulcer of the stomach. Olive oil is taken three times daily from half to one hour before meals; in wineglassful doses in the morning and in dessertspoonful doses at noon and in the evening. In very mild cases an emulsion of sweet almonds may be substituted for the oil. The oil fulfils several indications. It forms a coating over the stomach and thus assists in overcoming pylorospasm, and by relieving friction it overcomes pain; it checks the excessive secretion of acid, and improves the general nutrition. The treatment of a number of special symptoms must yet be referred to.

(1) *Hæmorrhage*.—In all cases of hæmorrhage absolute rest in bed must be insisted upon; an ice bag should be placed upon the epigastrium and a hypodermic injection of morphine administered. It is quite doubtful whether any drugs which we have at hand have any special influence in checking bleeding from the stomach. Among the remedies which may be utilized for this purpose are hypodermic injections of ergot or gelatin (100 grammes of a 2 per cent. watery solution). Recently Einhorn

has recommended the hypodermic injection of a syringe of adrenalin chloride, 1 to 2000, twice daily, or the internal administration of 15 drops of the same solution three times daily. In cases of great weakness or actual collapse from hæmorrhage saline infusions must be resorted to. Very profuse hæmorrhages recurring at short intervals or even frequent small hæmorrhages of the stomach which are not relieved by the usual treatment require surgical interference.

2. *Acidity*.—For the relief of the acidity, which is a usual accompaniment of ulcer of the stomach, one is frequently required to administer alkalies alone or combined with belladonna or codeine.

(3) *Constipation*.—This symptom may be relieved by the use of enemata or by the internal administration of oil or Carlsbad water.

The question which always arises after the treatment of ulcer of the stomach and which is sometimes difficult to decide is, What evidence have we that an ulcer is healed? In a general way this question may be answered in the affirmative when there is an entire absence of pain after taking solid food; when there is no longer pain on pressure in the

epigastric region; and, finally, when repeated tests fail to reveal further "occult hæmorrhages" in the fæcal discharge. Another question of equal importance which the physician must decide is the time when surgical procedures should be instituted, in other words when cases of gastric ulcer should no longer be treated medically. The indications for surgical procedures are as follows:

1. *Perforations*.—All perforations should be handled at once by surgical methods.

2. *Perigastric Adhesions*.—Perigastric adhesions produced by gastric ulcers, especially those accompanied by tumor formation, should be handled surgically.

3. *Hæmorrhages*.—Hæmorrhages which are very profuse, occurring at short intervals or even small frequent hæmorrhages which are not relieved by medical means require surgical treatment.

4. *Persistent Nausea and Vomiting*.—In all cases in which there is persistent nausea, vomiting, and pain, not relieved by the rest treatment or by a strict abstinence cure, it is necessary to seek surgical aid.

5. *Recurring Ulcers*.—All cases of ulcers of the stomach recurring at shorter or longer intervals notwithstanding a proper rest or abstinence cure require surgical treatment.

I beg leave to submit a short statistical report of the results of treatment of 287 cases of gastric ulcer under my care in hospital and private practice during the past six years. I have been careful to eliminate all cases in which there has been any doubt as to diagnosis as well as those which could not be carefully observed during the entire course of treatment.

	Cured.	Not cured.	Died.	Percentage of recoveries.
Of these 75 were treated by the				
best cure.....	67	8	3	89
198 were treated as ambulatory patients:				
108 were treated by the nitrate of silver method.....	64	14	0	59
82 were treated by the sub-nitrate of bismuth method..	55	27	0	67
8 were treated by the oil method.....	4	4	0	50
14 were operated on.....	10	..	4	71
Of these 2 had acute perforation.	1	..	1	50

The Albany, N. Y., Hospital Training School graduated the following nurses on May 17th:

Misses Percy Loveday, Edna Grace Bridgeford, Harriet M. Stark, Elizabeth Ulrich, Anna Hervey Strong, and Florence E. Bochlowski, of Albany; Mabel Stevens Diack, of Rensselaer, and Susan James Sullenden, of Eagle Rock, Va.; Effie Anne Nettleton, of Little Falls; Florence Amelia Heidle, of Ohio; Marietta Frost Fitchett, of Poughkeepsie; Margaret Isabel Black, of Fergus, Canada; Rosemary Barrett, of Oneonta; Irene Sarah Williams, of Fort Plain; Grace Maude Wells, of Fort Plain; Emily Anne Fraser, of Prince Edward's Island, Canada; Margaret Gertrude McClellan, of Gananoque, Canada; Sara Ingalls, of Ponda; Lulu Florence Schrader, of New Haven, Conn.; Mary Walker, of Schenectady; Edith Alma Loomis, of Canandaigua; Mabel King Hill, of Walden.

THE EMPLOYMENT OF CELLULOID PLATES FOR COVERING OPENINGS IN THE SKULL IN OPERATIONS FOR EPILEPSY, BRAIN TUMOR, ETC.*

By WILLIAM PERRIN NICOLSON, M. D.,

ATLANTA, GA.

It is somewhat surprising that in all the history of surgery practically no attempt has been made to protect with artificial coverings openings made in the skull by design or accident. There is a universal belief on the part of the laity that the insertion of silver plates is a matter of everyday occurrence. This has been so extensively accepted that it is not unusual to find physicians who also believe that this has been done. A review of current text books in surgery does not reveal any mention of such a procedure, and surgical treatises in the medical press have very few allusions to the subject. There seems to be an almost universal recognition of the fact that such a principle should be of value. At the meeting of the American Medical Association in 1896 in the section in surgery the writer heard the question asked if any one present had ever employed, seen used, or authentically known of the implantation of a plate for the protection of the brain. There was a universal negative reply.

Theoretically, the insertion of some means of protection should be an ideal procedure. In exposing the brain we deal with the organ which Nature has most carefully guarded against force of impact, and one the irritation of whose surface causes many of the most serious conditions for which we are called upon to operate. By the usual means of operating we in many instances substitute a pressure and resulting irritation for that we are removing, for we leave the impressible brain covered over only by the scalp, and subjected to outside influences before impossible. While it is true that Nature finally substitutes a partial protection in the form of a fibrous covering, this must of necessity by atmospheric pressure have been depressed before consolidation, and we have the renewed pressure, which we found necessary to remove, with the difference that in many cases the area of pressure is greater than before. If under such conditions we are able simply and rapidly to cover openings of whatever size with an easily prepared plate, which is in itself unirritating, sufficiently unyielding to resist atmospheric pressure, and at the same time elastic to a certain extent, we certainly have accomplished a great deal.

* Read before the Association of Southern Railway Surgeons.

Such requisite conditions we find in celluloid, a material which remains indefinitely in the tissues without irritation or disturbance, and the physical character of which is such that it can be easily cut with scissors to the required size and shape for adjustment to the opening. Its harmlessness in the tissues was demonstrated to me by the absence of any irritation from a celluloid testicle introduced by me into a patient's scrotum, and worn now for five years without any trouble whatever. Given such a material, we are enabled to enlarge the opening in the skull to whatever size we may desire, knowing that we can cover the opening and protect the brain from subsequent injury or from undue protrusion from want of support. In operations for epilepsy it not only protects the brain from subsequent pressure, but leaves an increased space measured only by the thickness of the individual's skull.

One might naturally suggest that this can be accomplished in surgical destruction of the bone by making a large osteoplastic flap, but this is applicable only when we know beforehand that we are going to make an extensive dissection. Many conditions arise during brain operations that call upon us unexpectedly to enlarge our incision in the skull, in which case the bone cannot be utilized for subsequent reintroduction into the wound.

TECHNIQUE.

The surgeon will select the method of opening the skull which he prefers, whether by saw or rongeur. Personally I prefer the De Vilbis rongeur where long incisions in the skull are to be made, and for enlarging or rendering symmetrical the opening already made I use the ordinary angular rongeur. The incision in the scalp should be of horseshoe shape, and sufficiently free in its sweep to give the desired room for enlargement in any direction that may be necessary, always remembering that it is far better to have both the bone and scalp opening too large than too small.

The question of control of scalp hæmorrhage is one always important because of the very free vascular distribution, and of the difficulty of clamping the vessels in the dense scalp tissue. In order to handle this with rapidity I have devised a scalp forceps, with the assistance of Messrs. George Tiemann and Company, with convex and concave jaws of varying lengths, by means of which large areas may be secured at one time in a few seconds. Time is also saved by the employment of the De Vilbis trephine, which can be pushed rapidly to the dura without fear of injury of the brain.

After completion of the operation the plate of

celluloid can be shaped to the size of the opening with scissors, allowing sufficient edge to overlap the opening in the skull so that it will rest upon the outer table of the bone. The plates I have employed are made from the convex top of an ordinary celluloid powder puff box, the convexity of which very nearly conforms to the arc of the skull. As boiling destroys the convexity, those that I have used I have sterilized by washing with soap and water, and leaving overnight in a solution of bichloride 1 to 500, and transferring to a normal salt solution before the operation is begun. After shaping the plate as nearly as possible to the opening in the skull, three or four points are drilled obliquely through the bone, beginning about one fourth of an inch beyond the edge and coming out just about the margin of the inner table.

It is well to place a spatula or some protecting plate between the dura and skull to prevent a sudden passage of the drill through the inner table into the brain.

Into these openings silver wires No. 22 are passed and left in position. Corresponding openings are now drilled in the plate, and the inner ends of the wires are brought outward through these. Twisting the wires now draws the plate down snugly into position, and the twisted ends are cut off, and bent so that they can be pushed under the edge of the plate.

In the temporal region I have relied upon pushing the lower end of the plate under the muscle, as it is very difficult to drill the lower angle of the bone opening.

The scalp is now closed over by the ordinary method of the operator, though personally I always close these wounds with a continuous suture of plain catgut, because this renders it unnecessary to ligate any of the scalp vessels, as the even pressure of the continuous stitch controls hæmorrhage perfectly. It is well to bring a drain of gauze or a few strands of catgut from the space between the scalp and plate, as I have had to contend in two instances with quite a large serous collection at this point that required several weeks for absorption.

It is also well to place the dressings somewhat snugly over the wound, so that pressure will prevent oozing and keep the scalp well down upon the plate.

Healing is usually complete in one week, and the patients are out of bed in half this time. I have seen absolutely no irritation result from the plate in any instance, and I am certain that these patients are far more comfortable than those in whom the brain is left unprotected under the

scalp. The cases in which I have so far applied these plates are six, whose histories are given below:

REPORT OF CASES.

CASE I.—*Cyst of the Brain Producing Epilepsy.* Mr. W., aged 50 years, received a compound fracture of the left orbital arch and frontal bone in a railroad accident twenty-three years before. Within less than a year he was seized with an epileptic convulsion, and these had been increasing in frequency and severity since that time, so that now he had had three or four within the previous few months. His mental activity had been

cut out for a space covering an ellipse, one and one half inch by two inches, extending from the supraorbital ridge upward and outward. The cyst was found to be about the size of an English walnut, extending from the original seat of the fracture upward and outward towards the speech centre. It was evacuated, and drained, after scratching its internal wall at various points with a needle. On account of the extensive removal of bone the frontal sinus was opened, thus making a direct connection between the cavity of the nose and the brain, and during the operation air was forced up through the sinus. After stitching the dura in position, the outer end of the frontal sinus was packed with iodoform gauze, and a notch was made in the inner edge of the plate, which was anchored in position by the methods described. Patient had a convulsion the night following the operation, but the course was otherwise uneventful. The gauze in frontal sinus was left six days, and, after removal, the sinus gradually closed without trouble. Now eleven months after operation it is impossible across the room to detect any evidence of the operation, the scalp lying evenly and smoothly over the plate, which is not discoverable even by close examination. The general condition of the patient has been excellent, but there have been one or two convulsions since the operation. His speech has much improved.

CASE II.—*Jacksonian Epilepsy.* M. F., aged 25 years, male. This patient had been operated upon three times for traumatic epilepsy, twice by Dr. McGannon, of Nashville, Tenn., and once by myself. He still has epilepsy, and his condition is supposed to be incurable, and he suffers on account of the large exposure of his brain, where the bone has been removed. Hearing of the plate that I had inserted in the above mentioned case, he consulted me with the view of having the opening in his skull covered. The examination showed three openings in the skull, somewhat irregularly joined, and extending over a large part of the Rolandic area. The brain pulsed freely, and he complained that he suffered at all times from the direct exposure of the brain to pressure and to blows, even turning upon his pillow at night when he lay upon this side, seeming to precipitate convulsion. Operation May 15, 1904, at St. Joseph's Infirmary. Under ether a large curved incision twelve inches long was made so as to encircle the whole area, extending from the external angular to the posterior process. The separation of the flap was difficult at some points on account of adhesions between the scalp and dura, but these were carefully separated over the whole pulsating surface. With rongeur the edges of the bone openings were cut away so as to make the opening more even and symmetrical. The bone, especially thick, was cut away downward, showing the brain here to have been apparently compressed and its convolutions atrophied. The opening, when complete, was an ellipse three by four inches. The plate employed was a circle three and a half inches in diameter, being the bottom of a large puff box, which unfortunately was less convex than the top, but it



CASE I.—This patient has a plate 1½ x 2 inches in left side of forehead. Now in place more than one year.

much impaired, and from formerly having been a fluent talker he now spoke with slowness and difficulty, finding much trouble at times in selecting his words. Diagnosis was made of cyst of the brain, involving the frontal lobe of the left side, and extending backwards towards the speech centre, to the removal of which he consented. As the opening in the skull for the removal of the cyst and the necessary exploration would be necessarily large, and knowing that it would result in such an unsightly depression in the patient's forehead, I gained his consent to carry out what I had long contemplated doing, the experiment of the application of a plate of celluloid. The skull at operation was demonstrated to be very thick at the point of injury, and the thickened bone was

was selected on account of its larger size. This was perhaps a mistake, for the want of convexity permitted the atmospheric pressure to dent in the plate somewhat. Recovery in this case was uneventful, the patient sitting up in the yard on the third day after operation. Quite a quantity of fluid collected between the scalp and the plate, and on account of the too early absorption of the catgut drain. This subsequently disappeared without causing any trouble. The patient immediately felt better, and his tendency to convulsions grew much less. It was possible to tap upon this plate with the fingers without causing any disagreeable jar of his brain, and he was enabled to lie upon this side upon his pillow without any disagreeable sensation. Though this was done simply to protect his brain from external injury, and not with the view of curing his epilepsy, he has been much benefited, and the contrast between the comfort before and after the protecting plate is very great.

CASE III.—*Jacksonian Epilepsy from Brain Cyst.* J. A. M., aged 45 years, suffering from epilepsy resulting from a blow upon the side of the head received twelve years before. Convulsions began four months after injury, and had increased in frequency and severity until now he was completely disabled from work. Diagnosis, brain cyst with resulting epilepsy. Operation July, 1904, St. Joseph's Infirmary. Skull was opened over the slight depression where the injury originally was received, and a circle of bone one and a half inches in diameter removed. When the dura was opened, a cyst was encountered practically as large as a hen's egg. This was evacuated, and treated as in Case I, and the plate inserted by the same method. His progress was uneventful until the end of the first week, when he began to have increasing stupor, while at the same time there was a large collection of fluid under the scalp and over the plate. As his temperature was at the same time very high, it was feared that infection had taken place, but removal of the fluid showed it to be clear serum. Seeking further into the cause of this condition, it was found that his urinary excretion was very small, and this proved to be the cause of his stupor and high temperature. He passed into a complete coma, and there was a total suppression of urine for twenty-seven hours. Fortunately the excretion of urine began under use of saline enema and digitalis hypodermically, and he gradually progressed to recovery, leaving for his home one month after operation. There was a large collection of fluid between the plate and the scalp, which required about one month for absorption. Subsequent history shows gradual improvement, and no trouble from the plate.

CASE IV.—*Exploratory Operation Upon the Brain.* Mr. C., aged 60 years, had been suffering for some months with vague symptoms of brain pressure, which could not be localized by any focal symptoms, except that optic neuritis and bulging of the left eye ball pointed to some pressure not far behind the orbit. There was also a motor oculi paresis. Examination of the urine

showed patient was also suffering from chronic Bright's disease. On account of his desperate condition, an exploratory operation was decided upon, with the view of reaching any growth that there might be in the anterior portion of the brain. A large opening about two inches in diameter was made just above the zygoma and behind the external angular process for the frontal bone, with the view of gaining access to the anterior fossa of the skull. After opening the dura I was surprised to find to what extent the base of the skull and under surface of the brain could be explored with the finger. As my finger was removed the first time there was a large gush of cerebrospinal fluid, or some other fluid collection, which gave me freer access subsequently on account of reducing the intracranial pressure. The finger was passed inward in the anterior fossa of the skull until the anterior clinoid process and the falx cerebri could be felt distinctly. Passing it along the lesser wing of the sphenoid permitted exploration of the fissure of Sylvius. Passing the finger downward and backward the middle fossa of the base of the skull and the temporo-sphenoidal lobe could be felt over all of its surface. Next the entire surface of the cerebrum could be swept over with the finger up as far as the falx cerebri, and back over the convexity of the cerebrum as far as the mastoid process. Nothing tangible was discovered except perhaps an increase of cerebrospinal fluid or a cystic collection. As sometimes happens, in spite of the fact of no definite lesion being found, his brain condition was much improved, his intellect was clearer, and the eye paralysis improved. A plate was inserted as in the former cases and the healing was perfect without any change of the original dressing. Unfortunately, on the twelfth day after operation, this patient was seized with uræmic convulsions, and with intervals of only a few minutes' rest these continued until his death two days later. An autopsy was refused, so that the exact condition remains a mystery.

CASE V.—*Cerebral Sinus Following Operation for Cyst.* J. A. P., aged 30 years, was operated upon three months before by Dr. Floyd W. McRae, for Jacksonian epilepsy, resulting from a compound fracture just behind the angular process of the frontal, with resulting brain cyst. By some means his wound was badly infected, and some months afterwards continued to discharge from the sinus extending down to the brain. For this condition he was sent to me by Dr. McRae with the request that I operate upon him, and insert a plate. Operation July 7, 1904, St. Joseph's Infirmary. An incision was made encircling the former one, exposing quite an area of bone around the seat of the former opening. The bone was cut away to a circle about one and three quarter inch in diameter, adhesions between the scalp and dura, especially at the point of entrance of the sinus, being dissected away as well as possible. The dura was not opened except at the point of the sinus. The plate was inserted in the usual manner, but in spite of all precautions there was a certain amount of infection along the suture openings, though there was apparently no

deep infection in the wound. As before, there persisted a sinus which discharged cerebrospinal fluid, which was treated first by Dr. McRae and then myself for several months. Attempts were made to close the tract by application of pure carbolic acid, passing it from the lower angle across the plate to the upper edge. This was successful and finally the sinus closed, but a few days afterwards the patient called at my office complaining of headache. Two days later I saw him at home, suffering with intense headache and very stupid. His relief through the treatment was only temporary, his stupor increased steadily, and three or four days later, when seen by my assistant during my illness, he was found profoundly comatose, with a pulse of 45 to the minute. He was moved at once to the infirmary, and a diagnosis was made of brain abscess. In pressing against the plate it was found to be somewhat pushed outward by the intracranial pressure.

Operation, Sunday morning, October ——— St. Joseph's Infirmary. Under either the scalp incision was opened about along the former line, and the plate quickly uncovered. There was no evidence whatever of any irritation or infection around the plate, but one of the wires which anchored it had been broken. Removing the plate showed the dura, which was rough at the time of the operation, to be perfectly smooth and uniform in its surface, but just in the centre of the area uncovered was a slightly discolored pulsating spot. Here a small opening was made with the point of a scalpel, and a pair of artery forceps was plunged into the brain through this opening, and when the blades were separated there was a tremendous gush of pus from an abscess in the brain. Introduction of the finger showed this cavity to be about the size of a hen's egg. A drainage tube was introduced into this cavity and brought out through a puncture through the centre of the flap, and the flap sutured in place. This tube was shortened from day to day, and finally the abscess closed entirely in about six weeks. The interesting feature about this case is that the patient now has a large pulsating area, that was originally covered over by the plate, and it is so uncomfortable, as compared with his former condition, that even though he has already undergone three operations, he asks that a plate be reinserted for the purpose of comfort and protection.

CASE VI.—*Insanity Following Depressed Fracture and Brain Cyst.* B. S., white, male, aged 36 years. When 18 years of age, in an altercation he received a blow over the right temple resulting in a depressed fracture. Within a few months his mind became disturbed, and it was necessary to commit him to the Alabama Insane Asylum. The form of his mania was of the nature of a harmless dementia. He continued in this condition until five years later, when he was operated upon by Dr. A. S. Talley, of Birmingham, Ala. Following the operation there was such decided improvement that he was taken home. His mother says that as soon as the opening began to "sink in and get hard," his mind again grew worse, and he was recommitted to the asylum. Another operation was discouraged by the officer

of the asylum, but he came to me in December last for operation. Examination revealed a deep crater-like depression behind the external angular process upon the right side, the skin tightly adherent. The centre of the depression was hard and firm. Operation, December 28, 1904. St. Joseph's Infirmary. Gave ether anaesthesia. A horseshoe incision surrounded the area of former operation, and the skin was with difficulty separated from the underlying dura. The thickened dura was opened, and found one eighth of an inch thick, covering a well defined cyst. A part of the anterior wall was cut away, and the cavity of the cyst needled. A plate of celluloid was anchored by the usual method, and the wound closed with continuous catgut suture. Complete healing in one week, plate smoothly covering the opening, and undetectable by examination. His improvement mentally began at once, and a letter from his mother a few days since informs me that his condition is so much improved that she is preparing to take him home in about four weeks.

Though the duration of these cases does not give a very long observation of results, I feel safe in making the following claims for the routine application of this principle to all operations, where we are compelled to make openings of any size in the skull, or where a larger area has been removed by accident:

First.—It is safe, does not add any extra risk to the operation, and the materials required are easily obtainable.

Second.—It not only removes the pressure and irritation which we are endeavoring to combat, but by its resistance prevents a recurrence, from the subsequent consolidation of the coverings in a false position, due to atmospheric pressure.

Third.—It protects the patient from external influences, and not only makes him feel safer, but actually safer.

Fourth.—It enables us to be much more untrammelled in the amount of bone that we can remove.

Fifth.—It prevents deformity, which, especially when beyond the hair line, is necessarily great in large bone removals, and this produces an important cosmetic result.

Sixth.—It does away with the necessity for introducing substances for preventing adhesion between the scalp and dura mater.

Seventh.—In the event of a necessity for subsequent invasion of the brain it enables us rapidly to reach the seat of trouble, without finding adhesions to confuse and obstruct.

The Fat of the Land.—Dr. John W. Streeter's book of this name, having passed through many editions, has been issued in paper covers by the Macmillan Company at 25 cents. Every country practitioner who has an acre or more of land should read this charming and instructive work.

RECURRING SUBLUXATION OF THE FEMUR AS AN UNUSUAL SEQUEL TO AN INCOMPLETE FRACTURE OF THE NECK OF THE FEMUR.

By PRESCOTT LE BRETON, M. D.,

BUFFALO,

ASSISTANT ATTENDING ORTHOPÆDIC SURGEON TO THE ERIE COUNTY HOSPITAL.

Owing to the recent work of Dr. Whitman, of New York, an increased interest has been taken of late in the subject of fractures of the neck of the femur, especially of the incomplete or greenstick fractures in children. The ordinary disability resulting in untreated cases of this kind is usually diagnosticated as some form of hip disease by the family physician, but it is really a traumatic coxa vara with its own special symptoms and treatment. The writer wishes to report the following case which resulted in a unique condition:

E. B., a schoolgirl, aged 15 years. Referred by Dr. Scofield, of Bemus Point, N. Y., and Dr. M. N. Bemus, of Jamestown, N. Y., on November 17, 1903. A large, strong girl, weighing one hundred and twelve pounds. The family history and the previous personal history were negative. Fourteen months before coming to Buffalo, this girl had fallen on the street, striking her left hip. Although in considerable pain, she was able to get up and walk home. She remained home for three weeks, limping about the house. While walking she flexed her thigh and leg and stepped on the ball of the foot, rotating the leg outward slightly. This position in walking continued from the date of her first injury to the time the writer saw her. After the three weeks mentioned she began to go to school again, complaining always of a slight pain relieved best by the attitude above described (see cut).

Five months later she received a push from another girl which strained the same hip and caused increased soreness. Three months after this second injury, when about to sit down on a chair, another child pulled the chair away and she fell to the floor, striking the same hip. These secondary injuries seemed to be of minor importance.

During the previous three months the girl had noticed on attempting to extend her thigh while in the upright position, a sudden jerk or slip at the hip, which caused a sharp pain. Walking became progressively more of an effort, and she tired readily.

Examination.—A well developed, strong girl, large for her age. While standing or walking she kept the thigh and leg somewhat flexed and did not bring the heel to the ground. Slight outward rotation was evident. There was a marked limp and the left hip was prominent. On lying down the limb was easily straightened into a normal position, but on arising the deformed position was immediately resumed. On attempting to

forcibly straighten the thigh in the upright position, the trochanter jumped suddenly forward and became less prominent. It seemed as if the head of the bone slipped violently into its socket, riding over a bony ridge, which must have been the rim of the acetabulum or an artificial ridge formed by the abnormal conditions. A corresponding ful-



FIG. 1. Showing attitude that relieved pain.

ness could be felt under the gluteal muscles, which disappeared as the slipping occurred. The sensation was very similar to that felt in a case of congenital dislocation when the dislocation is reduced.

There was no atrophy of thigh or calf. Spasm of a voluntary nature resisted every movement of the thigh, but there was no limitation of motion. The left leg was three eighths of an inch longer than the right (probably due to overgrowth). The slipping of the bone, so marked in the upright position, was absent while she was prone. Sensation and reflexes were normal.

An x ray forwarded by Dr. Bemus showed evidence of a previous injury to the neck of the femur. A tracing of the bones made it appear that partial fracture followed by thickening and lessening of the angle of the neck had occurred, but not enough depression to give the symptoms of a coxa vara.

After study of the case it seemed that the only treatment indicated was to overcome the deformity and the tendency to subluxation. It was very evident that the patient had been throwing abnormal strain for over a year on the capsule of the

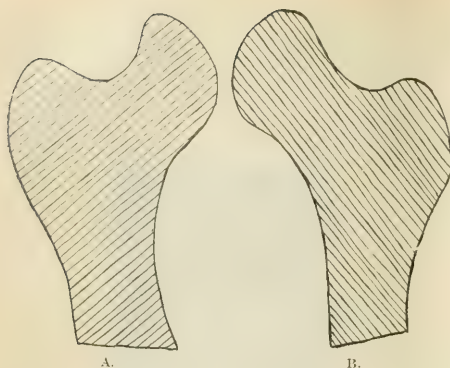


FIG. 2.—X ray tracings. A, Left femur; B, Right femur.

joint by this habit of walking, and that only during the past three months had she experienced the sudden pain and jumping forward of the bone. As all parts were in normal position while she was lying down, a modified Lorenz treatment was advised, i. e., to apply a strong plaster of paris cast in this position and hold the leg fixed for some time until the bad habit of walking and tendency to subluxation were cured. This advice was approved by Dr. Roswell Park, who saw the case the next day in consultation.

Accordingly a cast was applied, and it was found necessary to run it from the lower ribs to the left ankle to prevent the girl from assuming her old position. As soon as this was finished, she walked evenly and well without pain, and brought the sole of the foot to the ground for the first time in over a year. After remaining in Buffalo a few days under observation she went home, and returned three months later. The plaster was removed and the girl walked normally, except for a limp, which later disappeared. There was no tendency to subluxation, and the previous slipping movement could not be reproduced. All motions at the hip were free and normal. The knee was quite stiff from its confinement for a short time. An ingrowing toe nail induced by her habit of walking required treatment. The patient wrote some months later that the cure had been complete.

The interesting points in this case were that an unrecognized incomplete fracture had been received which nature repaired. The girl adopted a position to favor the leg, which finally resulted in a stretching of the capsule of the joint and a tendency to luxation, so that while standing and walking the head of the femur was not in the acetabulum. A short period of immobilization by plaster cured this very marked deformity.

20 CARLTON STREET.

Jewish Hospital, Brooklyn.—Only \$35,000 of the necessary endowment fund of \$250,000 remains to be collected for this institution. A fair, to be held in November, is expected to make good the deficiency.

LOSS OF THE SIGN LANGUAGE IN A DEAF MUTE FROM CEREBRAL TUMOR AND SOFTENING.

By CHARLES W. BURR, M. D.,

PHILADELPHIA,

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I have been unable to find any statistics concerning the frequency of cerebral apoplexy and brain tumor in deaf mutes. Since the great cause of mutism is local disease of the ear in early childhood, usually the result of some acute infectious fever, the brain itself remaining entirely normal, there is no reason to suppose that deaf mutes are inherently either more or less liable than the general population to become the victims of brain disease later in life. On the other hand, since many of them lead sheltered lives, it is probable that alcoholism and syphilis are less frequent among them than in the world at large and therefore they largely escape two of the commonest and most potent causes of brain disease. There were 40,562 deaf mutes in the United States in 1890, according to the census, and therefore the total number of them suffering from brain disease would be small, even if the percentage were quite high. Disease of such a nature and so situated as to produce loss of the ability to comprehend and to use the sign language (aphasia) must be very infrequent. In a rather careful search of the literature I have not discovered any reports of cases. In the English edition of Oppenheim's text book (p. 455) a case of Grasset's is referred to in which "a deaf and dumb patient, who was able to make himself understood by the use of his fingers (sign language) lost the ability, after disease of the left hemisphere, for the right hand, although this was not paralyzed." I was unable to find Grasset's original description.

The history of the case I report is as follows:

M. B., a white woman, 56 years old, was admitted to the Philadelphia Hospital, March 22, 1905, with right hemiplegia and speechlessness. From friends I learned that she became deaf in early childhood and had never learned to talk. She had been taught the sign language and to read and write well. On December 17, 1904, she fell unconscious on the street, was picked up paralyzed on the right side and was taken to a hospital, whence she was removed to her home on the same day. Soon after consciousness returned, that is, a few hours after the stroke, she regained the power of using the sign language. She had a second stroke on December 20th, a third at the end of January or the beginning of February, 1905, and a fourth and last on February 14, 1905. She permanently and totally lost the ability to use the sign language only after the fourth attack. After the other attacks the loss was temporary

and more or less recovered from. She regained the power of walking after the first attack, but after each subsequent one the right side was more paralyzed and after the fourth there was no return of power. She was never paralyzed on the left side. After which stroke she lost the power of reading and writing is unknown. Dr. Collins informed me that she had not complained of any illness previous to the first stroke.

Examination.—There was complete flaccid palsy of the right arm and leg and the right side of the face. She was conscious. She moved the left arm and leg about in bed, but not with much strength, looked from side to side, and would swallow food put in her mouth. She paid no attention to commands, whether verbal, written, or given in the sign language. When another mute spelt out commands with her (the patient's) fingers, whether of the left or right hand, she paid no attention. There was not anaesthesia to deep pressure on the left side. Tactile sensibility could not be determined. There seemed to be total anaesthesia on the right side. When a pencil was put in her left hand she grasped it awkwardly, but made no attempt to use it. She looked for a moment at pieces of paper on which were written and printed short commands, but made no attempt to do what was ordered. She glanced for a moment at objects put in front of her, but made no attempt to show by pantomime that she understood what they were. She would follow with the eye a moving object brought into the left field of vision, but on the right side paid no attention till it reached or almost reached the middle line. She made no attempt at any time to express thought by pantomime. Emotionally she was inert, expressing neither pleasure or pain, except that when pricked with a pin on the left side she would withdraw the extremity and her face would show pain. She never made gestures. The biceps tendon jerk was present on both sides and the knee jerk and the Achilles jerk were absent. Stroking either sole caused extension of all the toes. There was incontinence of urine and faeces. On March 29th she was seized suddenly with dyspnoea, became bathed in sweat, and in a few minutes died. While in the hospital her temperature was normal, and until the death agony her respiration averaged 22 and her pulse rate 120.

Briefly her final condition was one of right sided hemiplegia and right homonymous hemianopsia following repeated apoplectic strokes, with the loss of all power of expressing or comprehending thought by verbal speech, the sign language, writing, or pantomime. She was not blind in the left field, because she would follow moving objects there, but she gave no evidence of knowing what she saw and all the evidence points toward her being mind blind. She followed objects with her eye as a baby will follow and look at a light or any shining thing.

At the necropsy the left cerebral hemisphere was found to be a little larger than the right, and its convolutions were flattened on the convex surface, especially in the anterior two thirds. The mesial surface bulged in the region of and just in front of the paracentral lobule. At one point

over an area of about one inch in the posterior part of the superior frontal and superior part of the ascending frontal was a dark red soft spot. Palpation over the entire surface gave a feeling of fluctuation beneath. On section the reddish spot spoken of above was seen to belong to a tumor, which extended to the basal ganglia. The tumor was soft and not encapsulated, and was surrounded except on its cortical aspect by an area of softening which involved almost the entire white matter of the hemisphere. The basal ganglia on the left side were almost destroyed by softening. The softening was due in part to hæmorrhage, in part to thrombosis. Histological examination showed the tumor to be a very vascular glioma. The fissure of Rolando on the left side extended into the fissure of Sylvius. There were no other structural anomalies. The right hemisphere was normal. The area of disease was so great that the case is of no interest in localizing speech, except that it shows that the left hemisphere controls language by signs as it does all other forms of language.

The sign language is closely related to pantomime. The latter may be defined as the natural mode of expressing thought, ideas, and emotions, by muscular action other than that of the vocal apparatus. Gestures on the other hand express emotion only and not thought. Pantomime and gesture are natural and inherent. The sign language is an artificial and elaborate system which must be learned to be understood. In actual life deaf mutes always use natural pantomime to help them in expressing ideas.

Disorders of pantomime—amimia and paramimia—have not received as much careful study as speech aphasia. Bastian is of the opinion that amimia varies in the same ratio as the intelligence of the individual affected. In his opinion it does not occur in subcortical lesions and after a lesion in Broca's convolution the disability may be only slight. If on the other hand the auditory word centre is involved and still more the visual word centre there is more and more mental degradation and a corresponding diminution in the individual's power to use and understand pantomime. Charles K. Mills, who has given much time to the subject, states that in true motor aphasia even when complete the patient sometimes shows marked preservation of pantomime, whereas in word deafness and word blindness pantomime is most disturbed on the sensory or receptive side. In mixed sensorimotor aphasia pantomime may be uncertain.

In none of the patients I have examined have I found complete amimia associated with pure motor aphasia. In some patients the ability to use pantomime was remarkable. On the other hand, I can not recall a case of sensory aphasia in which the visual speech centre was diseased in

which there was not either total amimia or, and this more frequently, paramimia, the pantomime being so confused and contradictory as to be incomprehensible. The same condition is found in sensorimotor aphasia. Further, in pure motor aphasia the patient understands pantomime well, whereas in sensory or mixed aphasia he either does not understand at all or only incompletely and with difficulty. Since the sign language is only a highly developed form of pantomime it is probable that the same laws control both and that disease affecting pantomime in a person having the power of speech would affect the sign language in deaf mutes. The sign language is of course learned by vision, and it is probable that in deaf mutes a lesion of the visual centre always causes its loss. Whether there can occur a purely motor disturbance of the sign language, the retention of the ability to comprehend (a normal visual centre), with a loss of the ability to express thought by signs on account of a lesion making it impossible to recall muscular movements necessary to be made is, I believe, unknown. A pure motor amimia in persons who are not deaf mutes, unassociated with any form of verbal aphasia, has never been described.

1327 SPRUCE STREET.

THE PREVENTION OF INSANITY IN ITS INCUBATION BY THE GENERAL PRACTITIONER.*

By J. T. W. ROWE, M. D.,

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Within the limitation of a six column paper I shall attempt to express my views on a subject that alienists and psychopathologists have for many years striven to shed light upon, viz., a means or method for preventing the occurrence of insanity.

I expect to be received with due acclaim by superintendents of overcrowded institutions whose greatest efforts are in the direction of keeping out the incoming patients and getting rid of those on their hands, and by industrious students of asylum financial budgets. Constantly renewed volumes of psychiatry have not aided us in the least. The annual reports of superintendents only deplore the steady increase of insanity with no relief in sight. The ratio of recoveries is no better, and assigned causes for the disease are the merest generalizations. Then the question arises, What means are we taking to keep the overcrowding of our hospitals within bounds or to prevent in the slightest degree the occurrence of insanity?

* Read at the sixty-fifth annual meeting of the American Medico-Psychological Association, San Antonio, Tex., April 18 to 21, 1905.

The State hospital has acquired such an enviable reputation nowadays for its luxurious appointments that its freely yielding doors have invited all sorts and conditions of defectives, coming like those in the nursery rhyme, "some in rags, and some in jags, and some in velvet gowns," who might well be kept outside the walls.

The poor relations, "lightly touched," have been unearthed from back rooms and qualified for the journey to their Mecca. And as well the old fatuous chronic, whose alcoholic periodical qualifies him for the workhouse instead of a State hospital, the increasing number of degenerate types and imbeciles which by an easy stretch of the examining powers receive the *imprimatur* of insanity, impel us not only to scan vigorously the doubtful cases presented for our acceptance, but also to speed the parting guests who complaisantly settle down to the amenities of asylum life and share with relatives the fear only that they may be discharged to the short commons of their family circle.

We perhaps do not appreciate the importance of a frequent rounding up of the population for chronic harmless dements who should be discharged to their friends. Many of these patients could be liberated without danger to themselves or others; at any rate the patient should have the benefit of the doubt or be turned over to his local department of poor.

We are all doubtless familiar with cases where the relatives refuse to be comforted because we object to discharge the patient upon their first request and later, when notified to remove him, promptly discontinue visits to patient and hospital, and invoke political and charitable aid to have him retained in the institution, alleging fear of personal harm, or perhaps, newly formed outside attachments. It is needless to say that no consideration should be shown except to relieve the hospital of its incubus. Too lengthy treatment is not always best for these cases.

Our Argus eyed inspectors at the very foot of Liberty's statue bid fair to give an account of the undesirable classes from abroad, but the State has done such wonders with its maternal care and coddling that the hospital is now a veritable *hospice* toward which is directed any and everybody who shows the slightest aberration. The policeman marches the mumbling rounder promptly to the nearest reception hospital, and an alacrity is always shown by interested parties in diverting to us the harmless old mendicant prayerfully haranguing the sun, while the profane and lusty tramp of violent speech, begotten of frequent ejections, is especially the object of their solicitude and, incidentally, of State hospital care.

The question arises, Do we check the flow at the fountain head, or are we content merely to exhibit *vis inertia* and receive the flotsam and jetsam

brought to us by the scores of small streams, scavengers of the country side? The flood comes from the supply already domiciled here. If it was dependent only upon foreign supply, we could easily avoid the consequences by demanding a certificate of sound mental health at the port of entry or, if necessary, at place of embarkation or, to reach out still further, from the native town or village of each immigrant.

But our asylums are not filled by the sharply challenged immigrant, who is not always as black as he is painted, and we have a knotty problem to solve in devising a way to check the increasing stream of insanity of all degrees and stages. After a long association with the classes received at probably the largest hospitals for the insane in existence, I can but conclude that the remedy must be applied before the patient is submitted to the examiners in lunacy.

Theories and opinions, fortified by new classifications and further buttressed by many a foreign *ipse dixit* of academic soundness, give rise to very agreeable and interesting scientific discussions, but they lessen the incoming tide, or relieve the hospitals of their burdens, not one jot. Our patients come, we must agree, from the field, the factory, and the office, and must, as a matter of course, in the large majority of cases come first to the notice of the family doctor. Therefore, to the general practitioner, and not to the trained alienist, must we look to relieve us of our increasing burden. That he has been more or less delinquent in this respect is apparent to us all, for who of us has not been frequently impressed by the shameful neglect of proper medical treatment for patients prior to their commitment to a hospital for the insane?

To minister to a mind diseased is perhaps not the daily routine of the general practitioner, but he will find scores of incipient cases in his daily rounds whose progress he can arrest, and the responsibility rests upon him to guide the patients into a safe haven. The physician could do an immense deal of good to his patients and to the hospitals if he had a better knowledge of the nature and phenomena of mental disease. We see, every day, patients arriving who, if taken in time, need never have sought the protection of a certificate of insanity. We see case after case showing toxæmia following abeyance of function, the result of too close application and overwork amid insanitary surroundings. Such cases, taken in time, unquestionably would have responded to proper medical treatment. Hundreds of patients are committed to our asylums yearly, a large portion of whom have the conviction that they need never have been certified as lunatics had they received timely medical advice in the stage of incu-

bation, and their functions and physical condition bear them out in their lamentable statement of neglected health.

The medicine of the future will be largely one of prevention of disease, insanity in particular, and the preservation of health. The general practitioner should exercise vigilance and should be urged to stop the downward course, and the subsequent filling-in of asylums. If a man is obviously a lunatic, is suicidal or dangerous to others, he should properly be placed in a hospital for the insane, but such a place is not for cases of neurosis or exhausted states due to neglect or lack of medical care. The family doctor is the first to see the cases in the stages in which alone the disease is curable. Many of these patients can be treated at home and cured.

In his daily rounds the practitioner sees the departure from normal health in a hundred forms. He has the opportunity to check its progress and give sound advice, and can manage to see every member of the family at one or other of his visits. The parents or some of the family can be encouraged to confide in him regarding the mental condition of any one of them and by treatment for the declining bodily health upon which it depends the patient can be restored in mind and body. The working classes should be taught to seek a physician's advice much more frequently than they do. It might be brought home to them through their pockets if in no other way, for the dullest intellect will comprehend that the weakling cannot bring grist to the mill, and that fact being impressed, the doctor undoubtedly will be called in without delay.

In these days, when our social and economic systems are disturbed by disorganizing factors, industrial upheavals, and strenuous competition between those well and those poorly equipped for the struggle, a large number of old and young are to be found on the verge of physical and mental breakdown. They dare not give in, for the pace has been set, and they strain every nerve to respond to the demands. While able to drag along neither they nor their families will consult a physician. The laborer, in his ignorance of the laws of nature, sweats in the darkness. The workers in the factory and the slums; the professional man overconfident in his intellectual powers and well ordered nervous system; the lad at school weighed down by too close application and not enough open air exercise; the shy retiring boy just yielding to evil inclinations; the worried business man and father bearing a heavy load and seeing no way of lightening it—all these patients are very near the borderland of mental affection and this is the very time when proper medical advice could avert disaster. A large number, the condition recognized, if taken from their

work and sent to the sea or mountains, or even advised to do half time, could ward it off. The family doctor sees such cases every day.

The neurasthenic with trepidation consults his physician. The alcoholic with his fleeting delusions and the railroad man complaining of nervous exhaustion and fearing that his nerve is failing him are cases which require close watching. The mother with her dangers of the climacteric, bending under the monotonous drudgery of household cares, the young girl with her period of evolution, ungratified longings, and hypochondriasis, and the man who has his sleep broken and begins to hear voices at night demand medical attention. This is the period of initiation and incubation. These are the varieties of ailment becoming insanity. This is the doctor's golden opportunity. A few days in bed with "rest" treatment, and perhaps nothing more is required. A short time in a general hospital or under observation would enable a large number to clear up sufficiently to resume work and the care of family, the physician's advice helping along to recovery.

Thirty per cent. of admissions to hospitals for the insane are cases due to neuroses, drug and drink habits, toxæmias of adolescence, and states incident to the menopause. A few days off the farm and the carking cares of the house, and the results will be astonishing if the doctor shows determination to nip the symptoms in the bud.

An early diagnosis is of the utmost importance, and the adviser has a boundless opportunity to check the downward course by sending his patient away, even in the face of a threatened poverty, which is preferable to certain poverty with the additional burden of the sick or insane father or brother. The inclination to send to the medical certifiers should be resisted to the last. It should always be the *dernier ressort*. An asylum is not by any means the best place in the world for him; it is not the solution of the problem. Comparatively few require such extreme measures as being locked up from family and consigned to the discipline of an institution for the insane with the loss of personal liberty and dissolution of family ties. A timely word to the patient, a hint to the family, even if it is unheeded, and there is time to defer this regrettable action. Send him abroad if his circumstances permit, or to the sea or mountains. For those long immured in the country the diversion of a densely populated city may be beneficial, but not the discipline and rules of an institution.

The overcrowding of State hospitals has become a necessary evil through the ready complaisance in writing out a certificate of insanity, and many have been taken to asylums against their will, their families inflicted with horrible doubt, and the patients themselves subjected to suspicion ever after-

ward. It is true, although to be deplored, that the knowledge of a former asylum residence militates seriously against a man, for there is always a doubt about his mental restoration. The pilot experiences difficulty in getting back his old post, the engineer may obtain sympathy, but seldom the charge of his train or yacht, and the business firm is decidedly averse to placing responsibility in the hands of a man with an asylum history.

No one appreciates this handicap more than the patient himself and, therefore, he does his best to keep the fact of failing physical or mental strength concealed when his daily bread is at stake. Proper and early recognition by the doctor may enable the patient to avert what must be a blot upon him for the remainder of his days, while under proper medical supervision he would be infinitely happier outside asylum walls.

If the physician will pay less attention to the mental condition and treat the failure of bodily health upon which it depends, for he should know that functions are not slow to become disordered, he frequently may effect a recovery in mind and body. Indeed, many most unpromising cases benefit so much by change of scene and occupation that they scarcely would be recognized as having narrowly escaped the restrictions of a hospital for the insane. Every day it is more forcibly impressed upon us that a large number of cases of degeneration can be arrested before becoming fully developed.

The care of fully established cases of insanity is not in question. Such should go to the alienist, but the physician has it in his power to prevent the full establishment of insanity. He can shed light upon the darkness begotten of ignorance regarding syphilis and its inclusive list of general paralysis, tabes, and all the disastrous consequences to immediate sufferers, including the neuroses of degeneration resulting from it. He has it in his power to assist the asylums and benefit his patients who time and again lament the fact that they received no medical attention before admission. Their friends, when questioned, admit that no physician was consulted until pronounced mental symptoms were exhibited and the patient became unmanageable.

The school curriculum in each practitioner's neighborhood may well arouse his concern, its absurdly high standard being frequently out of all proportion to the mental and physical strength of the pupil. He may see many a growing and promising lad whose precocity is mistaken by his proud parents for unusual mental endowments, winning prizes and scholarships at the ruinous price of his mental and physical stamina. The writer has seen such cases end in complete bodily wreck, mental enfeeblement, and frequently complete dementia,

rendering the subjects fit only for an asylum for the rest of their days.

That the family doctor can do much for us if he cooperates heartily is brought home by the astonishing length of time some discharged patients, not considered favorable cases, remain at large when placed under his surveillance. There is no doubt that the *facilis descensus* of the defective and the delinquent, with the resultant crowding of asylums, can be materially relieved by the efforts of the family physician.

INGUINAL BUBO AS A COMPLICATION OF MALARIAL FEVER. ADDITIONAL REPORT.

By A. C. SMITH, M. D.,

NEW ORLEANS,

SURGEON, UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

In the *New York Medical Journal*, for June 22, 1901, I reported a short series of cases of what I believed to be inguinal bubo accompanying and caused by malarial fever. Unfortunately I was not able to demonstrate the character of the fever beyond doubt by the results of blood examinations. Since that time I have been looking for other cases to confirm the diagnosis, but not until I reached the Gulf States again did I see a typical case which presented an opportunity to demonstrate the theory.

In the case which is reported herewith the proof appears to be clear and sufficient. The patient had recurring attacks of quotidian malarial fever. In one attack, the second treated by me, the inguinal glands became acutely tender and swollen with the onset of the fever. The plasmodium malarie was found in the blood. The fever yielded to treatment with quinine and arsenic and the bubo subsided also. The bubo and fever recurred, and again yielded to the antimalarial treatment. There was no indication whatsoever of any venereal disease as a possible explanation of the bubo. The detailed report follows:

F. F., aged, 23 years; place of nativity, Dutch West Indies; color, white. Admitted to hospital January 3, 1905, from a steamship in the Porto Rican trade.

The patient gave a history of having been sick for five days, with a chill and rise of temperature about noon every day and a sweat and decline of temperature about 7 p. m. A calomel cathartic was given and treatment with quinine was instituted immediately; the patient had a chill and rise of temperature the next afternoon, but no further attack, and he was discharged from the hospital January 12th.

February 24th he returned. At the time of his second admittance he gave a history of having been sick about seven days. The fever had re-

curred daily, but chills were at irregular intervals. A remarkable feature of the attack was that he felt pain and tenderness in both groins whenever he had a chill. At the time of admittance the glands in the right groin were scarcely swollen, but were sensitive to touch; the glands in the left groin were very perceptibly swollen, without induration, and quite tender; and he felt an aching pain in both groins. Tongue, moderately coated. Bowels, inactive. Lungs, apparently sound. First sound of heart, soft, like a hæmic murmur; apex beat, normally placed; rhythm, regular. No venereal history. A calomel cathartic and a placebo of compound tincture of cardamom were given.

An examination of the blood, made the afternoon of February 25th, revealed the presence of the malarial germ, tertian variety, in considerable numbers, with some irregularity in the size and shape of the red cells.

The patient had a very slight chill the morning of February 26th, and a moderate rise of temperature in the afternoon. The glands in the left groin became a little larger and firmer than before. Quinine was given first the morning of February 27th. The course of the fever was peculiar in that it rose and continued high for a number of days while quinine was being administered freely. The bubo, on the other hand, diminished in size rapidly. Warburg's tincture was given a part of the time instead of quinine sulphate; on March 8th both were stopped and treatment with arsenic was adopted.

On March 3rd, the malarial germ was still present in the blood, but in reduced numbers. From March 10th the patient's temperature continued practically normal, and on March 20th he was discharged as recovered. Two glands could then be felt in the left groin, slightly indurated, but not visibly enlarged.

On March 28th he came to the hospital again on account of a return of the bubo, which had become acutely painful and swollen three days before. He was not aware of having had a return of the fever, but his temperature was 37.6° C. the morning of admittance and rose to 39.8° C. in the afternoon. The glands in the left groin were large and tender, and two lumps could be distinguished by touch, rounded in outline and almost coalescing. Being satisfied as to the character of the fever I did not wait to examine the blood, but gave quinine immediately, at 10.30 a. m. An examination made at 5 p. m., six and a half hours after quinine was administered, failed to reveal the presence of the plasmodium malarie, but showed free pigment granules and hæmin crystals and some degree of leucocytosis.

On this occasion the fever yielded quickly to treatment, but the bubo subsided more slowly and there was considerable anæmia and debility. Arsenic had the best effect on the anæmia. The patient was discharged on April 24th; two very small indurated lumps could still be felt in the left groin, but he was feeling well and could not be longer held in hospital.

The condition of the blood found on this last occasion, with free pigment granules and some leucocytosis, but no discoverable plasmodia, was

such as I have found in a few other cases in what appeared to be a similar stage of this disease. I doubt that the plasmodium would have been found if the examination had been made before any quinine was administered.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXIX.—How do you treat erysipelas of the face? (Answers due not later than June 15, 1905.)

XL.—What are your views on the obstetrical binder? (Answers due not later July 15, 1905.)

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXVIII has been awarded to Dr. James Stratton Carpenter, of Pottsville, Pa., whose article appears below.

PRIZE QUESTION NO. XXXVIII.

THE PREVENTION OF DISEASE OF THE VERMIFORM APPENDIX.

By JAMES STRATTON CARPENTER, M. D.,

POTTSVILLE, PA.

The personal factor in this question must determine the character of the reply. The question is not, How may appendicitis be prevented? but, How will you be governed in your efforts to prevent the occurrence of this too rapidly increasing disease of American life, one with which the laity is so familiar through repeated instances of its occurrence among them as to be able, in nearly every instance, to diagnose the disease before the physician who may have been summoned arrives upon the scene.

The popularizing of knowledge concerning any disease has some advantages, and we may derive valuable aid in the successful combating of the

particular disease under discussion by familiarizing the people with a treatment that shall be potent for good results when promptly availed of by them, while we may even hope, eventually, to prevent its occurrence by acquainting them with the best means of avoiding its attack. In other words, preventive medicine should be here, as in other directions, the great desideratum, not the needless subjection to the knife of the surgeon of every unfortunate sufferer with the classical pain in the right iliac fossa.

Were the question How may appendicitis be prevented? I doubt not it would be answered by the vast majority by "an early removal of the appendix." But our discussion of this question must be made with the idea of the greatest good for the greatest number, and I am of the opinion that a great deal of unnecessary mutilation is being undertaken nowadays by the surgeon, and many a life lost through the mistaken idea that surgery alone is able to save the life once threatened by the acutely inflamed vermiform appendix.

We are not asked to do more than provide our readers with the best means for the prevention of appendicitis, and so, not being concerned with the treatment of the inflammation, let us seek some vantage ground where we may find a common agreement, and then deduce some tangible expression of our thought that will, at least, be defensible on that basis.

I have referred to appendicitis as "the rapidly increasing disease of American life," and, I think, with sufficient reason. We do not find any country where the disease is more prevalent than in our own, or, I am sure, anywhere so frequent operations are undertaken for its cure. And, yet, right among us live a people who are so seldom affected by it as to make it of exceptional occurrence when a case of the disease appears among them. In a practice covering a period of twenty-four years I have never seen an attack of appendicitis in a negro; and while I have not had sufficient practice among that race to make the statement noteworthy, yet I have never thus far even heard of an operation for appendicitis being performed upon a colored patient. Howard Kelly and Burdon have made this fact prominent in their classical work on *The Appendix and Its Diseases*, but they have failed to go farther and evolve out of this immunity of the negro race from appendicular attacks the best means of its avoidance by the whites.

Now if we consider for a moment our modern civilization and the rush and hurry of this twentieth century living, to which the black is a com-

parative stranger by reason of his very inability to attain unto it, have we not a sufficient reason furnished us for his immunity, if out of the hurly-burly of his more favored white brother's existence we may extract good reasons for the latter's greater susceptibility to the disease? It would surely seem so. The rush and hurry of living—the pursuit of "the almighty dollar"—is the most plainly deducible cause for the existence of appendicitis based on the foregoing hypothesis. Stop a moment and compare the earlier days of the nineteenth with these present ones of this early twentieth century. Life then did not flow at such resistless speed as now; the stage coach of our ancestors and the automobile that now crowds our streets make two pictures that eminently portray the two epochs of our national life; and I do not think I should be liable to contradiction did I affirm that in those earlier times appendicular inflammation must have been almost as great a rarity as now we find it to be among those equally easy going, but more indolent creatures, the negroes.

If in a general way we may deduce that "a quiet life," with its regular performance of duties, freedom from nervous excitement, and securing of needed rest for wearied mind as well as fatigued body are factors in the prevention of disease of the vermiform appendix, how may we, more particularly, reach a conclusion that will sustain this thought? Surely a study of the anatomy of the appendix, the nervous and vascular supply, its peculiarly well adapted situation for attack, are not the only considerations to be borne in mind. These have existed for more than six thousand years, if our ideas of the creation of man are correct, while the terrors of appendicitis have announced themselves within a very recent period. No, we must take the disease itself into consideration, and we find at once, in an examination of its prominent symptoms, that *constipation*, existing both prior to and during the attack, is a most constant factor in its causation.

How may we prevent constipation? Solve this question, and we shall probably reach the desired preventive treatment for appendicitis. Shall we find its solution in the fervid life of today, the hurry and bustle of which leave us so little time for eating and sleeping that our bowels may take care of themselves as best they may? Too often is that call of nature unheeded or put aside for a more convenient season, and thus it comes that we find ourselves depending on laxatives and cathartics until, in one of those moments of masterly inactivity of the intestinal tract, the blow falls that, like the sword of Damocles,

has long been threatening, and after a particularly heavy meal, or a chill, or other exciting causes, the ideal conditions necessary for the appendicular attack are created, and the attack begins.

We are not overdrawing on the imagination surely. By no other race is existence maintained at so high a pitch as by the American people, and no people can live at such a tension without incurring the diseases incident to their neglect of Nature's laws. We stand aghast at what statistics are telling us of the rapidly increasing mortality from various diseases, and appoint our various learned commissions to penetrate into the mystery of it all; but "symposiums" and commissions are equally doomed to failure in their laudable efforts to withstand the progress of disease when they overlook the persistent wilfulness of man in rushing to his own destruction. Bring life down to a regular methodical living; set apart your hours for work, your times for eating and sleeping, as well as those for healthful, judicious exercise, and you will stand in no great need of special commissions for the study of disease, least of all of how to prevent appendicitis.

Dr. Gerald Bertram Webb, of Colorado Springs, writes:

By arranging the pathogenesis in the following order methods of preventing the causative factors can be concisely related:

1. *Digestive Disturbances.*—Educate children and advise patients in the proper methods of eating and drinking. Give careful attention to the teeth and proper mastication. Inculcate avoidance of hasty meals; warn against overeating; see that plenty of water is drunk and at proper times. Especially try to prevent the modern exhaustion of nervous energy, since neurasthenia is the cause of most digestive disarrangements. Advise rest after meals. Regulate the results of neurasthenia, such as flatulence, constipation, and improper and relaxed fecal evacuations, if possible without drugs; advocating rest, mechanical treatment, and diet. Should a drug be necessary, castor oil is the best, given every week or so to empty especially the contents collecting in the cæcum. Advocate generally a diminished meat diet. Remembering the comparative physiology and anatomy of the appendix I have not restricted patients in vegetables and fruits, but rather encouraged the use of these. I do not think the forbidding of all seeds necessary or practicable. Most of the fecal concretions found, being formed in the organ probably through faulty secretions and helped by bacteria and improper peristaltic movements of the appendix and by deviation of the

appendix, it does not seem to me that restriction of certain foods, in moderation, will prevent an attack, unless a previous attack has been felt by the patient to be due to some particular article. Prevent overindulgence in such articles as pop corn, peanuts, etc., which may start an enterocolitis.

2. *Trauma*.—One can only preach the avoidance of violent exercise, especially that which provokes violent contractions of the psoas or transversalis abdominis, to those who have had an attack, and yet who do not wish to part with the organ. To advise avoiding violent exercise for lads is not practical, yet perhaps this is an important factor in their greater liability than girls, as in thirty out of forty of Kelly's reported cases of death from traumatic appendicitis the organ contained concretions; the reply in the preceding section, which deals with the prevention of disturbances of digestion, partly answers this, i. e., prevent the concretions, which probably can be done by proper attention to mastication and digestion. Floating kidney, in women especially, may be a traumatic agency, and should be attended to surgically or by the application of a proper corset or belt. Blows on the abdomen should be avoided. Belts and corsets, if worn at all around the waist, should be loosely brought together.

3. *Cases Arising Through Contiguity with the Female Pelvic Organs*.—Teach girls how to take care of themselves at the physiological period. Correct misplacement. Remove growths which may irritate the appendix.

4. *Exposure to Cold*.—When this cannot be avoided, and patients are susceptible in their entrails, the cholera belt or flannel band is of use. Encourage clothing which keeps the extremities warm.

5. *Enteroliths, Foreign Bodies, Entozoa*.—Enteroliths probably chiefly arise from digestive disturbances, faulty innervation perhaps being the starting point, through altered secretions from the appendicular mucous membrane (perhaps some antiperistalsis) encouraging bacterial growth. The prevention of this improper innervation has been considered. Teach children never to place foreign bodies in the mouth. Should they by accident be swallowed, administer a meal promptly of chopped up worsted in mashed potato, and follow some hours later with castor oil. Administer the appropriate remedies when entozoa are recognized, and since a large percentage of children entertain these unbidden guests, occasional doses of calomel and santanin or other vermifuges are wise, even should the worms not have proclaimed their presence.

6. *Rheumatic Fever*.—The salicylates and salol are especially valuable, and prevent the growth of bacteria which might instigate an attack. The best preventive treatment would be to see that patients were abstemious in meat, indulgent in water, took exercise, and took sweat baths.

7. *Infection*.—The pathogenic germs, such as the *Bacillus coli communis*, etc., can possibly be limited by prevalence of plenty of bile in the intestine, by the avoidance of digestive upsets, which help their thriving, and by the occasional administration of salol, calomel, etc.

In general, in those who have had one attack, the removal of the organ should be advocated. Remove the organ with the patient's permission when performing any abdominal section. Since it seems impossible to prevent the nervous digestive disturbances caused by the demands on the nervous system of strenuous competition, the time may soon come when removal of the appendix may become as familiar an operation in childhood as circumcision, especially in those whose progenitors have been victims.

Dr. Frank C. Henry, of Perth Amboy, N. J., writes:

It is presumed that Nature so constructed the vermiform appendix that in a healthy condition it possesses the function to relieve itself from inert masses or bodies that find their way into it. We must therefore attribute the initial cause to some interference with this normal function. And the cause that suggests itself is some catarrhal condition. I believe the initial lesion in appendicitis occurs most commonly in childhood. I base this opinion on post mortem work and general practice, also some experience in operating. In operating in some twenty-five cases of appendicitis, I was able to prove the initial cause in only two cases, and the cause in those cases was oxyurides. In the last case of operation in the Perth Amboy City Hospital, in November, 1904, I found about fifty oxyurides in an appendix about ready to suppurate. The other case I reported in the *New York Medical Journal*, for June 11, 1903.

I believe the reason surgeons do not find oxyurides more frequently is that they do not operate in the primary attack, or at least not until suppuration has taken place and the oxyurides are destroyed, and that in some cases the oxyurides are overlooked. From my own experience I know oxyurides do cause appendicitis, and knowing how commonly oxyurides occur in childhood, the wonder is with me, not that we have so much appendicitis, but that we do not have more cases. My preventive treatment for disease of the vermiform appendix therefore may be said in a few

words: Rid children and adults of oxyurides promptly.

Dr. C. Floyd Burrows, of Syracuse, N. Y., writes:

When considering the prevention of disease of the vermiform appendix it is well to remember that this organ is a relic of primæval man—an ancient warrior, so to speak, in a company of more modern and vigorous tissues—and that in repelling the invasions of bacteria from the territory of the cæcum it easily falls a prey to their attacks. Therefore the abdominal tissues of which it is an intimate member, and which influence it for health or disease, must be kept up to their best possible point of efficiency to protect it from bacterial advances. By producing abnormal conditions in the intestinal canal, and the cæcum in particular, indigestion and constipation stand as foremost factors in the causation of disease of the vermiform appendix. To prevent appendicitis, then, in many cases means the correction of alimentary disorders. Regularity as to feeding hours must be exacted; food must be eaten slowly, chewed fine, and never bolted or washed down with swallows of water, etc. Eating between meals must be absolutely prohibited, also the ingestion of pastry, candy, and nuts. Only easily digestible foods, like milk, meat, eggs, bread, and vegetables, are permissible. Dinner ought to be taken in the middle of the day, and a light supper at night. Eating just before going to bed must be positively forbidden. Overeating especially means gastric and intestinal indigestion, and should be cautioned against. Tea, coffee, malt and spirituous drinks, and the use of tobacco should be reduced to a minimum. Plenty of water ought to be drunk in the intervals between the taking of food, and a glass or two only allowed with each meal. Whenever quantities of gas collect and pain or distress occurs in the abdomen after eating, or any tenderness is perceptible in the right inguinal region, a brisk purge of magnesium sulphate or castor oil should be ordered to be taken at once and an ice bag or coil applied to the painful or tender area.

The bowels should be trained to move at a regular hour each morning, and a day should never pass when a movement is not obtained; if not naturally, then by the ingestion of a saline, cascara, or calomel, or else by a rectal injection. Straining at stool, however, must be absolutely forbidden. Careful attention to the daily movement of the bowels, intelligently carried out for a proper period, will correct nearly all cases of constipation, if associated with careful dieting and feeding. Calisthenics and abdominal massage may also assist. Outdoor exercise of various

kinds, particularly walking and horseback riding, is also very beneficial in the regulation of indigestion, and thus helps to prevent disease of the appendix.

Traumatisms and strains, next to alimentary disorders, are fertile causes of appendicitis; consequently too vigorous athletic pursuits, the lifting of heavy objects, strenuous bicycling, or straining or tugging in whatever fashion must not be permitted at all. The relation of the appendix to the psoas muscle must be considered, and movements which bring this into violent contraction avoided.

The appendix is made up largely of lymphoid tissue, and, like the tonsils and Peyer's patches, it is subject to inflammation along with these in gripe, rheumatism, scarlet fever, and typhoid fever. Therefore it is wisdom in every case which presents hypertrophy of the tonsils and adenoids to advise special care in the avoidance of those diseases. In gripe and rheumatic attacks early treatment with sodium salicylate and alkalies, rest, and careful feeding, with attention to the bowels, are to be advocated. Not much can be done in scarlet or typhoid fever or general bodily infections of other types to prevent involvement of the vermiform, except the careful treatment of these diseases along their respective lines. Special care should, however, be taken about feeding, the state of the bowels, and the reduction of tympany.

In women menstruation is an exciting feature also in the causation of disease of the appendix. The menstrual periods should be guarded from anything which increases the congestion of the internal generative organs, such as exposure to cold, coitus, douchings, etc., and the flow should be encouraged by hot drinks and foot baths. Rest and freedom from work and exercise are also to be advised.

Foreign bodies play a small part in the rôle of causative agents in appendicular disease. Pins are foremost in the list of objects which sometimes find their way into this organ. Shot and pieces of lead, bones, hairs, fruit, seeds, gallstones, and intestinal parasites are each sometimes found present. Care, then, should be exercised never to place a pin in the mouth, also in the eating of game or canned food, fruits, meats, etc., that the objects mentioned are not carelessly swallowed. In patients who are afflicted with worms the parasites should be removed by the usual therapeutic methods without delay. Gallstones may also be removed by surgical means if they are passing the bowels in sufficient quantity to cause concern.

Little can be done to prevent disease of the appendix in persons predisposed to it by anatomical deformities, malpositions, concretion formation tendencies, or extension of disease from contiguous tissues. Floating kidneys, however, may be sewed in place and pressure relieved, and diseased Fallopian tubes and diseased ovaries removed.

I believe it advisable, whenever the abdomen is opened surgically and conditions permit, to remove the vermiform appendix whether it is healthy or not. This is certainly one sure preventive of disease of this organ.

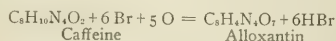
(To be concluded.)

Therapeutical Notes.

The Transformation of Theobromine Into Formic Acid.—M. L. Serbource, in *Bulletin commercial*, for April 30, 1905, comments on the communication of Dr. Huchard, which appeared in *L'Union pharmaceutique*, for March 31, 1905, page 129, as follows:

If by clinical observations Dr. Huchard has found a certain analogy between the therapeutic effects of formiates and those of theobromine, chemistry, according to my modest experiments, will corroborate him, since by simple oxidation *in vitro*, I have transformed theobromine into formic acid. I intend to publish in a short time the result of my work, and it is only to assert my right of priority that I recapitulate my conclusions.

It is known that caffeine, as well as theobromine, oxidized by an indirect agent (chlorine or bromine), is transformed into alloxantin—



which produces with ammonia, ammonium purpurate, or murexide—this is, in fact, the characteristic reaction of these two alkaloids.

I have found, however, that caffeine and theobromine, oxidized by direct agents, instead of producing a uric acid derivative are transformed into formic acid.

Almost all the direct oxidizing agents effect this transformation,¹ but the most easily handled is ammonium persulphate.

If, for example, one part of theobromine with three parts of ammonium persulphate and about ten parts of water are warmed, an active effervescence ensues, the liquid becoming limpid, and the theobromine transformed. It is only necessary to allow it to dry and then wash with alcohol to obtain crystals which may be identified by the following reactions: (1) Complete volatility; (2) formation of a mirror by boiling with silver nitrate; (3) transformation of mercuric chloride

into protochloride; (4) odor of rum by boiling with alcohol and sulphuric acid.

The salt obtained must be ammonium formiate.

The same procedure may be repeated with caffeine and the same results obtained. There is, therefore, no reason to wonder at an analogy between the therapeutic properties of the formiates and those of theobromine.

The Diuretic and Tonic Actions of Formic Acid.—At a recent meeting of the Academy of Medicine, of Paris (*Répertoire de pharmacie*, April 10, 1905), M. Huchard recalled that for two centuries formic acid had been employed as a remedy under the name of *eau de magnanimité*. It appears still in the German Pharmacopœia. In 1904 Dr. Clément discovered the tonic action of this acid on the muscles. M. Huchard has observed that this action makes itself felt on the unstriped as well as the striped muscles. Formic acid can be of real service in neurasthenia, diabetes, and in the various stages of adynamia and senile weakness. It can also be used to overcome fatigue on long journeys. Formic acid acts as a diuretic, its action being, however, inferior to that of theobromine, but it has the advantage of diminishing the quantity of albumin. It can, therefore, be employed, according to M. Huchard, in the treatment of arterial cardiopathies. It is non-toxic and does not irritate the stomach. Potassium formiate, which is perhaps more diuretic, is prescribed, but sodium formiate is more frequently used, the salt being administered in doses of 3 grammes daily. Lithium formiate may also be prescribed, but in a smaller dose (1 to 1.50 gramme daily). The following is a good formula: Syrup of bitter orange peel, 200 grammes; sodium formiate, 10 grammes. Dose, one tablespoonful three times a day. Usually this medicine is taken for ten days, with an intermission of six days, and so on for several weeks and even months. M. Huchard regards sodium formiate as an efficient therapeutical agent of the future.

Some of the Uses of Oxidized Pyrogallallic Acid in Dermatology.—Jamieson, in the *Edinburgh Medical Journal*, for May, 1905, refers to Unna's investigations with pyrogallallic acid and to the advantages of its derivative pyraloxin. Unlike pyrogallallic acid pyraloxin has no toxic properties, seldom excites dermatitis, and is recommended for the treatment of psoriasis and leprosy, and also lupus erythematosus and eczema palmaris. For psoriasis it stands next to chrysarobin in efficiency, and in some cases it is even superior to it, this being especially the case when there is retrogression of the disease. It is one of the best external remedies for lichen planus, relieving the itching and favoring the disappearance of the eruption. Though it is useful in lupus erythematosus, it leaves a deep black stain upon the tissues. In infantile eczema of the face pyraloxin may be added with advantage to Lassar's paste. In staphylogenic sycosis it may be applied after the hairs have been removed by x rays. For ringworm of the scalp in children it is also beneficial, destroying the fungous elements which have become located in the skin.

¹ Schmidt has already proved that formic acid is a product of numerous compounds formed when hydrochloric acid reacts on theobromine. Formic acid is found also among the products of the action of baryta water on theobromine.

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TYPHOID FEVER AS A SCOURGE OF ARMIES.

Taking as its text the comparative exemption of the armies of Japan from disease of a deadly nature during the campaigns against the Russian forces, and properly according precedence to typhoid fever among the diseases that persistently cripple European and American armies, the *Lancet*, in its issue for May 20th, seeks to account for the insignificance of that disease as a destroyer of Japanese soldiers during the war now in progress. Our contemporary's reflections are almost wholly of a suggestive, not to say speculative, character, though it lays some stress on the proposition that typhoid fever is not an exclusively water borne disease and on the consequent deduction that the Japanese practice of isolating such soldiers as may contract it is rather powerfully contributory to its restriction to the minimum.

It seems to us that this isolation, in conjunction with measures that would naturally go with it, would be quite sufficient, irrespective of the question of whether or not typhoid fever is spread by water alone, to effect a material reduction of the typhoid morbidity; but the *Lancet* goes further and suggests either that the Orientals have largely acquired immunity by having had the disease in childhood or that they enjoy an immunity derived from the nature of their food, in which vegetable substances predominate. It appears to incline to the

theory that the virtual elimination of meat from the diet is adequate to account for a degree of immunity which it supposes to exist among the Orientals, but it remarks that typhoid fever is really much more prevalent among the natives of India than had until recently been supposed. The only significant fact adduced by our contemporary in support of the vegetarian theory of immunity, it seems to us, is conveyed in this statement: "The cases of typhoid fever which do occur in the native (Indian) army are mainly among the Gurkha troops, who are meat eaters and spirit drinkers." Perhaps this may be explained on quite another supposition than that the bacterial flora of the intestinal canal in vegetarians may be held to be substantially different from the corresponding flora in the omnivorous, as the *Lancet* suggests.

We are disposed to attribute the comparative freedom of the Japanese armies from typhoid fever to their admirable sanitary arrangements rather than to any racial or dietetic immunity. The government of Japan seems to have been wise enough to commit the health of its armies into the hands of its medical officers without trammel, and other governments, including our own, would do well to follow its example. It is futile to think of inducing our people to subsist on rice or on any exclusively vegetable diet, and to argue that such a diet may possibly prevent typhoid fever will never save an American or an English army from devastation by that disease.

THE INSANE IN THE STATE OF NEW YORK.

Whoever is in danger of underrating the importance, the magnitude, or the varied character of the problems connected with the care of the insane in so large a community as that of the State of New York is likely to be set right if he will read the *Twelfth Annual Report of the State Charities Aid Association to the State Commission in Lunacy*, recently issued. It is fortunate for the insane that such an enlightened organization is influential in their management.

It appears from the report that on October 1, 1904, there were 25,019 inmates in the fourteen regular State hospitals, 844 in the two State hospitals for the criminal insane, and 998 in the twenty-three licensed private asylums, making a total of 26,861,

a number greater by 927 than the total at the corresponding date in the preceding year. Probably this increment represents approximately the annual increase of insanity in the State. In spite of the present rigid inspection to which immigrants are subjected, it is not unlikely that much of the increase is due to the landing of insane persons from foreign countries. Though in this matter as in all others the State of New York has to bear the brunt of the evil of undesirable immigration, the association does not think it wise for the State to undertake to supplement the national inspection service.

The prospective establishment of a reception hospital for the insane in the city of New York, authorized by recent legislation, is highly favored in the report. "It now remains," we read, "for the city of New York to do its share toward the establishment of this hospital by acquiring by purchase or otherwise sufficient and suitable lands conveniently located within the borough of Manhattan." Such a hospital, it is properly pointed out, would furnish a timely refuge for persons whose mental impairment might be only temporary if they could meet with appropriate treatment without the delay incident to a formal commitment; would, by its outpatient department, accomplish a great deal in the home treatment of individuals in danger of lasting insanity; and would furnish opportunities far superior to those now available for the clinical teaching of psychiatry.

The report deals with many other features of the work of caring systematically and humanely for the insane, but we have not space for their consideration at present. We cannot, however, refrain from expressing our gratification at the appreciative terms in which the report speaks of Dr. Peterson and Dr. Macdonald, who recently resigned, the one from the State Commission in Lunacy and the other from the superintendency of the city asylums.

EPILEPTIC STUTTERING.

It is well known that stuttering is often accompanied by convulsive contortions of the face, also that in some instances convulsive movements of other parts of the body are evoked by the stutterer's attempts to speak. It is known, too, that epilepsy and the stuttering defect of speech may both affect an individual without any manifest

connection with each other. But it seems to be true that in certain cases there is a relation between stuttering and epilepsy. The relation varies in different instances, and some of the variations have lately been made the subject of an interesting article by M. Féré, of the *Bicêtre* (*Revue de médecine*, February).

Sometimes, says M. Féré, habitual stuttering is intensified after an epileptic fit, or a recrudescence of the defect of speech may be the only manifestation of an epileptic crisis, the actual convulsion and loss of consciousness failing to appear. More rarely it is only in connection with an epileptic paroxysm that the stuttering occurs, preceding it, following it, or taking its place, in which last mentioned case it is a true manifestation of epilepsy and deserves to be ranked as such. When stuttering follows an epileptic attack, it should be looked upon as a continuation of the nervous discharge or as a result of the exhaustion consequent upon the paroxysm.

When stuttering precedes the attack, it is the first manifestation of the storm. The time intervening between its onset and the beginning of the convulsion may be so brief that it may be regarded as an aura; in other instances it serves as a warning, occurring some minutes or even hours before the convulsive attack, and it may not continue up to the time of the fit. Attacks of stuttering that really replace the ordinary epileptic paroxysm are apt to be misinterpreted, but, on the other hand, they are sometimes so characteristic that the patient himself recognizes their significance.

SENILE AND INFANTILE OSTEOMALACIA.

By the term osteomalacia is meant a disease involving the osseous tissue in general and characterized by true decalcification of the skeleton. In some cases the process may be localized in the neighborhood of foci of suppuration, at least in osteomyelitis, as has been shown by Gayet and Bonnet. But generally speaking the softening is very extensive. In the adult the disease more frequently attacks women, and the affection arises after several pregnancies, although it may occur in the nulliparous. Osteomalacia is exceptional in the male and makes its presence known,

in the first place, by pains in the limbs and in the ischiadic regions. Then deformities arise, due to the curving of the diaphyses, while the exaggeration of the patellar reflexes and generalized hyperæsthesia indicate the great excitability of the nervous system. There is also a very marked elimination of the urinary phosphates, and from this arises the decalcification of the skeleton, which later on will be made evident.

In children, as in elderly people, certain changes appear in the clinical picture, giving rise to diagnostic difficulty. In the child osteomalacia is by no means frequent, but it has been met with between the ages of eight and ten years. One rarely meets with an absolutely pure type of the affection, and the process is more frequently accompanied by a more or less pronounced rachitic process. Koenig has given a very distinct clinical picture of the disease in the young, and he points out that the beginning is very slow and insidious, while some few digestive disturbances, such as anorexia or diarrhœa, make their appearance. The little patients lose flesh and soon pains in the legs, which are deep seated and diffused, draw the physician's attention, and at the same time one notices that the patient presents an exaggerated susceptibility, insomnia, and agitation. Temporary contracture of the adductors and extensors appears, and these muscular disturbances soon give rise to a peculiar gait, very similar to that of a duck.

The bone changes then make their appearance; the height of the subject decreases and an arrest in growth takes place. The diaphyses become misshapen and bent, the deformity arising in the lower limbs in the first place. The muscles of the limbs become atrophied, and such changes easily explain why fractures arise from the slightest cause, while repair takes place badly or not at all. Broca has pointed out the frequency of genu valgum; the epiphyses are markedly thickened, and on palpation the bones feel like pasteboard. Radiography shows in a most distinct way how poor the bones are in mineral salts, because the shadow is hardly darker than that of the cartilages. Occasionally one meets with a frequent deformity in rickets, craniotabes, that is to say, a thinning of the bones of the skull which gives

rise to the feeling of pasteboard or a thin metallic plate, met with particularly over the parietal and occipital bones. The course of this disease is both continuous and progressive, lasting from eight to fifteen months, and death is the ordinary outcome. When a fatal issue does not occur, because energetic treatment may occasionally put a stop to it, the patient is the possessor of a fragile skeleton and is always exposed to a recurrence of the disease.

The diagnosis of osteomalacia in children presents little or no difficulty, although in the first place one may be more inclined to look upon the condition as one of rhachitism, but in the latter the child, from the very beginning, never presents the pains met with in osteomalacia or the nervous susceptibility which is common to the former affection. Later on in the evolution of rickets, the deformity arising in the diaphyses is less pronounced and the swelling of the epiphyses far more marked. However, the diagnosis will still remain difficult and frequently quite impossible to make. In hereditary syphilis of the bones a mistake in diagnosis is also possible, but the osteocopic pains are more marked at night, while the contrary is true of the pain in osteomalacia.

In elderly subjects one may meet with osteomalacia, but the general characters of the affection differ somewhat. The patient is usually a woman and complains, in the first place, of pain seated in the dorsal region, usually in the form of a pricking sensation or cramps, and not in the lower limbs as is the rule in children. One is apt to think of ordinary rheumatism, in the first place, and Piérart believes that nervous impressibility may be the cause of the pains; contracture, however, is exceptional in elderly subjects. The patients continue to walk and usually end by fracturing the tibia while going down stairs. In the case reported by Piérart, there were no changes in the reflexes and trembling was absent. In elderly subjects the urine does not always show evidence of an increase in the elimination of the phosphates, and even if it should contain them in excess this might simply be the result of treatment, because phosphatic preparations are taken internally.

Fractures are usually the first thing to draw

attention to the condition of the bones; the latter have no tendency to recover by the formation of callus, and consequently pseudarthroses result. Besides fractures, no deformity in the osseous system can be found, but the patients notice a sudden decrease in their height, due probably to the flattening of the vertebral bodies. The spinal column may take on an S shape or the back may become vaulted, but changes in the pelvic bones are rarely met with in elderly people. However, if the latter and those of the limbs show no change in their shape, the same cannot be said of the changes found on pathological examination. Under these circumstances they appear softened and friable, while their proportion of mineral salts is greatly diminished. The cranium shows no microscopical changes, but Piérart insists on the fact that a histological examination will show both the lesions of osteomalacia, namely, transformation of the osseous tissue into fibrous tissue with the presence of myeloplaxes, and osteoporosis; in other words, a pure and simple rarefaction of the bone tissue.

As in the child, senile osteomalacia shows a progressive evolution, and the treatment is not so effective as in the young, usually remaining without any results. The treatment should be prophylactic above all, consisting in a fortifying diet containing large amounts of phosphates, and in placing the patients in the best hygienic condition possible. When the disease has fully developed, rest, combined with the internal administration of the phosphates in various forms, will combat the disturbances of the general nutrition. In cases of fracture in osteomalacia, suture of the fragments has been recommended by some operators.

CHARLES GREENE CUMSTON.

A MEDICOLEGAL ASPECT OF X RAY STERILITY.

Destruction of the procreative capacity by means of applications of the Röntgen ray may perhaps prove of frequent occurrence if the use of the apparatus by anybody and everybody continues to be permitted. The matter was brought up by M. Hennecart at the Röntgen Ray Congress recently held in Berlin (*Presse médicale*, May 13th). He advocated legislation restricting the use of the ray on human beings to physicians, arguing that it would be difficult to punish laymen in the event of avoidable injury. He met

with hearty support in his contention, and, on motion of Dr. Becher, of Berlin, a resolution was adopted calling upon physicians to employ only medical men in x ray work, pending legislation on the subject.

MOTOR CARRIAGE FRACTURES.

Perhaps it is not with unmingled regret that we may look upon some of the performances of the motor carriage. It seems that the chauffeur is exposed to certain injuries of the forearm, especially at its lower portion, produced by a recoil of the crank when the motor is started. Two examples are recorded by C. Deutschländer (*Zentralblatt für physikalische Therapie, Diätetik*, etc., January; *Zentralblatt für Chirurgie*, May 13th), both fractures in the epiphyseal region, one of them attended with much overriding of the fragments.

OPHTHALMOLOGY IN PARIS.

An institution for the care of the eyes of the poor, founded by Baron Adolph de Rothschild, was opened in Paris during the week ending on May 6th. It is not surprising to learn from the cabled news that the hospital was opened without ceremony until we read further that it is the first one of the kind in the French capital. That so distinguished a scientific centre should have hitherto gone without a hospital devoted to this immensely important branch of surgery seems incredible and we should like corroboration of so astounding a statement.

THE EMMET DINNER.

The dinner given at Delmonico's last Monday evening, in celebration of Dr. Thomas Addis Emmet's seventy-seventh birthday, was even more largely attended than had been expected, and an enthusiastic spirit prevailed. In the formal toasts the various phases of Dr. Emmet's activities were specified, his career as a surgeon, his contributions to history, his achievements in art, etc. The proceedings constituted a well merited tribute.

The American Gynecological Society.—The annual meeting, held in Niagara Falls last week, proved to be one of the most satisfactory of recent years. Officers for the ensuing year were elected as follows: President, Dr. R. M. Maury, of Memphis, Tenn.; vice-presidents, Dr. Howard A. Kelly, of Baltimore, and Dr. Reuben Peterson, of Ann Arbor, Mich.; secretary, Dr. J. Riddle Goffe, of New York; treasurer, Dr. J. M. Baldy, of Philadelphia; member of the council, Dr. E. C. Dudley, of Chicago. The next meeting will be held in Hot Springs, Va.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 5th.—New York Academy of Sciences (Section in Biology); German Medical Society of the City of New York; Morrisania Medical Society, New York (private); Brooklyn Anatomical and Surgical Society (private); Corning, N. Y., Academy of Medicine; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, June 6th.—New York Neurological Society; Buffalo Academy of Medicine (Section in Surgery); Elmira, N. Y., Academy of Medicine; Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston); Baltimore Academy of Medicine; Medical Society of the University of Maryland (Baltimore).

WEDNESDAY, June 7th.—New York Academy of Medicine (Section in Public Health); New York Genitourinary Society; Harlem Medical Association of the City of New York; Society of Alumni of Bellevue Hospital; Medical Microscopical Society of Brooklyn; Medical Society of the County of Richmond, N. Y. (New Brighton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association.

THURSDAY, June 8th.—New York Academy of Medicine (Sections in Pediatrics and Otolaryngology); Society of Medical Jurisprudence and State Medicine, New York; Brooklyn Pathological Society; Medical Society of the County of Cayuga, N. Y.; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, June 9th.—Brooklyn Dermatological and Genitourinary Society (private); German Medical Society of Brooklyn; Medical Society of the Town of Saugerties, N. Y.

SATURDAY, June 10th.—Obstetrical Society of Boston (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending May 27, 1905:

	May 27.		May 20.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	888	19	769	10
Diphtheria and croup.....	331	26	345	36
Scarlet fever.....	184	15	201	13
Smallpox .....	..	..	1	1
Chickenpox	141	..	152	..
Tuberculosis	470	103	419	155
Typhoid fever.....	32	4	23	9
Cerebrospinal meningitis.....	76	60	99	72
	2,116	287	2,000	296

The Flag at Flushing Hospital.—The handsome American flag presented to the Flushing Hospital and Dispensary by the women of the Adam Wirth Relief Corps last February, was raised on Decoration Day for the first time on the hospital grounds with appropriate exercises. The ceremonies took place shortly after 8.30 a. m., and in attendance besides the members of the Hospital Board of Trustees were the cadets of Kyle Institute, all of whom participated in the exercises.

Vacancies in Bellevue Hospital.—There are at present three vacancies in the out patient department of Bellevue Hospital, two in the genitourinary clinic, those of first and second assistants to the surgeon in charge, and one in the general surgery clinic as second assistant to that class. Appointments to these vacancies will shortly be

made by the board of trustees of Bellevue and Allied Hospitals, and the board will be glad to consider the names of all desiring to present themselves as applicants for the positions. J. K. Paulding, secretary, board of trustees.

The Methodist Episcopal Hospital Training School for Nurses graduated the following young women on May 25th:

Ruby Nellie Furlong, Lillian Victoria Sherman, Stella Kathleen Kenny, Agnes Eleanor Reany, Jessie A. Twillman, Beatrice Pritchard, Nellie Esther Evans, Margaret Culbert, Lillian Esther Hankins, Martha St. John Eakins, Mabel M. Gaskin, Florence Mary Patton, Mabel Dayton, Harriet A. Chism, Lulu Pearl Rogers, Mrs. Margaret D. Hamilton, and Mrs. Lillian MacLernon Carlos.

Manhattan State Hospital, East.—An interesting programme of sports was carried out by the inmates and employees of this institution on Decoration Day, under the refereeship of Dr. J. T. W. Rowe, as follows: Baseball; lawn bowls; 100 yards dash; potato race; crab race; tug of war; 120 yards hurdle race; sack race; egg race; wheelbarrow race; tug of war, women; three legged race; 100 yards dash, page boys; 75 yards dash, women; tug of war, employees. An excellent programme of music was furnished by the hospital band.

Personal.—Dr. Samuel W. Bandler has been appointed adjunct professor of gynecology in the Postgraduate Medical School.

Dr. Doty has been appointed by Health Commissioner Darlington to direct the work of attempting to exterminate the mosquitoes of Staten Island, for which a preliminary appropriation of \$1,000 has been made.

His ambulance struck by a Fulton Street car, Dr. Moody, of the Cumberland Street Hospital, Brooklyn, was thrown to the street and sustained serious cuts and bruises at Pearl and Fulton Streets on May 29th. He was removed to the hospital on a car and was attended by his fellow physicians.

Society of the Medical Inspectors of the City of New York.—A stated meeting will be held Tuesday, June 6, 1905, at the Chemists' Club, 108 West Fifty-fifth Street, at 8.30 p. m. sharp. Order: Executive session; papers of the evening: The Prevention and Management of Summer Diarrhoea Among Tenement Children, by Dr. Charles G. Kerley; The Summer Diarrhoea of Infancy and the Agencies in New York for Its Prevention and Treatment, by Dr. Rowland G. Freeman; Some Remarks on the Practical Working of the Summer Corps, by Dr. Francis J. Murray. Discussion. Dr. A. C. McGuire, president; Dr. Edward M. Thompson, secretary, 315 West Fifty-eighth Street.

The Dinner to Dr. Emmet.—Dr. Thomas Addis Emmet was honored on his seventy-seventh birthday on May 29th at a dinner given at Delmonico's by his medical friends. About 125 guests were present. Dr. Emmet was escorted to the dinner by Archbishop Farley, who pronounced a blessing and also made a brief speech. Dr. E. C. Dudley, of Chicago, made the address of introduction. Others who spoke were Dr. W. M. Polk, Dr. W.

H. Baker, of Boston; Dr. S. C. Gordon, of Portland, Me.; Dr. George T. Harrison, and Dr. F. J. Quinlan. In his remarks Archbishop Farley said: "I never felt more of a layman than I do at this dinner given to the eminent physician, Dr. Emmet. Honor is due to him who stands at the head of the medical profession. What he has achieved in literature, medicine, and surgery is more than sufficient for any one man. He has lifted up for himself a monument for work that will stand long when he is in his grave."

Projects of the Harvey Society.—A new society called the Harvey Society, consisting of laboratory workers in New York city, has recently been established under the patronage of the New York Academy of Medicine. Its purpose is the diffusion of scientific knowledge in selected chapters of anatomy, physiology, bacteriology, pathology, pharmacology, and physiological and pathological chemistry by the means of public lectures by men who are workers in the subjects to be presented. Each lecture is intended to represent the state of modern knowledge concerning the topic treated, and at the same time will be adapted for presentation before an audience, consisting of that portion of the general medical profession who are interested in scientific medicine. It is hoped that through these lectures the common interests of research workers and the medical profession may be profitably cultivated. The fulfillment of the purposes of the society has been entrusted to the hands of the following committee: Dr. Graham Lusk, president; Dr. Simon Flexner, vice-president; Dr. George B. Wallace, secretary; Dr. Frederic S. Lee, treasurer; Dr. Christian A. Herter, Dr. S. J. Meltzer, and Dr. E. K. Dunham. The members of the society consist of two classes, active and associate members. Active members are laboratory workers in the medical sciences residing in New York. Associate members are such persons as may be in sympathy with the objects of the society and reside in New York. The first course of lectures will be given on Saturday evenings during the winter of the year 1905 and 1906 at the Academy of Medicine.

PHILADELPHIA.

The House of Cards, a book issued anonymously, has been attributed by a professor of English in one of the large universities to Dr. S. Weir Mitchell.

Personal.—Dr. Edith Warner Cadwallader has resigned from the chair of Obstetrics in the Woman's Medical College of Pennsylvania, the resignation to take effect upon the election of a successor.

Charitable Bequests.—The Presbyterian Home for Indigent Widows receives \$3,000 and the Philadelphia Orphan Asylum receives \$1,000 from the estate of Rachel Wetherill, which was adjudicated on May 24th.

By the will of Herman B. Blumenthal \$2,000 is bequeathed to the Federation of Jewish charities.

Amusements for Charitable Objects.—Amateur theatricals for the benefit of the Vacation

House for Young Women at Green Tree, Pa., were given at the New Century Drawing Room on May 22nd. The production was under the management of Miss Eleanor S. F. Pue and Mr. Lawrence B. Eyre.

New Buildings for the Methodist Hospital.—On May 23rd four new buildings were formally added to the equipment of the Methodist Episcopal Hospital, of Philadelphia. The buildings are the Mary T. Hunter Memorial Home for Nurses, the Mary Burton Dispensary, a new ambulance stable, and a power house. The buildings cost about \$120,000.

The Kensington Hospital for Women Nurses Graduate.—On Tuesday, May 9th, the following nurses graduated from the Training School for Nurses of the Kensington Hospital for Women:

Miss Anna E. Bennett, Miss Susan S. Cook, Mrs. Grace M. Porter, Miss Willetta C. Bayliss, Miss Mary E. Ross, Miss Kathleen M. Mills, Miss Charlotte E. Matthews, Miss Barbara E. Diamond, and Miss Beatrice E. Boeshore. The Honorable G. Harry Davis and Dr. Charles P. Noble delivered addresses.

Chester County Hospital Nurses.—The annual commencement exercises of the Training School for Nurses of the Chester County Hospital were held in the chapel of the West Chester State Normal School on May 26th. The following young women received the diploma of trained nurse:

Miss Agnes McFarland, of Centre Square, Montgomery County; Miss Dorothy Paschall, of Newfield, N. J.; Miss Martha B. Pierce, of Upland, Delaware County; Miss Alice A. Weed, of West Chester.

Scientific Society Meetings for the Week Ending June 10, 1905.—Monday, June 5th, Philadelphia Academy of Surgery; Biological and Microscopical Section, Academy of Natural Sciences. Wednesday, June 7th, College of Physicians; Association of Clinical Assistants of Wills Hospital. Thursday, June 8th, North Branch, Philadelphia County Medical Society; Pathological Society. Friday, June 9th, Northern Medical Association; West Philadelphia Medical Association.

A Pure Food Decision.—On May 24th, the Supreme Court of Pennsylvania declared that portion of the act of June 26, 1895, commonly known as the pure food law, which provides against the adulteration of drinks when described as foods to be unconstitutional. The opinion was handed down in the case of Kebort, of Crawford County, who was convicted of selling adulterated blackberry wine. This is the same rock on which the national pure food bill was wrecked; but it seems that alcohol must become mixed with pure food laws as well as with politics.

Jewish Maternity Hospital.—At a meeting of the newly elected board of directors of the Jewish Maternity Association a committee of seven was appointed, with David T. Berlisheimer as chairman, to prepare plans for the adding to the hospital of the nursery annex suggested by the president, Mrs. S. Belle Cohn, in her annual report last week. Milton C. Stein was elected assistant secretary, and David Werner Amram, solicitor. The following were elected to the medical staff:

Medical director—Dr. Isaac Leopold. Consulting obstetricians—Dr. Lucy N. Tappan, Dr. Joseph Price. Consulting surgeons—Dr. Lewis W. Steinbach, Dr. Charles P. Noble. Consulting ophthalmologist—Dr. Isaac Leopold. Consulting neurologist—Dr. Francis X. Dercum. Consulting pathologist—Dr. David Riesman. Consulting dermatologist—Dr. J. F. Schamberg. Consulting paediatrician—Dr. Eleanor C. Jones. Obstetricians and gynecologists—Dr. Clara T. Dercum, Dr. Daniel Longaker, Dr. Helen Kirschbaum, Dr. Edwin A. Heller, Dr. Ludwig Loeb, Dr. Leo H. Bernd. Paediatrician—Dr. L. Valentine Levi. Dispensary physicians—Dr. Clara T. Dercum, Dr. Daniel Longaker, Dr. Helen Kirschbaum, Dr. Edwin A. Heller, Dr. Ludwig Loeb, Dr. Leo H. Bernd, Dr. Moses Behrend, Dr. I. Valentine Levi, Dr. Justin G. Schwerin, Dr. Ellis E. W. Given, Dr. D. A. Feldstein, Dr. Louis P. Steinhart. Resident physician—Dr. Elizabeth F. Lewis. Head nurse and superintendent—Mrs. Blanche F. Schloss. Instructor in massage and Swedish movement to the Nurses' Training School—Mr. Louis D. Sinkler.

The Health of the City.—During the week ending May 20, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever.....	2	0
Typhoid fever.....	103	16
Scarlet fever.....	34	0
Chickenpox.....	50	0
Diphtheria.....	56	3
Cerebrospinal meningitis.....	3	1
Measles.....	75	1
Whooping cough.....	14	2
Tuberculosis of the lungs.....	40	71
Pneumonia.....	37	37
Erysipelas.....	9	0
Tetanus.....	1	1

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 14; puerperal fever, 1; diarrhoea and enteritis, under two years, 22. The total mortality was 456, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.49 per 1,000 population. The total infant mortality was 79; 65 under one year and 14 between one and two years. There were 45 still births; 26 males and 19 females. There were thunderstorms on the 14th and 16th. The maximum temperature was recorded on the 15th, when the official thermometer recorded 83°. The humidity was high and the precipitation amounted to 0.96 inch.

Friends' Hospital for the Insane.—The eighty-eighth annual report of the Friends' Asylum for the Insane has just been received. During the year 269 patients were treated; 95 men and 174 women. Of these 29 were discharged recovered, 19 much improved, 24 improved, 19 unimproved, and 16 died. The training school for nurses, in which are both men and women pupils, completed its tenth year. Negotiations are being entered upon to affiliate the asylum school, which is under the charge of Dr. Grace E. White, with that of a general hospital, so that the pupil nurses of each school may have an opportunity to supplement their course by whatever part they may desire in the other schools. The class that graduated in 1904 numbered 13. The superintendent, in his report, puts himself on record as a believer in a training school as a factor in bringing about a higher moral and intellectual standard in the nursing staff, and an increased scientific value of the reports written by trained nurses. The pathological laboratory, under the direction of Dr. Seymour D. Ludlum, has become an indispensable

adjunct to the medical service of the hospital. The medical staff has been studying the possible relationship of neurofibrillar changes to insanity and during the year Dr. Ludlum published the conclusions thus far reached. During the year two advanced students from the Graduate School of the University of Pennsylvania have studied the special forms of morbid mentation under the direction of the professor of psychology. During the year the William Thomas Free Bed was founded by a legacy of \$5,000 under the will of Mary E. T. Lord. Under the will of Hiram Brooke \$5,000 bequeathed to the institution was used for the foundation of the Hiram Brooke Free Bed. Under the wills of Sarah Marshall and Mary Marshall Johnson \$8,669.50 was received by the corporation.

Medicochirurgical College Commencement.—The annual commencement exercises of the Medicochirurgical College were held in the Academy of Music on Saturday, May 27th, at noon. The following candidates received the diploma of doctor of medicine:

Calvin Hayes Elliott, M. Sc. of California; Irwin Lewis Chipman, of Delaware; Robert Warner Howard, of Florida; Samuel Hawkins Martin, of Kentucky; William James Churchill, Roland Stephen Newton, Herbert Mashell Goddard, of Massachusetts; James McFayden, Jr., of Maine; Arthur Harley Coward, Frederick Snyder Hammond, Walter Franklin Keating, George Beale Knight, Benjamin Franklin Ogden, Edward Wood Russell, Clarence Johnson Slack, Maurice Stayer, of New Jersey; Harry B. Fralic, of New York; James Leak Wyatt, of North Carolina; Dr. James E. Mulligan, Dr. William Henry Perry, of Ohio; Roy Cowles McDaniel, of Oregon; Samuel A. B. Barbash, Charles Howard Bee, Albert Roy Bickstein, Albert Monroe Cochran, John Joseph Dailey, John Edward Dailey, William John Davidson, Joseph Rasbold Delavan, George Hursh Ensinger, Jocelyn Joseph Emmens, Alexander Rae Evans, Curtis Clyde Eves, Joseph Bernard Feeley, John Montgomery Gelwix, Abraham D. Halperin, Harry Joseph Herzstein, Frank Tomlinson Hogeland, David Edgar Hutchinson, Jacob Karl Jaffe, Joseph Clement Jenkins, Frank Raymond Keating, Harvey Evert Kendig, James J. Kennedy, John Benjamin Lark, Hugh James Lenahan, John J. Lynch, Howard Wilson Levensgood, Joseph Jacob Levy, Amos Jones Mander, Thomas P. Martin, Mahlon Granville Miller, George U. Grant Mills, Albert Mehrer Moore, John Joseph Moore, James Aloysius McCracken, Arthur McGinnis, Arthur Ray McNeil, Reid Nebinger, Gilbert M. Neubinger, Martin Landis Nissley, Milton Frase Percival, William A. Raiman, Thomas C. Ross, Leo J. Rostow, Jules Maurice Rosenbloom, Lewis Cress Rowles, Burton C. Rumbel, Harry Wieder Salus, Samuel A. Savitz, Joseph Francis Schlatterer, William Kriebel Seibert, Frank Landis Shenk, Floyd A. Shimer, A. Burton Smith, John Leo Smart, Dr. Thomas Butler Snyder, Herbert Alonzo Spencer, Harry Ambrose Stutzman, Eugene Swayne, Nelson Shelly Weinberger, Walter John Whitehouse, Jr., of Pennsylvania; Charles Alfred Davlin, of Wisconsin; Arthur R. Dray, of England; Ardashes H. Merdingan, of Asia Minor; Professor Judson Daland, Emerson Haines Bainbridge, John J. Gilbride, Guthrie McConnell, Frank White, special.

The gold medal for the highest general average in the senior class of the medical department was awarded to Frederick Snyder Hammond, with honorable mention of Jocelyn J. Emmens and James McFayden, Jr. The gold medal for the highest average in the junior class was awarded to Charles C. Manges; in the sophomore class to Frederick C. Dunlop; in the freshman class to Paul G. Weston. On the evening of May 26th the faculty and trustees of the college gave a re-

ception in the clover room of the Bellevue-Stratford Hotel, and addresses were delivered by President Henry F. Walton, Speaker of the State House of Representatives; Professor John V. Shoemaker, Professor Ernest Laplace, Professor Judson Daland, Professor L. Webster Fox, Professor W. Easterly Ashton, Dr. A. C. Buckley, and Edward J. Houston. The commencement oration was delivered by the Honorable William N. Ashman, LL. D.

GENERAL

The Twentieth Century Women's Medical Club, of Cleveland, has elected Dr. Grace E. Cross, president; Dr. Edith Varney and Dr. Amelia Burroughs, vice-presidents; and Dr. Caroline Y. Wentworth, secretary.

The Suffolk County, N. Y., Medical Society elected the following officers on May 4th at its meeting at Riverhead: President, Dr. W. H. Ross, of Brentwood; vice-president, Dr. C. C. Miles, of Greenport; secretary, Dr. Frank Overton, of Patchogue; librarian, Dr. J. H. Benjamin, of Riverhead.

The Westchester County Medical Society elected the following officers on May 18th: President, Dr. T. F. Goodwin; vice-president, Dr. Frank E. Russell; secretary, Dr. C. P. Byington; treasurer, Dr. S. O. Myers; curator, Dr. W. F. Curtis, of White Plains; censors, Dr. H. E. Schmid, Dr. W. S. Fleming, and Dr. A. M. Campbell.

New Hampshire Medical Society.—At the closing session of the New Hampshire Medical Society held in Concord, officers were elected as follows: President, Dr. Ferdinand A. Stillings, of Concord; vice-president, Dr. Ira J. Prouty, of Keene; treasurer, Dr. D. M. Currier, of Newport; secretary, Dr. Granville P. Conn, of Concord; assistant secretary, Dr. Loren A. Sanders, of Concord.

The State Board of Medical Examiners of North Carolina.—On May 17th the State Board of Medical Examiners for North Carolina convened at Greensboro. There were 129 applicants for license, and the board was in session four days. Of the applicants, 88 were successful, 40 failed to make the requisite eighty per cent., and one withdrew. Among the successful applicants was Dr. H. A. Eberle, late of the American army in the Philippines, and now of Greensboro, N. C.

The Milwaukee Medical College graduated the following on May 15th:

A. C. Borchardt, J. E. Bingham, V. Baird, L. Dorpat, C. C. Dettman, J. L. Daniels, E. S. Elliott, L. J. Friend, J. J. France, F. R. Farrell, F. L. Griswold, J. J. Gramling, J. L. Hutchison, J. S. Hansbury, R. E. Hays, F. A. Jackson, F. L. Kelley, J. M. Kelley, N. H. Lewis, W. C. Lohr, J. J. Lunz, B. J. Manhoff, D. C. Miller, R. D. C. Moray, C. L. R. MacCullum, V. V. Nelson (class president), H. F. Pruessing, J. F. Quin, P. H. Rupp, A. J. Somers, J. F. Stein, Max Schnupp, L. N. Schmetz, W. J. Scollard, E. A. Titel, R. A. Vorpahl, and J. F. Zivniska.

Keokuk, Ia., Medical College.—The following graduated from this college on April 25th:

John L. Aleshire, Chester Brigham, Peder J. Bursheim, John A. Cousins, Walter T. Christenson, Earl Cooper, Leonard E. Frazer, Frank W. Fennell, Leo O. Forney, Henry A. Foster, George H. Gray, Leonard Goshorn, Davis W.

Humphrey, Otto E. Harmon, Freeman Haase, James Hinchliff, Joseph W. Hudak, Florence A. Howard, Otto E. Haisch, Oliver P. Jamison, Jens V. Jorgenson, Clarence J. Kepler, Harry V. Kitzmiller, Alfred L. Lafferty, Verner T. Lindsay, Oliver W. McGrew, Wilson F. McBill, William E. McClain, Arthur S. Monzingo, William L. Munn, Fred H. Miller, Charles V. Moorhouse, Jesse C. Moore, Henry J. Mullin, Edward E. Morgan, Earl H. Noble, Lemuel P. Peters, H. William Plummer, Roscoe Pollock, Sherman Ripperton, James C. Russell, Fred W. Rolfs, Fred T. Rucker, Thomas A. Sinclair, William W. Stelen, Homer Stronsinger, Edwin F. Stannus, Clyde S. Smith, Alexander C. Whitehill, Earl A. Warner, and Ernest A. Wilkinson.

Louisiana State Medical Association.—The following officers of this association were elected at the last annual meeting: President, Dr. C. J. Ducote, of Avoyelles Parish; first vice-president, Dr. J. T. Oechsner, of Orleans Parish; second vice-president, Dr. J. J. Ayo, of Lafourche Parish; third vice-president, Dr. D. R. Sartor, of Richland Parish; counselor, second congressional district, Dr. E. J. Granger, of Orleans; counselor, third congressional district, Dr. H. L. Ducrocq, of Lafourche; counselor, fourth congressional district, Dr. N. K. Vance, of Caddo; counselor, fifth congressional district, Dr. R. F. Harrell, of Lincoln; counselor, sixth congressional district, Dr. C. M. Sitman, of St. Helena; counselor, seventh congressional district, Dr. C. A. Gardiner, of St. Landry; nominees for the State Board of Medical Examiners, Dr. E. L. McGehee and Dr. M. J. Magruder. The next meeting place will be New Orleans, on the second Tuesday in May, 1906.

Poisonous Foods and the Washington Legislature.—The legislature of Washington State, in view of the fatalities consequent upon recent mistakes by children and others, has passed the following act: In relation to poisons and prohibiting the combination of poisonous substances with crackers, bread, or other preparations in any manner resembling or in similitude of any edible product and prescribing penalties for its violations;

Be it enacted by the legislature of the State of Washington:

Section 1. It shall be unlawful for any person to sell, offer for sale, use, distribute, or leave in any place, any crackers, biscuit, bread, or any other preparation resembling or in similitude of any edible product, containing arsenic, strychnine, or any other poison.

Sec. 2. Any person violating the provisions of this act shall upon conviction be punished by a fine of not less than fifty dollars nor more than five hundred dollars.

It appears that children have eaten a biscuit or cracker intended for rats only and loaded with poison for the sole purpose of exterminating the vermin.

Memphis Hospital Medical School.—The commencement exercises of the Memphis Hospital Medical College were held at the college building on April 28th. The list of graduates is as follows:

J. C. Ayres, of Tennessee; J. S. Abney, of Alabama; Rupert Butler, of Arkansas; E. J. Banks, of Mississippi; S. H. Barron, of Mississippi; W. W. Beach, of Indian Territory; J. C. Burdett, of Louisiana; Thad. Cothern, of Arkansas; J. Hugh Carter, of Tennessee; R. W. Carter, of Arkansas; W. T. Collum, of Mississippi; A. R. Carter,

of Louisiana; W. W. Carter, of Texas; J. L. Cox, of Indian Territory; S. S. Caruthers, of Mississippi; C. E. Duve, of Texas; J. C. Denman, of Mississippi; C. T. DeLoach, of Louisiana; S. E. Eason, of Mississippi; Harvey Embree, of Texas; H. E. Griffin, of Mississippi; C. W. Garrison, of Texas; F. A. Gray, of Arkansas; Robert L. Hill, of Alabama; J. F. Haynie, of Mississippi; R. J. Jones, of Mississippi; J. A. Joyner, of Louisiana; M. B. Key, of Mississippi; Ellis Lamb, of Arkansas; J. B. Lightfoot, of Arkansas; H. M. Lyda, of Alabama; Charles McCallum, of Texas; J. Harvey McNeill, of Mississippi; J. A. McCoy, of Mississippi; B. F. McArthur, of Mississippi; J. T. Mills, of Oklahoma; Frank Nisbett, of Arkansas; A. J. Newman, of Louisiana; John Pugh, of Louisiana; T. A. Russell, of Texas; A. W. Rhyne, of Mississippi; F. E. Rushing, of Texas; H. P. Simpson, of Mississippi; D. K. Sauls, of Tennessee; C. E. Shackelford, of Tennessee; J. A. Vance, of Mississippi; W. E. Webster, of Arkansas; W. E. Williamson, of Tennessee; R. F. Wheat, of Mississippi; J. L. Wright, of Texas.

Maryland Medical College.—The following graduated from this college on May 5th:

William Walter Abbott, Ira A. B. Allen, William Gadson Allen, Lawrence A. Baker, Clem Campbell Ballard, Blaine Berthold Barton, Oscar Burnham Beer, A. Marvin Bell, John Henry Bird, James W. Bishop, Lester B. Bradford, Henry Gwyn Branham, Sidney J. Burleson, Edward B. Claxton, Lafayette Coffman, Francis Oliver Darby, Virgil Lee Darby, Walter G. Dempsey, Jill J. Devoti, Charles L. Dichter, Ezra A. Dickey, John Melvin Fadeley, Willis Henry Faulkner, Chester Arthur Flegler, Clark Stevenson Fortney, Gilbert David Furbee, John Head Gayle, Leslie Handlin George, Harry Homer Gessler, Martin Van Buren Godbee, Edwin B. Goodall, Lycurgus Martin Gurley, U. Philo Hackney, Walter M. Hammett, Charley I. Hammond, Cecil de J. Harbord, John Hampton Hare, B. Woodward Hazell, William F. Hoeler, Oliver C. Holley, John Oscar Hunter, James R. Hunter, William D. Jones, William Eli Kay, John J. Kerr, Henry Albert Kiles, Joseph U. Kimble, Theodore W. Koldeaway, Walter Eyan Lee, George A. Leonard, John C. McCoy, Henry McMillan, James M. Meason, Clarence H. Mercer, E. Frederic Morris, Carlisle Nottingham, Benjamin A. Owen, Rollin B. Page, J. W. Payne, Newton I. Parr, Harvey Hinchman Pettry, Charles Lee Porch, Benjamin W. Peck, F. W. C. Quinn, James B. Rankin, Cirilo L. Rodriguez, Francis D. Roelkey, Charles C. Rumsisell, William J. Rysanek, J. W. Schlieder, M. Edward Seale, J. Benjamin Shannon, H. William Shaw, Walter F. Shepherd, George W. Sisler, Opie W. Swope, J. R. Sudler, J. T. Sullivan, Joseph D. Talkin, Edward H. Thompson, William P. Thompson, Neill A. Thompson, Lewis B. Thomson, Mosely J. Toney, Seneca S. Turner, Walter Alva Weed, John H. Weil, Okey N. Windle, Arch A. Wingrove, Albert T. Young, W. K. Zimmerman.

University of Maryland.—The following graduates of the medical department of the University of Maryland, eighty-three in number, were announced on May 9th:

Samuel Luther Bare, Robert Parke Bay, Chandos M. Benner, James Snow Billingslea, Ira Burns, Sydenham Rush Clarke, Frederick De Sales Chappelier, John Martin Elderchide, George William Mahle, James G. Matthews, Harry Downman McCarty, W. Arlett Parvis, John William Pierson, Daniel E. Rensberg, Albert Leigh Sanders, J. Holmes Smith, Jr., William Henry Fisher, Leo J. Goldbach, Brooke I. Jamison, Jr., Henry C. Houck, Francis White Janney, Eugene Kerr, Herbert L. Kneisley, William A. Knell, Roscoe Conkling Metzel, Robert Levis Mitchell, J. Albert Nice, Samuel T. R. Revell, John L. Riley, Anton G. Rytna, W. Henry Smithson, Jr., and William E. Elliott Tyson, of Maryland; Julian Warrington Ashby, Alvah Parish Bohannon, Edward V. Copeland, George Blight Harrison, Harry Equilla Jenkins, and Oscar S. Owens, of Virginia; Frank Burden, Samuel William Hammond, and Edgar Brown Lafave, of West Virginia; Elmer Hall Adkins, Baird U. Brooks, Arthur Bascom Croom, Alpheus Wood Disosway, Edwin Ferreebe Fenner, Oswald Ottmar Kafer, James P. Matheson, James Albert Stone, John Shaw Gibson, Milton R. Gibson, Archibald Wright Graham, Henry Hiram Hodgkin, Hamner C. Irwin, John W. Parker, Jr., and Willard James Riddick, of North Carolina; Vance W.

Brabham, Edward McQueen Salley, and Steuart Baskin Sherard, of South Carolina; George Skinner McCarty and William Benjamin Warthen, of Georgia; John Edgar Rooks, of Tennessee; Frederick J. Waas, of Florida; Roscoe C. Carnal, David A. DeVanny, William Morris Mitchell, William W. Halla, Harold Edson Minor, and William Wordsworth Riha, of New York; Charles Gallery Croushore, James Eugene Dwyer, Harry Moore Felton, John P. McGuire, and William Cuthbert McGuire, of Pennsylvania; Benjamin Franklin Tefft, Jr., and Seth DeBlois, of Rhode Island; Oliver Justin Ellis, of Vermont; Julius Levin, of Connecticut; John Joseph Carroll, of Massachusetts; Edward Lawrence Casey, of New Hampshire; Manuel Duemo, of Porto Rico; Nagib Kenawy, of Egypt; Kalil Magid Koury, of Syria.

University College of Medicine, Richmond, Va.—This institution graduated the following in medicine on May 18th:

Fielding Lewis Ashton, of Hooes, Va.; Coleman D. Bennett, of Keeling, Va.; Richard Alfred Bennett, Jr., of Toshes, Va.; John Otto Boyd, of Winchester, Va.; John Garnett Broadbuss, of Bowling Green, Va.; Joseph Haskell Chiles, of Fort White, Fla.; Joseph Dorsey, of Piedmont, W. Va.; E. Hale Connelly, of Walthall Store, Va.; George Marion Cooper, of Clinton, N. C.; James Harvey Craft, of Bramwell, W. Va.; Harry M. Crowe, of Berryville, Va.; John Williamson Daugherty, Jr., of Richmond, Va.; William Dalton Deshazo, of Spencer, Va.; Ernest Egbert Epperson, of Naruna, Va.; Robert Scott Fitzgerald, of Richmond, Va.; Rawley H. Fuller, of Danville, Va.; Alfred Ludwell Hammer, of Elkton, Va.; Delos D. Hooper, of Tuckasee, N. C.; Frank Ernest Irons, of Pickaway, W. Va.; James Warren Knepp, of Roanoke, Va.; Wiley Wilson Kootz, of Broadway, Va.; Jefferson Franklin Landen, of Chingapin, N. C.; George Price McCoy, of Franklin, W. Va.; Samuel Austin McFerrin, of Friar's Hill, W. Va.; Richard H. Manson, of Warfield, Va.; Moir S. Martin, of Stuart, Va.; D. C. Mayers, of Stony Creek, Va.; Henry Taylor Miller, of Washington, Va.; Ben James Montgomery, of La Crosse, Va.; Clarence V. Montgomery, of La Crosse, Va.; Schuyler Barclay Moon, of Richmond, Va.; E. Ackley Moore, of Castleman's Ferry, Va.; Heber P. Newman, of Fort White, Fla.; Cullen S. Pitt, of Barton Heights, Va.; Oscar Lee Ramsey, of Sandy Level, Va.; William Sterling Robertson, of Richmond, Va.; Robert Douglas Roller, of Charleston, W. Va.; Clyde Fenton Ross, of the Trappe, Va.; Joseph Hubbard Saunders, of Washington, N. C.; Fred L. Smith, of Lawton, W. Va.; Shelton Stringer, of Brookville, Fla.; George Fugett Turman, of Willis, Va.; William L. Watts, of Monitor, Va.; William Lee Weadon, of Bluemont, Va.; Robert Camden Whitehead, of Lynchburg, Va.; Roy Folsom Williams, of Sowers, Va.; William Franklin Williamson, of Alexandria, Va.; Wade Hampton Young, of Zackville, W. Va. Department of Dentistry.—Degree of Doctor of Dental Surgery: L. Cabell Bell, of Waterbury, Conn.; Benjamin Bloxton, of Richmond, Va.; Carl C. Bowman, of Pratts, Va.; R. Owen Canada, of Danville, Va.; Frank Garland Chamblee, of Wakefield, N. C.; John Mabrey Coleman, of South Boston, Va.; William Claude Fitzgerald, of Chatham, Va.; Burnam Oscar Grove, of Luray, Va.; Chancy Highsmith, of Parkersburg, N. C.; Richard Jones, of Virginia Beach, Va.; Maryan Buford Lewis, of Culpeper, Va.; David K. Lockhart, of Asheboro, N. C.; Frank Bell Miller, of Newport, Va.; James Oscar Quaintance, of Boston, Va.; R. Floyd Waller, of Leda, Va.; Lawson Carter Womack, of Whittle's Depot, Va.; J. Smith Yates, of Grifffinsburg, Va.; Paul Preston Yates, of Morrisville, N. C.

American Medical Association.—The forthcoming session of the American Medical Association promises to be most interesting and well attended, not only from a scientific and social point of view, but for the many liberal inducements and stop over privileges which are offered by the various railroads throughout the country. Of a number of special trains, the Overland Limited will leave Chicago via the Northwestern line Thursday, July 6th, at 8.02 p. m., going through Salt Lake City and Ogden and arriving at Portland,

Monday afternoon, July 10th, at 5.25. This will permit a stop over (if desired) of one day at the quaint, beautiful, and historic city of Salt Lake, and there will be no increase in railroad fare for this trip, which will enable one to return after the session is over, via any other of the United States lines of railroad or via the Transcontinental Canadian Pacific Railroad. Going via the Northwestern Line from Chicago affords a daylight ride through the wonderful Rocky Mountain scenery of the western States, and for some 200 miles of Columbia River scenery. The fare is \$56.50 for the round trip from Chicago; tickets valid ninety days from date of sale.

The White Pass and Yukon Route is offering inducements under most favorable auspices to those who desire to visit Skaguay, Dawson, and other Alaska points.

The Canadian Pacific Railway offers a delightfully picturesque trip through the Canadian Rockies with stop over privileges, the fare for the round trip from Chicago being also \$56.50.

For full details of all the above itineraries, Dr. Liston H. Montgomery, 92 State Street, Chicago, Ill., will gladly furnish the desired information.

Hospital Appointments.—The following members of the graduating class of 1905 of the Medicochirurgical College, of Philadelphia, have received hospital appointments as follows:

Medicochirurgical Hospital, Dr. W. F. Keating, Dr. J. J. Moore, Dr. C. H. Elliott, Dr. S. H. Martin, Dr. H. B. Fraile, Dr. R. Nebinger, Dr. B. Swayne, Alternates, Dr. G. M. Neuburger, Dr. A. McGinnis, Dr. J. R. Delavan, Dr. F. R. Keating, Dr. J. P. Kennedy, Dr. M. L. Nissley, Dr. R. C. McDaniel.

Frankford Hospital, Dr. John J. Lynch and Dr. Thomas C. Ross.

Jewish Hospital, Dr. Herbert M. Goddard and Dr. Gilbert M. Neuburger.

Prince of Peace Maternity Hospital, Dr. William J. Churchill.

Samaritan Hospital, Dr. Milton F. Percival and Dr. William A. Raiman.

Allentown Hospital, Allentown, Pa., Dr. Mahlon G. Miller.

Atlantic City Hospital, Atlantic City, N. J., Dr. Samuel Barbash.

St. Vincent's Hospital, Erie, Pa., Dr. Charles A. Davlin.

Mercy Hospital, Pittsburgh, Pa., Dr. Frederick S. Hammond and Dr. James J. McFayden, Jr.

St. Luke's Hospital, South Bethlehem, Pa., Dr. Jocelyn J. Emmens and Dr. Joseph J. Levy. Alternate, Dr. Roland S. Newton.

McKeesport Hospital, McKeesport, Pa., Dr. Joseph B. Feeley.

Lackawanna Hospital, Scranton, Pa., Dr. Thomas P. Martin.

Trenton Emergency Hospital, Trenton, N. J., Dr. Howard Wilson Levenood.

Trenton State Hospital, Trenton, N. J., Dr. Clarence J. Slack.

Westchester Hospital, Westchester, Pa., Dr. D. Edgar Hutchinson.

City Hospital, Wilkesbarre, Pa., Dr. James J. McFayden, Jr., and Dr. A. Burton Smith.

Mercy Hospital, Wilkesbarre, Pa., Dr. Hugh J. Lenahan.

The following are on the eligible list for the Philadelphia General Hospital: Dr. Jocelyn J. Emmens, Dr. Frederick S. Hammond, Dr. Abraham D. Halperin, Dr. Joseph R. Delavan, Dr. James J. McFayden, Jr., and Dr. Samuel Barbash.

Statement of Mortality in Chicago for the Week Ending May 20, 1905, compared with the

preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's estimated midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	May 20, 1905.	May 13, 1905.	May 22, 1904.
Total deaths, all causes.....	530	450	483
Annual death rate per 1,000.....	14.11	11.79	13.04
By sexes—			
Males.....	302	254	284
Females.....	227	196	199
By ages—			
Under 1 year.....	104	70	88
Between 1 and 5 years.....	51	35	38
Over 60 years.....	113	103	93
Important causes of death—			
Acute intestinal diseases.....	32	14	25
Apoplexy.....	16	13	12
Bright's disease.....	46	42	28
Bronchitis.....	19	14	15
Consumption.....	58	62	62
Cancer.....	28	17	34
Convulsions.....	9	9	9
Diphtheria.....	2	4	7
Heart diseases.....	53	49	36
Influenza.....	1	0	0
Measles.....	7	0	1
Nervous diseases.....	26	15	20
Pneumonia.....	70	62	82
Scarlet fever.....	1	0	0
Smallpox.....	2	1	0
Suicide.....	13	10	10
Typhoid fever.....	5	3	5
Violence (other than suicide).....	32	20	20
Whooping cough.....	14	14	1
All other causes.....	109	82	123

Statement of Mortality in Chicago for the Week Ending May 27, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's figures of midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	May 27, 1905.	May 20, 1905.	May 28, 1904.
Total deaths, all causes.....	454	539	437
Annual death rate per 1,000.....	11.89	14.11	11.82
By sexes—			
Males.....	266	302	258
Females.....	188	237	179
By ages—			
Under 1 year.....	99	104	82
Between 1 and 5 years.....	35	51	34
Over 60 years.....	102	118	96
Acute intestinal diseases.....	17	32	29
Apoplexy.....	12	16	14
Bright's disease.....	33	46	32
Bronchitis.....	19	13	13
Consumption.....	62	58	48
Cancer.....	28	28	21
Convulsions.....	11	9	8
Diphtheria.....	1	2	7
Heart disease.....	43	53	37
Influenza.....	1	7	0
Measles.....	7	7	2
Nervous diseases.....	19	26	24
Pneumonia.....	48	70	55
Scarlet fever.....	0	1	2
Smallpox.....	0	2	0
Suicide.....	9	13	5
Typhoid fever.....	3	3	4
Violence (other than suicide).....	33	32	21
Whooping cough.....	11	14	2
All other causes.....	105	109	113

American Laryngological Association.—At the sessions of the twenty-seventh annual congress of this association, to be held at the Hotel Chelsea, Atlantic City, June 1st, 2nd, and 3rd, members hope to hear the following papers:

President's Address, by Dr. Clarence C. Rice; A Case of Nasal Hydrorhœa, by Dr. D. Bryson Delavan; Partial Turbectomy Followed by Acute Otitis, Mastoiditis, Sigmoid Sinus Thrombosis, with Extension to Internal Jugular Vein, by Dr. Charles H. Knight and Dr. James F. McKernon; Further Report on a Case of Lupus of the Pharynx and Nasopharynx (*Transactions*, 1904, page 123), by Dr. Herbert S. Birkett; The Treatment of Acute Inflammations of the Nasal Accessory Sinuses, by Dr. Thomas Hubbard; An Intranasal Operation for Draining the Frontal Sinus, by Dr. E. Fletcher Ingals; Exhibition of Sections of the Nose of Various Animals, by Dr. John M. Ingersoll; "Symposium" on Sinus Disease: (a) What Symptoms in Diseases of the Nasal Sinuses Demand Radical Surgical Inter-

vention? (b) What Have Been the Comparative Results of Conservative and Radical Methods of Treatment? The Maxillary Sinus, by Dr. Robert C. Myles and Dr. George A. Leland; The Frontal Sinus, by Dr. C. G. Coakley and Dr. William E. Casselberry; The Ethmoidal Sinus, by Dr. John O. Roe and Dr. John W. Farlow; The Sphenoidal Sinus, by Dr. J. W. Gleitsmann and Dr. T. Passmore Berens; general discussion; Deflection of the Nasal Septum in Children, by Dr. Arthur A. Bliss; A Second Note on a Case of Sarcoma of the Nose, by Dr. J. Price-Brown; A Further Study of Hay Fever, Clinically, with the Employment of Pollantin, by Dr. Alexander W. McCoy; Amygdalotomy, the Basis for the Treatment of Tonsillar Affections, by Dr. George B. Hope; Gangrene of the Tonsil, with Report of Cases, by Dr. Charles W. Richardson; Sequel to a Case of Epithelioma of the Larynx, Shown to the Association Two Years Ago (*Transactions*, 1903, page 98), by Dr. Walter F. Chappell; Two Cases of Foreign Body (Impacted) in the Oesophagus, by Dr. Gordon King; Papilloma of the Larynx in Children, by Dr. J. Payson Clark; Rest in the Treatment of Laryngeal and Pulmonary Tuberculosis, by Dr. W. Peyre Porcher; The Relation Between Laryngeal and Pulmonary Tuberculosis, by Dr. Walter F. Chappell; Complete Adhesion of the Vocal Bands Following Tracheotomy After Diphtheria, by Dr. D. Braden Kyle; Rogers's Modification of the O'Dwyer Treatment of Chronic Stenosis of the Larynx, by Dr. D. Bryson Delavan; (a) Papilloma of the Nasopharynx Simulating Epithelioma; (b) Fibroma of the Larynx in a Child of Three Years, Necessitating Tracheotomy; Subsequent Laryngofissure for Removal Followed by Prolonged Intubation, by Dr. Thomas J. Harris; A Case of Laryngeal Diphtheria in an Adult (Necessitating Intubation) Complicating Cerebrospinal Meningitis, by Dr. William K. Simpson; An Unusual Case of Edema of the Glottis, by Dr. Emil Mayer.

Personal.—Regius Professor Osler sailed for England on the *Cedric*, May 19th.

Governor McDonald, of Colorado, on May 11th, appointed Dr. L. E. Lemen, of Denver, a member of the State board of health, to succeed Dr. Hubert Work, of Pueblo, who resigned because of inability to attend the meetings of the board regularly.

Dr. A. T. Grill, of Cleveland, has been appointed house physician at St. Joseph's Hospital and has entered upon his duties. Dr. Grill was for a number of years connected with the Charity Hospital of Cleveland.

Dr. W. L. Whittington, a physician at the insane hospital at St. Joseph, Mo., was elected superintendent of the colony for the feeble minded and epileptics at Marshall on May 13th. Dr. L. M. Thompson, formerly superintendent, resigned at the last meeting of the board. There were many applications for the appointment.

Dr. Thomas Opie, one of the founders of the College of Physicians and Surgeons, of Baltimore, and who for thirty-three years has been dean of the faculty and professor of gynecology, has resigned. Dr. Charles F. Bevan, professor of surgery, has been elected dean of the faculty and has assumed his duties as such.

The Wisconsin College of Physicians and Surgeons has strengthened its faculty and its standing by the acquisition of Professor Victor Hugo Bassett, of Johns Hopkins University, who will be professor of pathology and director of the Marks laboratories of pathology and bacteriology. Dr. Bassett will be the first incumbent not to engage in private practice.

Dr. William H. Taylor's class in medical jurisprudence, 1904-1905, of the Medical College of Virginia, have presented him with a silver loving cup as the result of the attacks made on their in-

structor following his famous lecture on the immortality of the soul.

Dr. John F. Winn, of Richmond, Va., has been elected by its board of trustees, professor of clinical obstetrics in the University College of Medicine of that city. For a number of years Dr. Winn has successfully filled the position of lecturer on obstetrics in the same institution.

Nurses Graduate.—The Good Samaritan Hospital, of St. Louis, Mo., has granted diplomas to:

Mamie Sutter, of St. Louis; Edith Coffey, of Stonington, Ill.; Lucy Engle, of Louisiana, Mo.; Emmeline Padgett, of Okawville, Ill.; Helen Landray, of Newark, N. J.; and Lillian Sharpe, of Eureka Springs, Ark.

The Presbyterian Hospital Training School, of Philadelphia, has graduated the following:

Maude A. Frantz, of Lancaster; Bertha H. Guilfoyle, of Philadelphia; Emma L. Lott, of Bridgeton; Carrie M. Marks, of Littlestown, Pa.; Estelle Pratt, of Cobourg, Ont.; Mabel E. Reazor, of Sayre, Pa.; Carrie Robeson, of Wilmington; Mary Schwer, of Jersey Shore, Pa.; Clara A. Smitheman, of Philadelphia; Alice M. Spang, of Reading; Beatrice M. Tyack, of Hightstown, N. J.

The Philadelphia Lying-in Charity and Nurse School graduates:

Leonore Albert, of Stroudsburg; Ida Bent, of Nova Scotia; Anna Booz, of Holmesburg; Esther Burt, of London, Eng.; Florence Cloud, of Colwyn; Grace Franklin, of Town Hill; Florence Greenwood, of Chester; Amanda Guy, of Yardley; Grace L. Irvine, of St. John, N. B.; Margaret M. Jones, of Phoenixville; Teresa Layou, of Forty Fort; Caroline M. Lee, of Atlantic City; Katherine Lenahan, of Germantown; Clara Lynn, of Yardley; Helen McCarthy and Katherine Neiswander, of Shenandoah; Carrie Rall and Jennie L. Sine, of Williamsport; Anna Thomas, of Moorestown; Elizabeth Waldron, of Utica, N. Y.; Barbara Willis, of Honesdale; Minnie Van Gilder, of Philadelphia.

The following nurses have graduated from the Medico-Chirurgical Hospital, of Philadelphia:

Kathryn L. Herr, Anna Loretto Hart, Adelaide I. Sprenger, Minnie E. Worrest, Flavilla M. Warner, Ida May Kurtz, Mary Augusta Greene, Maude B. Seaman, Clara Louise Ruth, Marjorie D. Clement, Mary Madalen Quinn, Della May Fletcher, Alma F. Getz, Emma R. Camper, Eva Cecil Cunningham, Clara Viola Leonard, Rachel M. Rambo, Alice M. Conard, Margaret E. Leber, and Nellie Lucile Fox. A special diploma was also awarded to Miss Emma G. Van Ness, who has completed a postgraduate course along special lines.

The following have graduated from University Hospital, Baltimore:

Ruth Rozalia Kuhn, Dora Iola Brosenne, Charlotta Lee Schaefer, Leila Griffith Owens, Lila Holmes Trenholm, Millicent Geare, of Maryland; Nellie Rives Ferrell, Letty Terry Jones, Eleanor Virginia Gilder, of Virginia; Nellie Harrison Hilliard, of North Carolina; Elizabeth Richards Bayley, of Pennsylvania; Margaret Brand Cowling, of Massachusetts.

The graduates of the Mayfield Sanitarium Nurses' Training School, St. Louis, are:

Misses Bertha E. Butler, of Evansville, Ind.; M. Ette Kincheloe, of Sidney, Ill.; Nora Homan, of Lamar, Mo.; Pearl I. Elliott, of Gower, Mo.; May Sterl, of Mt. Carmel, Ill.; Marion R. Tyzzer, of St. Louis; Ruth Russell, of Geneva, Neb.; E. H. Osborn, of St. Louis; Maria Louise Nivin, of Bunker Hill, Ill.

Graduation exercises for the training school of nurses of the Niagara Falls Memorial Hospital were held May 8th, and nine young women were given diplomas. They were:

Jean Mingay, Edythe Grace Shape, Helena Morrison, Mabel Stewart, Bella R. Stewart, Lily Knox, Nell Berry, Anna Strayne, and Nellie E. Simons.

Pith of Current Literature

PRESSE MEDICALE.

May 3, 1905.

1. Anæsthesia with Atropine, Morphine, and Chloroform (Method of Dastre and Morak). By TH. TUFFIER.
2. The Causes Which Bring About Miscarriage.

By E. BONNAIRE.

1. **Anæsthesia with Atropine, Morphine, and Chloroform.**—Tuffier is very favorably impressed by his experience in the administration subcutaneously of morphine and atropine a few minutes before giving chloroform. He is accustomed to inject one and a half to two centigrammes of morphine with one half milligramme of atropine subcutaneously and fifteen minutes later to proceed with the chloroform. Although only a small quantity of the latter drug is employed complete and profound anæsthesia is quickly obtained with no stage of excitement.

2. **The Causes Which Bring About Miscarriage.**—Bonnaire says that in most cases the actual cause of a miscarriage escapes observation. Commonly it is attributed to a vague traumatism, often to a fall on the stairs. He reduces the pathogeny of abortion to this formula; the ovum plays the part of a foreign body and is expelled. first, when it is itself changed by death, separation, or other cause, though contained in a normal uterus; second, when, whether healthy or not, it is contained in an intolerant uterus. The causes which may produce these conditions are changes in the ovum, pathological conditions in the uterus, faults in the general health of the woman, and vitiation of the spermatozoa. He finds that traumatism varies greatly in its power to interrupt pregnancy according to its intensity, the seat of its application, its severity and repetition, the age of the fœtus, and the degree of the idiosyncratic irritability of the uterus.

May 6, 1905.

1. Cerebrospinal Meningitis Due to Meningococci. Some New Points in Their History. By CHAUFFARD.
2. The Present Epidemic of Cerebrospinal Meningitis in America. By JARVIS.

1. **Cerebrospinal Meningitis.**—Chauffard describes a case which came under his observation. It is not a new disease, but one that can be recognized in the descriptions of certain epidemics of the fifteenth and sixteenth centuries. From the observations of other writers he finds that the meningococci enter the meninges from the nasal fossa by way of the lymphatics, and agreeing with them he advocates treatment by hot baths and lumbar puncture. It is difficult to recognize his new points in the history of meningococci unless they are contained in the quotations from the recent work of Pinto, according to whom he says there is a great resemblance between the gonococcus and the meningococcus as each has the same form, size, diplococcal arrangement, and intracellular position, have the same color reactions,

and are both decolorized by Gram's method. Even their cultures are said to resemble each other and they produce similar toxins; still they can be differentiated.

2. **Epidemic of Cerebrospinal Meningitis in America.**—Jarvis traces the course of the late epidemic in the United States and then gives a short history of previous epidemics, beginning with the disease in 1806. The labors of American bacteriologists and the methods of treatment which have been employed are briefly mentioned.

May 10, 1905.

1. The King's Evil. The Royal Touch for Scrofula in France and England. By LANDOUZY.
2. The Antituberculosis Dispensary of Lyons. By COURMONT.

1. **The King's Evil.**—Landouzy gives an interesting account of the ancient custom of touching to cure scrofula as it was practised in England and France. The common belief was that kings were possessed by Divine grace of the power of curing this disease in this manner, which they did with considerable ceremony, the patients afterward receiving alms. The paper is illustrated by several curious old cuts representing the ceremony as it was performed. In England the custom seems to have originated about the time of Edward the Confessor, and to have finally passed away at the accession of the Georges.

2. **The Antituberculosis Dispensary of Lyons.**—Courmont gives a description of the building and of the work carried on therein. It is a new section of the bacteriological institute of Lyons founded in 1899.

May 13, 1905.

1. The New General Hospital at Calcutta. By JEANSELME.
2. Technics of Palatoplasty. By BROCA.

1. **Hospital at Calcutta.**—Jeanselme gives a description of this hospital with plans of the different floors and of the pavilions for contagious diseases.

2. **Technics of Palatoplasty.**—Broca says truly that this is an operation which demands special skill and experience. The patient is anesthetized and placed on the table, so the head will hang over the edge. The tongue is then drawn out so as to expose the palate with its fissure. The margins of the fissure are freshened by the removal of a strip of mucous membrane. After the bleeding is checked an incision is begun behind the last molar tooth, carried forward, and passed a good centimetre beyond the anterior angle of the fissure. When the cleft is large the incision is prolonged backward between the soft palate and the cheek, so as to obtain a greater mobility. With an ordinary bistoury, guided by the index finger of the left hand, the incision thus marked out is deepened to the bone and the soft parts are then elevated by means of a Trelat's raspator, a manœuvre, the details of which the writer gives

with great care, until they are thoroughly mobilized. Bleeding is then checked by means of pressure with the fingers against the bone. After proper mobilization has been accomplished, the flap on each side is seized with forceps, and the two flaps are brought together and sutured along the median line.

SEMAINE MEDICALE.

May 3, 1905.

A Fifth Eruptive Disease, Epidemic Megalerythema,

By L. CHEINISSE.

Epidemic Megalerythema.—Cheinisse has collated the literature in regard to a variety of measles which has been described under the various designations of acute infectious erythema, morbilliform infectious erythema, megalerythema epidemicum, erythema simplex marginatum, etc., but has added little if anything to our knowledge regarding the disease.

May 10, 1905.

Mechanical Effects of Hypertension of the Cardioaortic System,

By VAQUEZ.

Hypertension of the Cardioaortic System.—Vaquez speaks first of the accentuation of the second aortic sound and then considers hypertrophy of the left ventricle, dilatation of the aorta, rupture of the heart or of the aorta, dilatation of the heart, aortic insufficiency, and mitral insufficiency, all of which may be the results of hypertension.

LYON MEDICAL.

May 7, 1905..

1. Congenital Stenosis of the Pylorus in an Infant,

By AUDRY and SARVONNAT.

2. Indications for the Surgical Treatment of Biliary Lithiasis,

By COTTE.

1. Congenital Stenosis of the Pylorus in an Infant.—Audry and Sarvonnat report the case of a child, 3 days old, brought to them on account of continual vomiting. The vomiting persisted and the child died four days later. On autopsy the only lesion found was a stenosis of the pylorus. The stomach was not dilated and there was only a little hypertrophy of its walls except in the region of the pylorus. The pylorus was represented by a very hard ring of normal color with a very small orifice. When the stomach was filled with water the liquid filtered through slowly, drop by drop, into the duodenum.

2. Surgical Treatment of Biliary Lithiasis.—

Cotte reviews briefly the indications given by Kehr and the method of operation employed by that surgeon. His advice is to wait in the simple forms of cholecystitis, but to operate as quickly as possible in the purulent and gangrenous forms. Hydrops of the gall bladder does not justify intervention, but empyema of that viscus, as well as pericholecystic suppuration, demands it. Frequent hepatic colic without icterus and without passage of calculi necessitates operation on account of the general health of the patient, while attacks accompanied by icterus and by the passage of calculi should be treated medically. He

advises operation when the morphine habit has resulted from very frequent attacks. Acute occlusion of the duct should be treated medically, but little time should be lost in the medical treatment of chronic occlusion. In cases of chronic icterus of other origin than biliary lithiasis operation is of advantage, as it gives the opportunity to determine whether the biliary retention has been caused by chronic pancreatitis, cancer of the pancreas, or some other condition. Cancer of the gall bladder frequently is caused by lithiasis and an early operation is indicated. Perihepatic and pericholecystic adhesions often cause violent pain which may be relieved by surgical intervention. Such complications as suppurative inflammation of the bile ducts, abscess of the liver, pyloric or duodenal stenosis, obstruction of the intestines by calculi also imperatively demand intervention. It is important to consider the general health of the patient before deciding upon an operation. No operation should be performed on a patient suffering from diabetes, arteriosclerosis, or organic disease of the heart, or other organs, unless it is one of urgency.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

March 12, 1905.

1. On Diminution of Resistance to Infections as a Cause of Death in Frogs, After the Extirpation of the Thymus Gland,

By G. A. PARI.

2. A Case of Suture of the Heart, with Recovery,

By ETTORE GIULIANO.

3. Conservative Surgery,

By MARIANO MARADEI.

4. On the Therapeutical Value of the Antibacillary Serum,

By GIUSEPPE RICCI.

1. On the Diminished Resistance to Infection After Thymectomy.—Pari has taken up the work initiated by Abelous and Ballard, who removed the thymus gland in frogs, and who obtained a series of phenomena in these animals which pointed to the activity of toxic substances circulating in their blood. The results obtained by the two French observers just named were contradicted by Ver Eecke, who showed, three years later, that the thymus gland might be removed with impunity in debilitated frogs, but that after the operation these animals exhibited a lowered resistance to infection. Pari repeated these experiments, and found that the majority of the frogs in which the thymus gland had been removed recovered completely. A small number died after an illness characterized by discoloration and ulceration of the skin, gastroenteritis, and changes in the various organs, which exhaled a putrefactive odor even during life. This illness the author found to be due to the presence of a certain bacillus which stained with Ziehl, and was not resistant to acids. These bacilli, injected into other frogs with extirpated thymus, produced a fatal infection. The bacillus resembled that of the gangrenous septicæmia of frogs described by Legrain. As the author had for years operated on frogs, and has never seen a case of gangrenous septicæmia among them, he concludes that the extirpation of the thymus diminishes the resistance of these animals to infection.

2. Suture of the Heart Followed by Recovery.—Giuliano, of Catania, reports a case of stab wound of the heart, in which suture was followed by recovery. The patient was a youth of eighteen years, who had been wounded in the thigh, and in the chest at the third intercostal space in the mammary line. The surgeon saw him half an hour after the accident, and he was then in a state of collapse. On auscultation, a peculiar churning noise was heard, and a wound of the heart was suspected. No time was lost in thinking of a method of operating, and a U shaped incision, open externally, was made through the skin, down to the ribs, the cartilages of the third and fourth being cut at about a centimetre away from the sternum. The flap thus made was held aside by an assistant, and the heart with its pericardial pouch was brought forward with the hand. The pericardial wound was found, and was enlarged by means of straight forceps. A wound was then found in the free margin of the right auricle, which involved the coronary artery. The latter could not be ligated, but sutures of silk were introduced during diastole (as during systole the heart escaped into the chest). The pleural and pericardial regions about the wound were then hastily cleansed, and the wound closed, allowing a drain of gauze to pass down to the pericardial wound. The patient slowly rallied and made an uneventful recovery, except that he developed a pleurisy which made him suffer a great deal, but ultimately to get well. The sutures were removed on the eighth day, while the drain was dispensed with as early as on the second day.

March 19, 1905.

1. On the So Called N Rays, By VITTORIO MARAGLIANO.
2. Contribution to the Study of Arterial Tension in Man in Diseased Conditions, By ARISTIDE TORCHIO.
3. Infectious Jaundice, Acute Yellow Atrophy of the Liver, and Biliary Hypertrophic Cirrhosis,

By GINO ZANARDINI.

1. The So Called N Rays.—Maragliano declares his belief in the existence of the n rays. In France opinions of scientists are now equally divided, some answering this question in the affirmative and others in the negative. In Germany the majority of observers now deny the existence of the n rays, and this is the more remarkable because Blondlot is such an eminent physicist (Blondlot, of Nancy, in March, 1903, discovered the n rays while trying to polarize the x rays. He found that while giving off Röntgen rays the tube also radiates another sort of energy which renders a small electric spark more luminous). Maragliano found that his training in x ray work had given him exceptional acuteness of vision, which enabled him to see the effects of the n rays on Blondlot's phosphorescent screens, although he admits that he could not get all the results which have been claimed by the Nancy school, such as seeing the outlines of the heart, and outlining the course of a nerve. In order to see the effects of the n rays, one must have a sharp vision and a great deal of patience, but they exist, in spite of the denials of many authors. The proof will come when mathematicians will give us a demonstration of the existence of these rays.

March 26, 1905.

1. The Interpretation of Some Systolic Murmurs of the Aorta, By G. CURLO.
2. Addison's Disease and Pediculosis, By UGO BENENATI.
3. Abscess of the Right Kidney, Due to Echinococcus, By GIUSEPPE SPADICCI.
4. New Researches on the Morphology of the Elements of the Blood, By TRILO DI TUNISI.
5. The Surgical Treatment of Bright's Disease, By LUIGI CESARI.
6. A Case of Spontaneous Subluxation of the Crystalline Lens, By PIETRO PORRU.

2. Addison's Disease and the Pigmentation Due to Lice.—Curlo warns against an error of diagnosis between Addison's disease and the pigmentation of the skin produced by pediculosis. Phthiriasis is an ancient disease, spoken of by Aristotle, Celsus, and Galen, but even expert clinicians have at times mistaken the peculiar pigmentation produced by lice for the bronzing of Addison's disease. In the latter the parts of the skin normally richest in pigment are usually attacked first, and show brown plaques, which do not appear usually in pediculosis. The mucosæ may show pigmentation in both maladies. According to Briguet the pediculus not only sucks the blood of its victim, but inoculates him with a special poison contained in its saliva, which produces the blue macules. In fact, this author found experimentally that the insects contain a poisonous substance, and succeeded by inoculating this substance in producing blue macules. It is the central portion of the insect which contains the salivary glands that contains this poison. This origin of the blue macules explains their occurrence in the mucosa of the mouth. A differential point between Addison's disease and the pigmentation due to lice is that the debility accompanying the latter improves with proper care and rest, while in the former it is progressively fatal. History records the death of Herod Antiochus, Philip II, etc., as due to pediculosis, but probably an autopsy would have cleared up the true cause of death which undoubtedly was not due to pediculi. The case of Ferdinand II, whose death is not so far removed from our times, was probably one of pyæmia. Hundreds of lice were removed from the bed of this unfortunate king every two hours. Some authors, however, assert that Ferdinand was suffering from cancer, others that he had been poisoned, and still others that he had syphilis. Very probably the debilitated state of his system favored the enormous fecundity of the lice and favored the spread of infection. It is said (Leuwenthal) that a single louse gives birth to a progeny of 18,000 within two months.

3. Abscess of the Kidney Due to Echinococcus.—Spadicii reports a case of renal abscess in the right kidney in a man, aged 37 years, in which the infection with echinococci was demonstrated. Pus and echinococci were found in the urine during an attack of colic. The swelling occupied the entire right superior quadrant of the abdomen, and the colon could be made out in front of it, owing to the presence of tympany. The patient made a good recovery after transperi-

toneal nephrotomy. The chief difficulty in making a diagnosis in such cases lies in the fact that the disease is so insidious. The patient had been suffering from vague pains and slight fever for a long time.

5. **Surgical Treatment of Nephritis.**—Cesari reviews the history of this subject, and summarizes the various statistics published to date. He concludes that the success thus far obtained is encouraging to those who believe that a surgical operation is necessary in the cure of medical diseases of the kidney. The following is the summary of his statistics: In acute nephritis, Pousson had a mortality of 16.21 per cent.; Patel and Cavaillon, of 21 per cent.; Klink, 75 per cent. of cures and 12 per cent. mortality. In cases of chronic parenchymatous nephritis, Klink had 56 per cent. of cures and 28 per cent. mortality; Edebohls, 33.5 per cent. mortality and 25 per cent. cures. In interstitial nephritis Klink had 68 per cent. cures and 11 per cent. mortality, while Edebohls had 38.7 per cent. mortality and 32.36 per cent. cures. In chronic diffuse nephritis Pousson had a mortality of 20.28 per cent.; Patel and Cavaillon, 15.5 per cent. mortality; Klink, 21 per cent. cures and 29 per cent. mortality; Edebohls, 24 per cent. mortality and 12 per cent. of cures. It should be noted that Edebohls with decapsulation alone had only 9.7 per cent. mortality. Good results were obtained by Israel with nephrotomy in simple and hæmaturic nephralgias. In a large collection of cases Guiteras found 16 per cent. cures and 33 per cent. mortality.

RIFORMA MEDICA.

April 22, 1905.

1. A Case of Chronic Indurative Pancreatitis, with Hour Glass Stomach. Gastroplasty. Recovery,
By FRANCESCO PURPURA.
2. Experimental Studies on Tuberculous Endocarditis,
By BINDO DEVECHI.
3. Contribution to the Treatment of Intestinal Obstruction (*To be continued*).

By FERDINANDO GANGITANO.

1. **Hour Glass Contraction of Stomach, Due to Pancreatitis.**—Purpura reports a case of indurative pancreatitis in a woman, aged 45 years, in whom gastroplasty was performed with excellent results, for an hour glass contraction of the stomach. The patient was very much emaciated, and suffered from pains in the abdomen, eructation of gas after eating, vomiting of a large amount of undigested food, etc. A rounded, smooth tumor could be felt sometimes between the umbilical and right parasternal lines, which gradually vanished towards the left side. This tumor was tympanitic on percussion, like the rest of the stomach. A tumor of the pylorus was believed to be present and, as the patient was getting worse, an operation was decided upon. The condition mentioned in the title was found, and gastroplasty, according to the Heinake-Mikulicz method, was performed. The pancreas was found to have a granular surface and a very dense consistence, and there was no glucose in the urine as occurs in the first stages of pancreatic inflammation. Therefore, the pancreatitis was chronic

and indurative in character. It evidently had produced a perigastritis, and thus a constriction of the stomach.

2. **Experimental Tuberculous Endocarditis.**—DeVecchi, of Martinotti's clinic, experimented upon the mode of origin of tuberculous endocarditis. He injected an emulsion of tubercle bacilli into the marginal vein of the ear of rabbits after he had injured the endocardium of these animals by means of probes passed into the carotids. In other animals, the culture of tubercle bacilli was mixed with finely powdered charcoal. The first series of animals were killed about twenty days after inoculation. The heart in two of these animals showed abundant valvular lesions, while in the third there were no cardiac changes. The lesions in the former animals consisted of partial detachment of the aortic valves, and of a deposit of grayish white tubercles. In five other rabbits, killed from 19 to 22 days after the inoculation of tuberculous cultures, mixed with powdered charcoal, three showed no lesions in the endocardium, while the other two showed well developed tuberculous endocarditis. All of these animals showed advanced lesions in the lungs, spleen, etc. In one rabbit the lesions affected the tricuspid and in another the mitral. This series of experiments confirms the results obtained by Michaelis and Blum, who found that traumatism and tuberculous septicæmia can produce a tuberculous endocarditis. In a second series of experiments the author tried to come more closely to the conditions obtaining in human beings. He inoculated the anterior chambers of the eyes of seven rabbits with a watery emulsion of tubercle bacilli. When the tubercles in the iris were well advanced, he produced a simple aseptic traumatism in the endocardium (by probing the carotid or injecting charcoal into the veins) and killed the animals after a certain number of days. In three rabbits thus treated, which were killed four, seven, and eleven days, respectively, after the traumatism, he found the following conditions: In the first rabbit no lesions were at first found except a swelling of the lymphatic glands, some of which were cheesy. A superficial lesion, due to the sound, was found at the aortic valves. In the second rabbit a miliary tuberculosis of the lung and a tuberculous endocarditis were noted. In the third rabbit the tuberculous process involved the lung, the pleura, and the pericardium, but not the endocardium. The author thinks that many of the cases of experimental tuberculous endocarditis in which no bacilli can be found are in reality simple endocarditides, due to toxic influences, and that the same forms occur in tuberculosis in human beings. This can only be demonstrated, however, by injecting tuberculous toxins into animals predisposed by previous or subsequent traumatism of the endocardium.

ROUSSKY VRATCH.

April 9, 1905.

1. On the Bactericidal Principles of the Fibrin of Human Blood,
By N. O. SCHUMOVA-ZIBER.
2. A Case of Primary Endothelioma of the Pleura,
By S. M. POGGENFOL.

3. Injury of the Lower Laryngeal Nerve.
By P. K. BROSHNIOVSKI.
4. Bimanual Dilatation of the Cervix During Labor,
By S. G. KRASHEVSKI.
5. Epidemiology and Parasitology of Malaria in the Native
Quarter of Tashkent, and in the Province of Tash-
kent, By I. S. NAZAROFF and A. L. SCHWARTZ.

1. Influence of Fibrin on Bacterial Growth.—

Schumova-Ziber reports the results of a large number of experiments undertaken with a view of determining whether the fibrin of human blood possesses bactericidal properties. She inoculated a large variety of resistant and non-resistant germs into fibrin or into media prepared with fibrin, and in all cases obtained negative results. She then tried the influence of extracts of fibrin prepared by allowing it to stand in water for some time. She found that the less resistant germs were very promptly affected by these solutions, while the more resistant ones, such as the typhoid bacillus, etc., required a longer contact with the fibrin extracts. The longer fibrin was allowed to remain in water the greater was the proportion of bactericidal bodies which the filtrate contained. Fibrin extracts, thus prepared, were able to neutralize the virulent properties of a large number of germs, and even to affect the vitality of such germs as the cholera bacillus, the typhoid bacillus, and the diphtheria bacillus.

2. A Case of Primary Endothelioma of the Pleura.—The clinical peculiarities of the case reported by Poggenpol were as follows: A very short duration of the disease, which lasted only two months from the appearance of the first subjective symptoms until the patient's death; the absence of cells derived from the tumor in the hæmorrhagic exudate in the pleura; the absence of enlarged lymphatic glands, and the presence of sharp and persistent neuralgic pains in the brachial plexus.

3. Wound of the Lower Laryngeal Nerve.—In the case reported by Broshniowski, a soldier was stabbed in the neck with a long bladed pen-knife, the end of the knife breaking and remaining in the wound. At the autopsy the end of this knife was found imbedded in the sixth and seventh cervical vertebrae, and penetrating into the spinal cord. When the patient was placed on the operating table, his head had to be turned to the left, and this so pressed on the end of the knife that one of the spinal arteries was severed, and a hæmorrhage into the spinal cord followed. The patient died of asphyxia. He was brought to the hospital two days after the accident with the symptoms of paralysis of the recurrent laryngeal nerve, due to the fact that the nerve had become compressed in the cicatrix.

4. Bimanual Dilatation of the Cervix in Labor.—Krashevski recommends the following method for the bimanual dilatation of the cervix during labor, when the narrow and unyielding neck of the uterus prevents prompt delivery: The index finger of the right hand is passed into the cervix, and is hooked under the upper lip thereof, the patient lying on her back and the operator standing at her right side. Then, if only a little

over one finger can be introduced into the os, the index finger of the left hand is passed along that of the right hand until it reaches the cervix, when it is hooked over the posterior lip, with the palmar surface downward. Then traction is made slowly. It is preferable to do this during the pains, as the manœuvre is painful. After from five to eight such stretchings, each of which should take about a minute and a half, the cervix will begin to yield perceptibly. The process should be continued until the womb admits about four fingers, when the whole hand can usually be introduced, or the forceps applied. In fourteen cases in which the author used this method, he has seen neither hæmorrhage nor tears of the cervix.

April 16, 1905.

1. Acute Infectious Diseases in the Elementary Public Schools of St. Petersburg, and the Methods of Prevention,
By W. G. MATVEVEVA.
2. Folding Cot and Stretcher Combined,
By I. M. FEDOROVITCH-VEDER.
3. Hernia of the Tympanic Cavity, By A. S. DE LENSS.

1. Acute Infectious Diseases in St. Petersburg Schools.—Matveyeva analyzes the reports of the school physicians of St. Petersburg for the past four years. A special staff of physicians numbering 37 men is employed for the sanitary supervision of the schools, each of these men having supervision over from 15 to 17 classes, which he visits not less than twice a week. Large schools containing from 12 to 20 classes are visited daily. There are a number of small public schools containing only one class each. In all, there were 330 schools in St. Petersburg in 1904, in which there were 26,269 pupils. In the school year 1903, 1904, 3,126 children were found to have contagious diseases. The chief function of medical inspection is to remove children from schools as soon as possible when a contagious disease breaks out and to prevent their return before they have fully recovered. Frequent inspections are necessary because parents often send children to school with contagious diseases, trying to conceal the true condition. The sanitary inspectors furnish each school with printed cards bearing the names of the children suffering from contagious diseases in their districts. The periods of isolation after each disease are posted in each school, and the teachers must follow these rules. When an inspector finds a case of contagious disease in a school he at once excludes the child, and if he suspects diphtheria he takes a culture, which is sent to the municipal laboratory. A disinfection is then ordered in the school, and the school is sometimes closed for three days, during which it is thoroughly ventilated. If several cases of the same disease develop in one school, the institution is closed during the number of days corresponding to the period of incubation of this disease. If the inspector so orders, the school is not closed after disinfection, but is carefully watched, visited daily, the children inspected, and the sick pupils visited at home. The other schools which are committed to his care the inspector entrusts in such an exceptional case to an assistant furnished in emergencies by the board of education.

Disinfection in the schools is ordered chiefly in the case of diphtheria and scarlet fever. In other diseases the furniture, floors, etc., are simply washed with a disinfectant solution, the class room is well heated, and thoroughly ventilated. All this is done after the school session, without closing the school. During the past year the children have been furnished with slippers which they wear at school only, in place of their shoes, which they remove with their outer clothing. Thus the dust of the street is not brought into the school and the air of the class room is not contaminated in that manner.

3. **Hernia of the Ear Drum.**—De Lenss thinks that some of the apparent polyps that are met with in chronic otitis media are formed in this way, involving such an increase of pressure from within that there is a protrusion of a portion of the mucous membrane through a perforation in the drum. This was the case in the instance recorded here. After an otitis which produced a perforation in the lower posterior quadrant, the inflammation spread to the antrum, and to a large cell in the mastoid. The increased inflammatory exudate produced a great deal of pressure upon the walls of the middle ear and neighboring cavities, and the mucous membrane, having filled all the available space in the process of swelling, began to protrude through the perforation, thus arresting the discharge from the ear. A mastoid operation was performed, demonstrating that this theory had been correct, and that the supposed polyp had been only a protrusion of a swollen mucosa from the middle ear.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 27, 1905.

1. Observations on Infant Feeding, with Report of Cases, By FRANK SPOONER CHURCHILL
2. Economics of Medical Organization, By J. MADISON TAYLOR
3. The Development of Fibroids of the Uterus After Ablation of the Appendages, By J. WESLEY BOVÉE
4. A Case of Typhoid Perforation of the Intestine with Surgical Treatment and Recovery, By THOMAS W. HUNTINGTON and GEORGE B. EBRIGHT.
5. Stenosis of Pylorus in Infancy, an Analysis of One Hundred and Fifteen Cases (*To be continued*), By CHARLES L. SCUDDER.
6. Ankylosis. Arthroplasty—Clinical and Experimental (*To be continued*), By JOHN B. MURPHY.
7. Tolerance to Nitroglycerin, By D. D. STEWART.
8. Peritoneal Gauze Drainage. An Easy Method of Its Use Through the Vagina, After Abdominal Section, By W. D. HAGGARD.
9. Immunity. Chapter XVI (*To be continued*).

1. **Infant Feeding.**—Churchill asserts that cases of difficult feeding in infancy are cases of (a) fat indigestion, (b) sugar indigestion, (c) proteid indigestion. Each one of these varieties may exist alone or in combination with the others. The most frequent form is proteid indigestion, but cases of fat indigestion are also common. Each individual infant must be a law unto himself. Babies cannot be fed by rule of thumb. The form of indigestion present, if possible, must be

determined and appropriate treatment applied. The treatment is almost exclusively dietary. The fats and sugar can be regulated by varying the amounts of cream and sugar. The composition of cow proteid, high caseinogen, and low lactalbumin, must be remembered in the management of proteid cases. The caseinogen must often be cut to a low point or even eliminated altogether; lactalbumin must be retained in the food; this twofold object is attained by feeding whey. Increase in quality and quantity of the food must be made gradually. It is desirable that many artificially fed babies should be carefully studied, the symptoms of different forms of indigestion noted, and the data published.

3. **Uterine Fibroids.**—Bovée asserts that, in the absence of a better explanation, he is disposed to accept the theory that fibroid tumors of the uterus, which originate after ablation of the appendages, owe their origin to an obliterating endarteritis. The proof of this is not very satisfactory, but for the present no better theory exists.

7. **Nitroglycerin.**—Stewart asserts that a tolerance for nitroglycerin is easily acquired. He once had a patient who took as much as 20 minims of pure nitroglycerin a day without inconvenience. Lately the author has not been using as large doses of the drug as he formerly did, and believes that it is rarely necessary to go beyond ten drops of a one per cent. solution a day.

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 25, 1905.

1. A Consideration of the Pelvic Articulations from an Anatomical, Pathological, and Clinical Standpoint, By JOEL E. GOLDTHWAIT and ROBERT B. OSGOOD.
2. A Case of Foreign Body in the Œsophagus, By A. COOLIDGE, JR.
3. Conservative Operation on the Ovaries and Tubes: Analysis of Ninety Cases, By R. G. WADSWORTH.

1. **The Pelvic Articulations.**—Goldthwait and Osgood have made, and now report a most elaborate study of the articulations of the pelvic bones. The general subject of relaxation of these articulations was first forcibly brought to Goldthwait's attention by seeing a patient who suffered great disability, due to marked relaxation of the pelvic articulations following pregnancy. Since that time the authors have had this condition in mind, have studied its anatomy and pathology, and have had the opportunity of observing over one hundred patients suffering from symptoms referable to these articulations. As the cases are studied they at once divide themselves into groups; the first including the cases in which there is definite relaxation associated with pregnancy, representing an exaggeration of a normal physiological condition; the second the cases in which the relaxation is associated with menstruation, apparently representing also a physiological condition, apart from any pathological change with which we are at present familiar; and the third, the cases in which the lesion is due to trauma, general weakness, or some definitely known pathological process. The cases in the first two groups are

naturally all women. In the last group sex and age do not influence the condition. It is not possible to follow the authors in their minute description of the anatomy, pathology, symptomatology, and treatment of the condition. Very briefly, and inaccurately, it may be said that many cases of backache, especially the kinds that come on at night during muscular relaxation, are due to this condition and that treatment consists essentially in fixing the pelvic bones, particularly the sacrum, by means of a special harness or plaster dressing. A number of illustrative cases will appear in the next issue.

2. **Foreign Body in the Œsophagus.**—Coolidge reports the following case: A woman swallowed an open safety pin. It lodged in the œsophagus, point up. The point became imbedded in the tissues and efforts at extraction, at the first attempt, had to be abandoned. The author had a metal ring, of suitable diameter welded at a right angle to a stiff wire. A Killian tube was passed into the œsophagus and through it the ring which was carried down below the pin. A Killian forceps grasped the pin by its point, pushed it down through the ring and so closed it. Extraction was then accomplished without further trouble.

3. **Conservative Operations.**—Wadsworth's ninety cases were operated in by various men at the Free Hospital for Women, Boston. He summarizes the results thus: "Considering the cases together without regard to the extent or multiplicity of operation, partial or complete symptomatic relief has been obtained in 86.5 per cent. Multiple operations give less good results as a whole than operations on the appendages alone, there being half again as large a percentage of failures in the former class. When both ovaries are cystic and part of one or both are saved, the chance of secondary operation for recurrence of cystic disease is nearly three times as great as in those cases where one normal ovary is present. Subsequent pregnancy has occurred in 26.5 per cent. In estimating the likelihood of this occurrence in any given case, it may be stated that the fact that the patient has borne children before operation nearly triples the chance of subsequent pregnancy."

MEDICAL NEWS.

May 27, 1905.

1. Clinical Features and Treatment of Epidemic Cerebrospinal Meningitis, By FRANCIS HUBER.
2. Infantile Tuberculosis: Its Portal of Entry, Topography, and Clinical Manifestations, By ROWLAND GODFREY FREEMAN.
3. Two Unusual Cases of Gastric Cancer, By WILLIAM FITCH CHENEY.
4. The Present Clinical and Bacteriological Status of Vincent's Angina, By WILLIAM N. BERKELEY.
5. On the Widal Reaction, By E. ANDRADE.

1. **Meningitis.**—Huber analyzes the clinical symptoms of the one hundred and twelve cases of epidemic cerebrospinal meningitis that were treated at the Gouverneur Hospital in 1904. To

give a composite picture of the symptomatology of the disease, as it was observed by the author, would result in a description varying little from that to be found in the ordinary text book; a manifestly useless task. The mortality was between sixty-five and seventy per cent. The treatment was essentially symptomatic, and no new specific methods are advocated.

2. **Infantile Tuberculosis.**—Freeman's paper is based on one hundred and fifty-eight autopsies of tuberculous patients performed at various hospitals. The author's summary of his paper, condensed, follows: "Tuberculosis in infancy arises most often from an infection through either the respiratory or alimentary tract; the comparative frequency of these two modes of infection has not yet been definitely determined. The tuberculosis of early life is most common during the first year, when children are on an exclusive milk diet. At this period, owing to the structure of the intestinal wall, bacteria can probably pass through it. Experiments on animals show that inhalation tuberculosis causes usually lesions of the bronchial lymph nodes and lungs alone, while whatever the portal of entry these structures become very early involved. Inoculation experiments prove that the mesenteric lymph nodes may be tuberculous without the presence of any gross lesions in them. Twenty-six and one half per cent. of the 158 autopsies show intestinal or mesenteric lesion on gross examination. The tuberculosis of infancy is usually an acute, widely disseminated, general disease, with moderate temperature and few symptoms and physical signs unless the invasion of the meninges gives rise to symptoms. Tuberculosis of the cervical lymph nodes and of the joints is rarely seen under the third year. The power to overcome a tuberculous infection that has spread from the lymphatics and invaded the organs apparently does not exist in infancy. While the autopsies show a very wide distribution of the tuberculous disease, they probably indicate a much less general distribution than really existed, for the data are based often on hurried gross examination without microscopic confirmation."

3. **Gastric Cancer.**—Cheney's two cases, very briefly summarized, are: (1) No symptoms referable to the stomach. Failing health for some months. After a time the liver was found to be greatly enlarged. At first the case was thought to be one of syphilis of the liver. The patient gradually grew worse and an exploratory incision was resorted to. Patient died shortly afterwards. Autopsy: Primary carcinoma of the stomach with secondary growth in liver. (2) No serious symptoms referable to the stomach. Failing health for some months. A mass in the region of the spleen which was at first thought to be an enlargement of that organ. Practically normal temperature. Anæmia and general weakness progressive, in spite of treatment. Aspiration of splenic tumor negative. Exploratory incision revealed a large abscess which was drained. Patient eventually died. Autopsy revealed perforation of the stomach, due to carcinoma and a peri-

gastric abscess consequent on the perforation. There were many metastatic carcinomatous foci.

4. **Vincent's Angina.**—Berkeley holds that Vincent's angina occurs more frequently than is generally supposed. It is most frequently confounded with syphilis and diphtheria. A positive diagnosis is easily made by staining slides with carbol fuchsin. The author has seen twenty-nine cases of the affection and asserts that when one is once familiar with its clinical aspect a fairly accurate diagnosis may be reached without the microscope. The author reviews the history, symptomatology, pathology, bacteriology, and treatment of the disease.

5. **Widal Reaction.**—Andrade, after making three hundred tests of the Widal reaction with both living and dead cultures, and using dried blood, reaches the following conclusions: (1) Living and dead cultures are about equally sensitive to the action of the agglutinins of typhoid fever, though in dead culture the reaction may require a longer time to take effect, and it is therefore necessary to keep the specimen under observation for two hours. In some cases the reaction is quicker with the dead than with the living cultures. (2) The dried blood method is equally effective with dead as with living cultures. (3) The reaction, when it takes place, is more characteristic with dead cultures than with living cultures. There are no pseudoreactions with dead cultures. (4) Dead cultures do not seem to lose their sensibility to the agglutinins of typhoid fever for a long time. He has now in use a dead culture which was prepared six months ago, and it reacts just as typically as when first used.

MEDICAL RECORD.

May 27, 1905.

1. Intermittent Claudication and Allied Syndromes, Due to Arteriosclerosis of the Extremities,
By J. RAMSAY HUNT.
2. The Gardener's Spade Deformity and the Silver Fork Deformity in Fractures of the Carpal End of the Radius,
By JOHN B. ROBERTS.
3. My Changes of View in Appendicitis Work,
By ROBERT T. MORRIS.
4. Toxæmia of Intestinal Origin as a Condition Predisposing to Minor Infections,
By HARRIS A. HOUGHTON.
5. Responsibility in Mental Deformity,
By JAMES WEIR, JR.

1. **Intermittent Claudication.**—Hunt summarizes his views as follows: Arteriosclerosis of the extremities in its gravest form, uncomplicated by a vasomotor neurosis leads to spontaneous gangrene. If the arteriosclerosis occurs in combination with a vasomotor instability and a tendency to vasomotor spasm, the syndrome of intermittent claudication results. This is characterized by the development of sensory (pains and paræsthesia), and motor (weakness and rigidity) manifestations during functional activity with a rapid and permanent restoration to the normal during rest. The syndrome, however, has a wider and more general application to the whole

circulatory mechanism and has been observed in relation to various organs of the body (heart, intestines, brain, kidney, and eyes).

2. **Fractures of the Lower End of the Radius.**—Roberts asserts that notwithstanding the fact that so much has been recently written regarding fractures of the lower end of the radius the lesion continues to be very badly treated by a great number of practitioners. The essential for a good result is forcible reduction, and it is this forcible reduction which is usually neglected. 'Almost any simple dressing will maintain reduction, though plastic splints are to be preferred to wooden ones.

3. **Appendicitis.**—Morris reviews the evolution of his technics for the treatment of appendicitis. The chief points to be emphasized are, perhaps, these: A small incision by the gridiron method; removal of the appendix in all cases (abscess cases included) except perhaps when the patient is moribund; no flushing of the peritoneal cavity; no gauze packing. The author has returned to the method of using a cigarette drain in all cases in which pus or septic debris is left in the peritoneal cavity, but the wound is closed without drainage in cases in which gangrene and pus occur within the peritoneal coat of the appendix.

AMERICAN MEDICINE.

May 27, 1905.

1. Of Ailurophobia and the Power to be Conscious of the Cat as Near, When Unseen and Unheard,
By S. WEIR MITCHELL.
2. Observations Upon Amœbas Infecting the Human Intestine, with a Description of Two Species, *Entamœba Coli* and *Entamœba Dysenterizæ* (*To be continued*),
By CHARLES F. CRAIG.
3. Chylous Ascites,
By JAMES FINLEY BELL.
4. Some Results of Abdominal Operations,
By GEORGE EREY SHOEMAKER.
5. The Lloyd Reaction for Morphine and Other Alkaloids (*To be continued*),
By DANIEL W. FETTEROLF.
6. Acute Carbon Bisulphide Poisoning,
By ALBERT PHILIP FRANCINE.
7. The Physician as a Citizen (*To be continued*),
By EDWARD N. BRUSH.

1. **Ailurophobia.**—Mitchell's request, made in *American Medicine*, for information regarding ailurophobia and the power to be conscious of the cat as near, when unseen and unheard, received one hundred and fifty-nine answers, of which about one third were valueless. A careful study of the replies with much subsequent inquiry and experimentation has led him to conclude that emanations from cats, odorous to some, may in others cause emotional disturbance without so impressing the olfactory nerves as to be recognized as odors. Persons who suffer from cats may be thus classed: "(1) Asthmatics—cat asthma. (2) Cat fear, with or without sequent, excessive, emotional manifestations, and only on sight. (3) Cat fear. Power to be sure an unseen cat is near. Symptoms same as in class 2, and apt to be extreme. (4) Those of the last class can detect the cat by smell, or may sometimes and

not always. (5) Cases occur in which the consciousness of a cat as present through its smell once existed, but does not now, and yet the ability to detect unseen cats remains. (6) It is therefore likely that the cat emanations may affect the nervous system through the nasal membrane, although unrecognized as odors. Why these emanations should, if plainly perceived as due to cats, cause certain symptoms in those who dread cats, is readily understood. The ultimate cause of unreasonable terror of cats, I cannot explain. To be told that a cat is near when none is in the room, may occasion the same unpleasant consequences as when the cat is present. It is, perhaps, worthy of note how many of the victims of cat fear declare that even strange cats seem to have an unusual desire to be near them, jump on their laps, and follow them."

3. **Chylous Ascites.**—Bell reports one personal case in detail. He has tapped his patient 37 times and removed 272,365 cubic centimetres of chyle since the first of last October. It is remarkable that the patient as yet has lost little in weight and strength, though he suffers much from the distention and from shortness of breath. The literature of chylous ascites is reviewed and a table of the thirty-three cases so far reported is given. To the paper is appended a report by Dr. Walter Kent on the chemical examination of portions of the fluid removed from the author's patient.

4. **Abdominal Operations.**—Shoemaker analyzes one hundred consecutive abdominal sections performed by him at the Presbyterian Hospital. We note that, as a general rule, the author prefers dry sponging to flushing, and only uses drainage in exceptional cases.

6. **Carbon Bisulphide Poisoning.**—Francine reports one case. As he only saw his patient once the history of the case is quite brief. The symptoms presented were in a general way those typical of carbon bisulphide poisoning.

BRITISH MEDICAL JOURNAL.

May 13, 1905.

1. The Logical Basis of the Sanitary Policy of Mosquito Reduction, By R. ROSS.
2. The Cause and Treatment of Pruritus Ani, By F. C. WALLIS.
3. The Surgical Anatomy and Operative Treatment of Tuberculous Glands of the Neck, By W. G. SUTCLIFFE.
4. Congenital Hypertrophy and Dilatation of the Sigmoid Flexure, By W. F. BROOK.
5. The After-History of Patients Upon Whom Gastric Operations Have Been Performed, By C. M. MOULLIN.
6. The Value of the Vermiform Appendix in the Treatment of Ulcerative and Membranous Colitis, By J. HUTCHINSON, JR.

1. **Destruction of Mosquitoes.**—Ross bases his conclusions on the following arguments: 1. There must be for every living unit a certain distance (limit of migration) which that unit may possibly cover if it continues to move all its life

always in the same direction. 2. Owing to the constant changes in direction which must take place in all random migration, the large majority of units must tend to remain in or near the neighborhood where they were born. 3. Applying this reasoning to the particular case of the immigration of mosquitoes into an area in which their propagation has been arrested by drainage and other suitable means, the following conclusions are reached: 1. The mosquito density will always be reduced, not only within the area of operations, but to a distance equal to the ideal limit of migration beyond it. 2. On the boundary of operations the mosquito density should always be reduced to about one half the normal density. 3. The curve of density will rise rapidly outside the boundary and will fall rapidly inside it. 4. As immigration into an area of operations must always be at the expense of the mosquito population immediately outside it, the average density of the whole area affected by the operations must be the same as if no immigration at all has taken place. 5. As a general rule for practical purposes, if the area of operations is of any considerable size immigration will not very materially affect the result. The whole subject of mosquito reduction cannot be scientifically examined without mathematical analysis.

2. **Pruritus Ani.**—Wallis's remarks apply to the inveterate cases of pruritus ani, which go on year after year, and bring in their train other symptoms, due to want of sleep, dyspepsia, etc. The local appearance of the skin is quite typical, and should be recognized as pathognomonic. The chronic inflammation of the epidermis completely alters its character, which becomes largely infiltrated with fibrous tissue, loses its elasticity, and becomes covered with dead and sodden epithelium. In ninety per cent. of his cases the author has found a shallow ulcer situated between the two sphincters, generally in the posterior segment and near the dorsal midline. In some cases there is more than one ulcer. He believes the method of fusion of the proctodæum with the blind end of the gut is the cause of this frequent ulcer. The thin mucous membrane is readily abraded and ulcerates. The author obtains the best results by following out this treatment; the patient is anesthetized and put in the lithotomy position. The sphincter is moderately stretched and the ulcer or ulcers brought into view and treated with the electric thermocautery, and the cautery is also applied to the thickened skin as well, especially where fissures or clefts exist. Vaseline is applied to the cauterized area, and a morphine suppository inserted into the bowel. A pad of wool is kept in position by a T bandage, and the patient is put back to bed and kept there. A purge is given on the third night. The irritation usually ceases either at once or after a few days, and the patients are well in about fourteen days. Where the abrasion practically encircles the bowel, he dissects off the ring of tissue involved. The interesting feature is the immediate cessation of irritation after the cautery has been applied.

3. **Tuberculous Glands of the Neck.**—Sutcliffe gives a detailed description of the surgical anatomy and operative treatment of tuberculous glands of the neck. Enlarged tuberculous glands rarely disappear without operative treatment after they have existed as definite palpable tumors for more than six months. The main contributory causes of such a result are always the climatic and hygienic conditions, and to these must be added prolonged rest. In the following four sets of cases operation should be carried out at once: 1. Where suppuration is taking place; (2) where sinuses, as a result of burst abscesses or previous incomplete operations, are present; (3) where, though not obviously suppurating, the glands are increasing in size, are causing pain, uneasiness, and deformity, and have not yielded to hygienic and climatic measures; (4) where gland infection has occurred in subjects unable or unwilling to incur a prolonged period of rest, or whose future would be jeopardized by the interruption of their education, or by the presence of the glands, as in boys wishing to enter the public service.

4. **Congenital Hypertrophy of the Sigmoid Flexure.**—Brook states that so called idiopathic dilatation and hypertrophy of the colon (Hirschsprung's disease), though not infrequent is seldom recognized during life. It occurs most frequently in early childhood, the symptoms usually commencing within a few days of birth. These are constipation with abdominal distention sometimes reaching enormous proportions, and more or less frequently recurring attacks of intestinal obstruction, the general health being often seriously affected by intestinal autointoxication. In well marked cases there is in addition to a permanently enlarged and lengthened abdomen, marked deformity of the thorax which is shortened and widened, so that the lower ribs lie horizontally and the subcostal angle is widely opened out. The disease is more common in males than in females. Death takes place from various causes—obstruction, colitis, syncope, or perforation—but a certain number reach adult life. The distention is entirely due to enormous dilatation with elongation of the colon, especially the sigmoid. The muscular coats are greatly hypertrophied. The rectum is generally normal and no organic obstruction is found to account for the condition. The author reports the case of a young woman, aged twenty-one years, suffering from this condition. There was a hard, globular, and movable tumor, dull on percussion, rising out of the pelvis somewhat to the left of the middle line. On opening the abdomen the colon was found to be enormously enlarged and thickened, and it contained a large concretion composed of vegetable fibre. This was removed, the bowel narrowed down by sutures, and the patient made an uneventful recovery.

6. **Ulcerative Colitis.**—Hutchinson reports a case of ulcerative colitis, occurring in a man, aged thirty-six years. It was treated by means of irrigation through the vermiform appendix—a lotion of nitrate of silver being the fluid used. The

patient, who had been admitted to the hospital with a diagnosis of malignant disease of the colon, was discharged well nine weeks later. By using the appendix for irrigation purposes, all leakage of cæcal contents can be avoided; by means of a rubber catheter inserted and retained in the appendix, the washing out of the colon can be done in an efficient and cleanly way; and, finally, it is quite easy by resection of the appendix to close the fistula when the treatment has accomplished its object.

LANCET.

May 13, 1905.

1. A Case of Concealed Menstruation; with Remarks on Treatment, By P. HORROCKS.
2. Nutrition and Malnutrition (*Lumleian Lectures, II*), By W. H. ALLCHIN.
3. A Case of Splenomegalie, or Myelopathic Polycythæmia, with True Plethora and Arterial Hypertonia Without Cyanosis, By F. P. WEBER.
4. *Symptomatologie et Diagnostic de l'Angine à Spirilles et Bacilles Fusiformes (Angine de Vincent)*, By H. VINCENT.
5. Treatment of Complete Uterine and Vaginal Prolapse, By F. H. WIGGIN.
6. Carcinoma of the Uterus and Its Surgical Treatment, By E. T. THRING.
7. The Technics of the Operation for Adenoids and Enlarged Tonsils, with Some Practical Suggestions, By F. C. CARLÉ.
8. Anatomical Peculiarities of a Gall Bladder on Appendix, By F. LEMON.
9. Cæsarean Section for Congenital Malformation of the Cervix Uteri; Recovery, By H. T. SKAE.

1. **Concealed Menstruation.**—Horrocks says that concealed menstruation must be looked upon as a rare condition. Probably imperforate hymen is the commonest cause of it, but it may result from congenital or acquired atresia of any part of the parturient canal, e. g., from the os internum of the uterus. In imperforate hymen the opening is filled in by a membrane. When the menses first appear they flow into the vagina, a portion being absorbed before the next period, and a portion remaining. As time goes on this remainder grows until the vagina is distended with a dark treacly fluid which generally remains aseptic. This is known as hæmatocolpos, and is free from danger no matter how relieved. But if the imperforate hymen does not yield and the concealed menstruation continues, the uterus gradually gets distended, a condition of hæmatometra is superadded, and the uterus and vagina form one large common cavity. If unrelieved the Falloppian tubes become distended and so a hæmatosalpinx results. If the blood in the uterus becomes septic it, as a rule, contaminates that in the tube or tubes. Finally the blood may escape into the peritoneal cavity, causing a hæmatocele, or burst into the broad ligament, causing a hæmatoma. As long as a patient with concealed menstruation remains unrelieved, she is in danger of septic infection or of rupture of the vagina, uterus, or tubes. The former is by far the more common, and often causes death. The author reports a case of hæmatocolpos which was correctly diagnosed, and

a tiny puncture made in the bulging membrane, two quarts of treacly fluid escaping. The uterine contents became infected, however, and passing through the tube, infected the peritonæum, necessitating operation, removal of one ovary and tube, and frequent and thorough douching in order to save the patient's life. What should always be done is to incise the membrane and wash out the cavity thoroughly. Since his adoption of this line of treatment the author has never lost a case.

2. **Nutrition.**—Allchin, in the conclusion of his second Lumleian lecture, sums up as follows: The vital activities of the living cells seem to consist essentially in the formation of ferment bodies which alone or in combination effect those integrations and disintegrations which liberate chemical energy, and this by transformation produces muscular work, nerve force, and secretory function, the fundamental manifestations of life. That these enzymes do bring about these changes in such conditions of temperature and alkalinity or acidity as obtain in the body appears to be certain; and as an explanation of the bioplasm which elaborates these bodies there is postulated an ionic action on the part of the cell contents and their surrounding medium whereby charges of electricity of variable strength and character are brought into conflict and that from the play of ions the manifestations of vitality result. Such a conception of bioplastic activity leads more clearly to the realization of the inseparable unity of function and nutrition, and that nutrition in its fullest sense is life itself.

3. **Splenomegalic Polycythæmia.**—Weber reports the case of a woman aged thirty-seven years who, when first seen, was suffering from erythromelalgia. Later the case was found to be one of splenomegalic or myelopathic polycythæmia, differing only from those reported by Osler and others, in that cyanosis was absent. The diagnosis was based on enlargement of the spleen, true plethora (polyhæmia), and arterial hypertension. The author believes the order of development of the main symptoms and their causal connection to be as follows: 1. Increased erythroblastic activity involving a great part, but not necessarily the whole, of the bone marrow. 2. Increased viscosity of the blood resulting from the polycythæmia. 3. Dilatation of small blood vessels, partly to lessen resistance to the abnormally viscous blood, partly to make more room for dilution of the blood. 4. The plethora vera or polyhæmia is to be regarded as an attempt to compensate for the increased viscosity of the blood and for the excessive percentage of the total blood volume occupied by the cells. It is necessary that there should be sufficient blood plasma to nourish the tissues and make metabolism possible; and that the viscosity may not become so great as to render sufficient circulation impossible. 5. The arterial hypertension is to be regarded as a result of the greater strain thrown on the circulatory mechanism. 6. Cyanosis, when it occurs, is probably due to inadequacy of the series of compensatory changes which precedes it. The patho-

logical activity in the erythroblastic function of the bone marrow may be the result possibly of tumor formation in the marrow, or to the presence of a hæmolytic toxine in quantities just sufficient to cause reaction. The splenic enlargement seems to be due merely to increase of the pulp and engorgement with blood.

7. **Adenoids.**—Carlé calls attention to the following practical points in connection with the operation for the removal of adenoids and enlarged tonsils. The patient should be in a horizontal position in the dorsal decubitus, with the head neither flexed nor extended. In removing the tonsils a small amygdalatome should be used in preference to a large one, since the encircled organ is not so liable to slip out. It is important to get the lower edge of the instrument below the lower end of the tonsil—thread the ring on to the tonsil from below upwards. The posterior pharyngeal wall is best cleared at the end of the operation by scraping with the finger nail from below upwards, thus avoiding tearing downwards of the posterior pharyngeal wall as is liable to follow the use of a curette. Large buried tonsils are best dealt with by removing a thin slice, followed by breaking down of the tonsil tissue with the finger. The cicatricial contraction following this method of procedure markedly reduces the size of the hypertrophied organ.

Letters to the Editor.

ALKALINE BEVERAGES IN THE TREATMENT OF PNEUMONIA.

1635 LOCUST STREET,
PHILADELPHIA, May 28, 1905.

To the Editor,

Sir: In an article entitled Alkaline Beverages in the Treatment of Pneumonia (*New York Medical Journal*, May 20, 1905), by Dr. J. B. Todd, of Syracuse, N. Y., there is an error which it is my duty to correct. In speaking of the employment of saline substances in pneumonia Dr. Todd states that "at first they were used per rectum as suggested by Dr. F. P. Henry, of Philadelphia, in 1889." I made no such suggestion in 1889 or at any time since that date. In 1889 I employed, and have ever since advocated by writing and teaching, *saline hypodermoclysis* in the treatment of pneumonia. This is, of course, the most direct and, in my opinion, much the most efficacious method of administering saline substances in pneumonia. My principal articles on the subject are: Treatment of Pneumonia by Hypodermoclysis (*International Clinics*, Vol. IV, ninth series, 1900); Remarks on the Treatment of Pneumonia (*Philadelphia Medical Journal*, February 14, 1903); Saline Hypodermoclysis in the Treatment of Pneumonia (*Medical Chronicle*, Manchester, England, February, 1904).

Reference to my work may also be found on page 43 of the Transactions of the Association of American Physicians for 1894 (Vol. IX), in the course of some remarks on a paper of Dr. Beverley Robinson by Dr. James C. Wilson. The whole question of priority is ably discussed in the *Medical News* for July 6, 1901, and in view of the publicity which

has been given to the subject, a publicity not altogether of my own seeking. I am somewhat surprised at the error in Dr. Todd's paper.

While I care little about the honor of being first in the matter which is a small one in the course of my work, I call attention to it because I am a great stickler for accuracy. FREDERICK P. HENRY.

2043 WALNUT STREET,
PHILADELPHIA, May 23, 1905.

To the Editor,

Sir: In an article entitled *Alkaline Beverages in the Treatment of Pneumonia*, published in your issue of May 20, 1905, Dr. J. B. Todd, of Syracuse, introduces what I regard as a very important step in the successful treatment of this dread disease, i. e., the oral use of saline solution. The two cases selected to illustrate his results are very suggestive: In the first case, in a woman of eighty-four years, the solution was used from the start; in the second, in a child of eight years, the improvement coincided with the use of alkaline beverages.

Dr. Todd having been good enough to inform me that my work on the *Internal Secretions* had started his inquiry, I wish to express the earnest hope that his method of treatment be extensively tried. Some opposition to the use of saline solution in this and other diseases has been based on the fact that the sudden elimination of waste products tends to cause inflammatory renal lesions or to augment them if present. In truth, such lesions occur because the toxic wastes are allowed to accumulate in the organism; on being suddenly liberated when the saline solution is used, they overtax the kidneys. This is prevented when the saline solution, which facilitates and insures the gradual elimination of toxic waste products, is administered from the start. Dr. Todd's formula is admirably adjusted to this purpose and provides "a refreshing effervescent drink, which is gratefully accepted by the patient." It is as follows:

R Sodium chloride.....320 grains;
Potassium bicarbonate.....160 grains;
Aromatic fluid extract (U. S. P.).....30 minims;
Water, enough to make.....4 ounces.

M. A teaspoonful in six to eight ounces of water every two hours, with a teaspoonful of lemon juice.

The patient is also allowed to drink water at will.

Experimental bacteriology forcibly emphasizes the importance of an alkaline reaction of the blood fluids in disease. Behring and Nissen have shown that it is because of the intense alkalinity of their blood that rats are refractory to anthrax. Paul not only confirmed this observation, but found that when the alkalinity of the serum of rabbits was neutralized its germicidal powers disappeared; von Fodor found that the resistance of rabbits to anthrax could be actually increased by the injection of alkaline solution, and Blumenthal found that the formation of bactericidal agents coincided with the blood's alkalinity, etc.

The more advanced teachings of biology point in the same direction. "We know," says Jacques Loeb in his recently published *Studies in General Physiology*, "that the peculiar phenomena of oxidation in living matter are determined by fermenta-

tive processes, and we venture to say that fermentations form the basis of all life phenomena." Dr. Todd's article refers to my interpretation of the body's autoprotective processes, viz., that tryptase, a ferment—activated by the interaction of the blood's oxidizing substance (as catalytic) and the phosphorus-laden fibrinogen—underlies the bactericidal and antitoxic properties of the blood and cells. This view assimilates the immunizing attributes of the organism, not only to the digestive processes, but also to the "life phenomena"—all being regarded as "fermentations." Linked to this fundamental principle is another, however (a *sine qua non* of the intrinsic cellular interchanges), to which Loeb gives voice when he says: "The sodium ions of the blood as well as of the sea water are essential for the maintenance of life phenomena." Hence my conclusion that in febrile diseases there exists a close relationship between a deficiency of sodium and death.

Even under normal conditions nearly one half ounce of sodium chloride is excreted each day with the urine, the loss being constantly made up by the food, along with that of the potassium salts. But the altered conditions during toxæmias, reduced diet, impaired assimilation, anorexia, etc., greatly diminish the intake, and unless measures are taken to compensate for this the defensive functions are increasingly hampered and the chances of death are correspondingly increased. And this applies not only to pneumonia, but to all febrile toxæmias. Considerable work done since the first volume of *Internal Secretions*, etc., was written, and personal clinical observations have convinced me that we have in the judicious use of alkaline salts in all morbid processes of this kind an important life saving measure.

C. E. DE M. SAJOURS.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of April 12, 1905.

The President, Dr. JAMES M. ANDERS, in the chair.

(Concluded from page 1090.)

Dr. A. C. ABBOTT said that only upon the ætiological and epidemiological phases of the subject did he feel competent to speak. As to the former, he did not think the profession was in a position yet to say the final word. While he thought positively that the best contributions along this line had come from Councilman's laboratory, he was convinced that during epidemics there were occasionally cases, clinically like the majority of cases, and yet due to factors other than the organism designated by Councilman. There appeared to be a *Pneumococcus meningitidis*, which was recognized only by the modern method of lumbar puncture or found at autopsy. Dr. Abbott had seen none of the cases, but was told that occasionally cases were accompanied with influenza. The opinion was becoming prevalent that, as in the case of pneumonia, there were in-

dividuals going about harboring the organism which the profession regarded as the most productive factor of meningitis. It would look as if the widespread appearance of the disease might often be due to infections that were induced by some undetermined ætiological factor concerned with a corresponding outbreak of pneumonia. What that factor was had not yet been determined.

The transmissibility of the disease was the next point considered by Dr. Abbott. He thought the opinion was general that if the disease was transmissible at all, it was mildly so, and the experience of the Department of Health in Philadelphia had not been different from that of other observers. To the present time there had been reported at the Health Department since September fifty-eight cases of cerebrospinal fever, with eighteen deaths, a mortality of 31 per cent., and this was not allowing for erroneous diagnoses or doubtful cases. Of thirty-four histories, six cases were very doubtful and five were almost certainly tuberculous. Two of these were shown to be tuberculous by lumbar puncture, and two cases were found by lumbar puncture and autopsy to be due to the pneumococcus, so that out of the thirty-four there were thirteen which might be taken out of the original fifty-eight.

While it was not to be supposed that the transmission of the disease was impossible, Dr. Abbott believed from the records of outbreaks that the disease was very mildly contagious.

Dr. LONGCOPE, of the Pennsylvania Hospital, gave a review of the bacteriological work in acute meningitis in that institution in the past two years. In eighteen of such cases the spinal fluid had been studied. In four the pneumococcus was found and in twelve the meningococcus. There were excluded tuberculous cases, of which there were eight in which the tubercle bacillus was found. In one case the organism was found on the third day of the disease and in others on the fourth day. In 385 autopsies there were twenty-four cases of acute meningitis and fifteen of tuberculous meningitis. Six of these were due to either the streptococcus or staphylococcus and were secondary to scalp wounds, otitis media, or fractures of the skull. He referred to the conjunctiva as being an additional source from which the organism might be distributed. In one of the cases at the Pennsylvania Hospital there was severe purulent conjunctivitis in which the meningococcus was isolated. The case came to autopsy and the lesions were typical of acute meningitis and the organism was found again in the exudate.

Dr. FRANK WOODBURY thought that further experience would warrant the statement of Dr. Wilson in reference to the very mild communicability of the meningococcus from person to person. He believed that treatment should not be directed too markedly to the lesion in the nerve centres, the brain and spinal cord, because the disease was primarily a blood infection. He advocated the administration of such antiseptics as would be destructive to the meningococcus in the blood and wherever the blood would carry it into the brain and spinal cord. Such antiseptics were creosote,

guaiacol, beta naphthol, and other coal tar derivatives. It seemed to him possible that these cases might be favorably influenced by injections of formaldehyde into the blood.

Dr. NORMAN B. GWYN referred to his observation in 1899 of an epidemic of cerebrospinal fever. Eleven cases were attended in the hospital and seen frequently by doctors, nurses, and students, yet there was no development of the infection among the attendants. On the other hand, one of the patients gave the distinct history of having been twenty-four hours before in the barracks from which several cases of meningitis had been reported. Among the interesting observations of these cases there was seen the development of chronic cases in which a fever, typhoidal in type, with the temperature running to 105° or 106°, might persist for from five to seven weeks. In each case lumbar puncture was not only of value as a diagnostic measure, but of very material value in relieving the distress of the patients. Convulsive seizures were allayed as the fluid was drawn from the cord. In the bacteriological study the *Diplococcus intracellularis meningitidis* was obtained without difficulty in every acute case as it came into the hospital. As the case developed into the chronic stage it became more and more difficult to find the organism in the fluid. Blood cultures in one case demonstrated the presence of the meningococcus. In this case there was severe arthritis and the meningococcus was found in the joint fluid. In many cases the severe symptoms of meningeal irritation, such as rigidity, were relieved by immersion in hot water. In one case surgery was resorted to by Dr. Cushing. The needle brought away thick pus in which staphylococci were readily demonstrated. The spinal cord was opened and freely drained and the patient did remarkably well for some weeks, but died later from secondary infection of the fluid.

Dr. GWYN believed that the suggestion of the disease being a blood infection should be given more consideration, and thought it possibly due to this that surgical procedures had failed.

Dr. WILLIAM WADSWORTH spoke of the probable outbreak of meningitis following a similar infection in horses.

Dr. J. B. CROZER GRIFFITH spoke upon the subject from the aspect of the pædiatrist, and referred to the experience in the Children's Hospital. Each year brought to the hospital some cases of what might be called cerebrospinal fever. Though they have come in groups of two or three from a family, they were usually isolated, and all the types had been presented. There had never been a spread of the infection in the hospital, and the cases were not isolated. He emphasized the marvellous irregularity of the disease in type. He referred to one case outside the hospital which was absolutely typical. Another was fairly pneumonic, and in a third it would have been said there was present an ordinary pneumonia were it not for the observation of a little more rigidity and tendency to abdominal rash than should be expected.

Dr. A. E. ROUSSEL emphasized the fact that even in acute cases the *Diplococcus intracellularis* was not found on the first examination. In one case

in literature as many as three examinations were made before the organism was isolated. In subacute cases the organism was not found at all. In one case lumbar puncture was performed twice and in both instances negatively. The patient improved, but afterward passed into a chronic state. Death occurred outside of the hospital, and it was said that the post mortem was entirely corroborative of the diagnosis.

Dr. BOYER, of the Municipal Hospital, said that nine cases of cerebrospinal fever had been sent to the hospital since December, of which a full report would be made at some future time. In one case on the fifteenth day there was a leucocytosis of 49,000; on admission, the count was 17,600. One case showed a count of only 7,400. In seven cases the diplococcus was secured from the spinal fluid and from the nasal mucous membrane. Kernig's sign was present in all the cases. Three gave a positive Widal reaction. In none of these three was there any sign of typhoid fever. All had retraction of the head and stiffness of the back. Babinski's sign was frequently met with. The first symptom noted by the resident bacteriologist was anæsthesia of the conjunctivæ and generally of the corneæ. In several instances in which it was thought there were pressure symptoms lumbar puncture did not show excess of fluid. This, he thought, was due to the fulminant type of the disease. Reference was made to a case he had seen in Dublin which entered the institution as an acute case and became chronic. The anterior fontanelle of the child was not closed, and when there was an excess in the accumulation of fluid the fontanelle would bulge and the child become almost comatose. Lumbar puncture would relieve the child, who would take nourishment and even cry for food, to become comatose again at the end of a week or ten days. Of the nine patients in the Municipal Hospital, not one vomited while in the hospital. In one case there was marked keratitis and in one there was ulcer of the cornea. The latter showed the meningococcus.

Book Notices.

Exploration des fonctions rénales. Etude médico-chirurgicale. Par J. ALBARRAN, Professeur agrégé à la Faculté de médecine de Paris, Chirurgien des hôpitaux. Avec figures et graphiques en couleurs. Paris: Masson et Cie, 1905. Pp. 604.

In this volume there is an elaborate study of the physiology of the urine, based upon many original experiments, and also a complete exposition of the subject of modern cystoscopy, with methods for the separation, collection, and examination of the secretion of each kidney. In this part of the work due credit is given to the investigations and technique of Howard Kelly and Tilden Brown in this country. The author has devised a new method of testing the functional capacity of each kidney separately by producing an experimental polyuria. The book will be of interest to physiologists and of practical value to specialists in genitourinary surgery.

A Text Book of Diseases of Women. By CHARLES B. PENROSE, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania, etc. With 225 Illustrations. Fifth Edition, Revised. Philadelphia: W. B. Saunders & Co., 1904. Pp. 550. (Price, cloth, \$3.75.)

Ever since its first appearance, in 1897, Dr. Penrose's work has been recognized as an acceptable exponent of conservative gynecology, and this edition seems to deserve the same recognition. While no startling changes have been made in the text, there is evidence throughout of such revision as time has rendered desirable.

Le Danger de la mort apparente sur les champs de bataille. Par le Docteur ICARD (de Marseille), vice-président de la Société de Londres contre le danger des enterrements prématurés, etc. Paris: A. Maloine, 1905.

The author has written a number of monographs on the subject of real and apparent death, and his enthusiasm has prompted him to investigate the danger of apparent death on the field of battle. As he truly states, there is no work on this subject; the reason is that in active campaigning the surgeons and the men of the hospital corps have their energies taxed to the utmost to care for the wounded, and there is neither time nor help to inspect all who are supposed to be dead to determine whether by chance any one is in a deathlike trance.

Ten Lectures on the Biochemistry of Muscle and Nerve. By W. H. HALLIBURTON, M. D., F. R. S., Professor of Physiology, King's College, London, etc. With Illustrations. Philadelphia: P. Blakiston's Son & Co., 1904. Pp. xvi-160.

This book contains an arrangement of the lectures that were given by the author at the University and Bellevue Hospital Medical College in 1904, and presents in a systematized way his many researches on muscle and nerve. The first five lectures are devoted to muscle, and describe the composition, heat, rigor, pigments, ferments, extractives and salts, and the chemical changes that accompany muscular contraction. The last five lectures describe the chemical composition of nervous tissue, its metabolism, the coagulation temperature of nerve proteids, the chemical pathology of certain degenerative nervous diseases, and the degeneration and regeneration of nerves. In the interesting investigation of fatigue it was demonstrable in the nerve centres and in the peripheral endings of nerve fibres; but the author thought that central fatigue was the more important and the more readily produced. He considers that sleep is the normal manifestation of one stage in the rhythmical activity of nerve cells, and though it may be preceded by fatigue or exhaustion, it is accompanied by repair, the constructive side of metabolic activity. He found that a temperature of 42° C. sufficiently long continued had the same influence as hyperpyrexia in causing coagulation of cell globulin. In the regeneration of nerve fibre he found that complete functional activity was associated with the appearance of the medullary sheath, just as the latter markedly shared in the degenera-

tive process when the nerve was cut. The author's style is forceful and clear and the book gives a comprehensive idea of these important subjects.

Diseases of the Liver, Gall Bladder, and Bile Ducts.

By H. D. ROLLESTON, M. A., M. D. (Cantab.), F. R. C. P., Physician to St. George's Hospital, London, etc. Fully Illustrated. Philadelphia: W. B. Saunders & Co., 1904. Pp. 794. (Cloth, \$6.00.)

This volume embodies the author's studies during the past twelve years of diseases of the liver from the clinical and pathological standpoints, and it includes some papers on these topics that have been published in journals and transactions.

The work is divided into sections on diseases of the liver, of the gall bladder, and of the bile ducts. In order that the bulk of the book should not be increased, the author has, and it seems wisely, omitted a review of the anatomy and physiology of the liver; and after describing anatomical abnormalities, some post mortem appearances, acquired deformities, and displacements of the organ, the various diseases are discussed with thoroughness and adequate detail.

The better authorities of the day will agree with the author that, while it is quite possible that primary functional disorder of the liver does occur, in the present state of our knowledge its existence is almost impossible to recognize with accuracy. The symptoms of such disorders are due to factors that interfere secondarily with the liver's functional activity, and not to primary functional failure of the organ.

The influence of dysentery on the etiology of single, or tropical, abscess of the liver is fully discussed, and it appears that there is no doubt that other organisms besides the ameba will cause hepatic abscess, but the latter is a frequent sequel of tropical dysentery.

The statement is made that it is rare to find sugar in the urine in ordinary cirrhosis; it has been an experience that the sugar, which, like the cirrhosis, is caused by alcoholic indulgence, will disappear under treatment and abstinence from alcohol.

The text is elucidated by clinical histories that add materially to its interest. The work is well printed, the photomicrographs are excellent, and the colored plates are good. There seems to be no satisfactory reason for the repetition of illustrations; Fig. 10 reappears as Fig. 26, and Fig. 38 as Fig. 47, and plate 2 has its illustrations inverted in plate 5, with changes in the legend. The reference in the second paragraph on page 41 to "p. 41" should be to page 37.

Transactions of the New Hampshire Medical Society at its One Hundred and Thirteenth Anniversary, held in Concord, May 19 and 20, 1904. Concord, N. H.: The Rumford Press, 1904. Pp. 317.

This volume contains the papers that were read at the one hundred and thirteenth anniversary, held in 1904. Among the interesting essays are one on albuminuria in the apparently healthy, by Dr. Leith, and a prize essay on the sanatorium treatment of incipient pulmonary tuberculosis, by Dr. F. L. Hills.

Miscellany.

First Aid in the British Navy.—It is a curious fact, observes the *Army and Navy Journal*, for May 6, 1905, that it is only at this late day that the British Admiralty has resolved to instruct the enlisted men in the navy in first aid service. In many large British warships launched in recent years little or no attention was given to arrangements for caring for the wounded in battle, but a commission has been appointed which is preparing to provide first aid instruction for men of all ratings on board ship and to consider the whole question of the most convenient places for surgical operations and the storage of surgical instruments and supplies. The *Hampshire Telegraph*, published at Portsmouth, England, says that as the result of suggestions made by that committee from time to time many wise changes have been effected in the internal arrangements of recent ships. Stations have been allotted for the surgeons behind armor or below the armored deck, where they would be sure of protection, while to facilitate the bringing of wounded men either up from the engine room or down from the gun positions on the upper decks, the hatchways have been made larger and fitted with specially designed lifts. The ash hoists have been increased in size so far as the engine rooms are concerned, and a chair and belt so designed as to easily accommodate injured men has now been provided for the ash hoists. Facilities, too, are to be provided for the prompt removal of the wounded, after treatment by the surgeons, to the sick bay and washing places, which, in time of action, would be fitted up as temporary hospitals.

Medical Ignorance of the Laity.—Of course it is not expected or even desired that every layman shall be as thoroughly conversant with medical topics as is the doctor. Nor is it possible that they can be more than superficially acquainted with any of the causes of ill health if they pursue their own vocations with the diligence it usually requires to promote any enterprise successfully. But ignorance is comparative, and the ignorance in some localities as compared with others is so obvious that the wonder is what causes this lack of progression.

Did you know, asks the *Medical Standard*, for February, 1905, that, with some people, the "skin" of an egg, or stale human milk is an infallible method of drawing a boil to a "head?" That for cuts and bruises a simple emollient of tobacco juice would heal it by first intention? That in fevers the dirty, greasy wool of the sheep bound tightly around the child is most efficacious in terminating the "distemper?" That tying a camphorated string around the neck of a dog or human being troubled with fleas will prevent their slacking their thirst in the watering troughs of the eye and so exterminate them? Of course salt pork will stand for years as the great eradicator of lockjaw. And of course putting certain foul smelling compounds of sulphur in the manger of a distempered horse will exert its invaluable properties in all cases.

Who is responsible? The doctor and the medical profession at large. Simply stated, all of the

knowledge, or almost all, appertaining to therapeutics which the laity possess is inherited from the profession. To-day they repeat the teachings of the ages which are now historical.

But these are more or less harmless therapeutic interferences. In other localities there is a vicious awakening from superstitious beliefs of the last century. Here one frequently sees alarming symptoms of a little knowledge which is dangerous. People possessed of a family guide or doctor book containing recipes for measles, whooping cough, bronchitis, pneumonia, indigestion, puerperal fever, hæmorrhage, eczema, scabies, syphilis, etc., etc., make their diagnoses from the printed page and copying the names of the ingredients used in the treatment they bring home the separate packages containing the medicaments and proceed to mix them, becoming not only their own physicians, but their own pharmacists!

One can imagine what harm may be done when it is remembered that carbolic acid, belladonna, sabadilla, sweet spirit of nitre, tincture of iodine, and ammonia are household remedies, while morphine, strychnine, and arsenic are open to them as eradicators of rats! Almost any drug, in fact, may be obtained in the crude state from unsuspecting druggists, though not so much in the larger centres as in the country villages.

Official News.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from May 20 to May 26, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington.	May 13-20.	2	
Florida—Jacksonville.	May 13-20.	2	
Illinois—Chicago.	May 13-20.	2	2
Illinois—Galesburg.	Apr. 13-20.	1	
Kentucky—Covington.	May 13-20.	9	
Louisiana—New Orleans.	May 13-20.	4	
Four cases imported.			
Massachusetts—Lowell.	May 13-20.	2	
Michigan—Ann Arbor.	Apr. 29-May 6.	1	
Missouri—St. Joseph.	May 6-20.	40	
Missouri—St. Louis.	May 13-20.	5	
New Hampshire—Nashua.	May 13-20.	2	
New York—Kingston.	May 13-20.	1	
New York—New York.	May 13-20.	1	1
Ohio—Cincinnati.	May 5-15.	7	
Ohio—Toledo.	May 6-13.	1	
Pennsylvania—Altoona.	May 13-20.	1	Imported
Pennsylvania—York.	May 13-20.	12	
South Carolina—Greenville.	May 13-20.	4	2
Tennessee—Memphis.	May 13-20.	1	
Tennessee—Nashville.	May 13-20.	4	
Wisconsin—La Crosse.	May 13-20.	1	
Wisconsin—Milwaukee.	May 13-20.	2	

Smallpox—Foreign.

China—Hongkong.	Apr. 1-8.	7	3
France—Paris.	Apr. 29-May 6.	21	1
Great Britain—Bradford.	Apr. 22-May 6.	12	
Great Britain—Toledo.	Apr. 22-May 6.	1	
Great Britain—London.	Apr. 20-May 6.	4	
India—Bombay.	Apr. 18-25.	76	
Italy—Catania.	May 6-11.	8	
Italy—Palermo.	Apr. 22-29.	8	
Malta.	Apr. 22-29.	1	
Russia—Moscow.	Apr. 15-29.	10	
Spain—Barcelona.	Apr. 20-30.	6	
West Indies—Barbados.	May 9.	1 among borders for Canal zone. probably imported.	
West Indies—Grenada.	Apr. 20-May 1.	2	

Yellow Fever.

British Honduras—Bellaz.	May 24.	2	1
Honduras—Puerto Cortez.	May 24.	4	1
Mexico—Tierra Blanca.	May 7-13.	1	1
Panama—Panama.	Jan. 1-May 13.	61	22

Plague.

Arabia—Aden.	Apr. 11-28.	19	8
Australia—New Castle.	Apr. 13.	4	3
Chile—Santiago.	Apr. 16-28.	2	1
China—Hongkong.	Apr. 1-8.	3	3
India—General.	Apr. 1-8.	59,227	52,841
India—Bombay.	Apr. 18-25.	1	1,018
Japan—Formosa.	Mar. 1-31.	1	284
Japan—Formosa.	Apr. 1-20.	1	272
Straits Settlements—Singapore.	Apr. 1-15.	1	5

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 24, 1905:

- LONG, H. D., Assistant Surgeon. To proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.
- MATHEWSON, H. S., Passed Assistant Surgeon. Granted leave of absence for two months from June 16, 1905.
- McCLINTIC, T. B., Passed Assistant Surgeon. To proceed to Berkeley Springs, and other points in West Virginia, for special temporary duty.
- MIRANDA, R. U. L., Acting Assistant Surgeon. Granted leave of absence for thirty days from June 1st.
- OLSEN, E. T., Assistant Surgeon. To proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.
- ROEHRIG, A. M., Pharmacist. Granted leave of absence for five days from May 19, 1905, under paragraph 191 of the regulations.
- SPRATT, R. D., Assistant Surgeon. To proceed to Cleveland, Ohio, and assume temporary charge of the station during the absence on leave of Passed Assistant Surgeon H. S. Mathewson.
- STONER, G. W., Surgeon. Granted three days' leave of absence from May 17, 1905, under paragraph 189 of the regulations.
- WAKEFIELD, H. C., Acting Assistant Surgeon. Granted leave of absence for ten days from May 27th.

Board Convened.

Board convened to meet at San Francisco, Cal., May 19, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon G. M. MAGRUDER, chairman. Passed Assistant Surgeon D. H. CURRIE, recorder.

Appointments.

Dr. HENRY D. LONG, of Pennsylvania, and Dr. EGIL T. OLSEN, of Illinois, commissioned (recess) as assistant surgeons in the Public Health and Marine Hospital Service May 19, 1905.

Dr. CHARLES E. FISHER appointed acting assistant surgeon in the Public Health and Marine Hospital Service, for duty at Toledo, Ohio.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending May 27, 1905:

- BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon. Reports as in temporary charge of the chief surgeon's office, Department of Colorado, during the absence of the chief surgeon on inspection duty.
- BORDEN, WILLIAM C., Major and Surgeon. Ordered to New York city to consult with architects regarding plans for the new Army General Hospital to be constructed in this city.
- BROOKE, ROGER, JR., First Lieutenant and Assistant Surgeon. Granted three months' leave of absence, to take effect about August 1, 1905.
- BROOKS, WILLIAM H., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months and fifteen days.
- BUSHNELL, GEORGE E., Major and Surgeon. Granted fifteen days' leave of absence.
- BYRNE, CHARLES B., Colonel and Assistant Surgeon General. Relieved from duty as Chief Surgeon of the Department of the Missouri, and ordered to Manila, P. I.,

- for duty as Chief Surgeon of the Division of the Philippines.
- COLLINS, C. C.**, First Lieutenant and Assistant Surgeon. Granted three months' leave of absence, to take effect when relieved from duty in the Philippine Islands.
- COMEY, EDWARD T.**, Lieutenant Colonel and Deputy Surgeon General. Retired from active service at his own request on account of thirty years' service, to take effect July 1, 1905.
- CRAIG, CHARLES F.**, First Lieutenant and Assistant Surgeon. Ordered to accompany First Squadron, Thirteenth Cavalry, from Presidio of San Francisco, Cal., to Fort Riley, Kan.; upon completion of which he will return to the transport *Logan*.
- GIRARD, JOSEPH B.**, Colonel and Assistant Surgeon General. Relieved from duty in the Philippines Division, ordered to proceed by first available transport to San Francisco, Cal., and upon arrival there to report to the Military Secretary of the Army for orders.
- HUTTON, PAUL C.**, First Lieutenant and Assistant Surgeon. Leave of absence further extended fourteen days.
- JONES, PERCY L.**, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Monroe, Va., and ordered to Fort Preble, Me., for duty.
- MCANDREW, P. H.**, First Lieutenant and Assistant Surgeon. Reports at Arcadia Rifle Range for temporary duty.
- McCULLOCH, C. C., JR.**, Major and Surgeon. Detailed as a member of the board of medical officers to meet at West Point, N. Y., for examination of cadets' graduating class, and other cadets, instead of Assistant Surgeon Ekwurzel.
- MEARNS, E. A.**, Major and Surgeon. Ordered to proceed from this city, where on leave, to Fort Sill, O. T., to accompany First Squadron, Eighth Cavalry, to Manila, P. I., and upon arrival to report to the commanding general of the Philippines Division, for assignment to duty.
- MURTAGH, JOHN A.**, First Lieutenant and Assistant Surgeon. Ordered to accompany Second Squadron, Thirteenth Cavalry, from the Presidio of San Francisco, Cal., to Fort Myer, Va.; upon completion of which he will return to his proper station.
- RICHARDS, R. L.**, First Lieutenant and Assistant Surgeon. Having recently arrived from Manila, P. I., will report at Fort Mason, Cal., for temporary duty during the absence of Assistant Surgeon Murtagh, and in addition to this duty, will act as attending surgeon and examiner of recruits at San Francisco, Cal.
- SHIMER, IRA A.**, Captain and Assistant Surgeon. Relieved from duty at Fort Niagara, N. Y., and ordered to report in person to the Secretary of War for further orders.
- TORNEY, GEORGE H.**, Lieutenant Colonel and Deputy Surgeon General. In addition to present duties at the Army General Hospital, Presidio of San Francisco, Cal., ordered to take charge of the chief surgeon's office, Department of California, during the absence of the Chief Surgeon on leave.
- TRUBY, WILLARD F.**, Captain and Assistant Surgeon. Relieved from duty at Fort Preble, Me., and ordered to Fort Niagara, N. Y., for duty.
- WEBB, WALTER D.**, First Lieutenant and Assistant Surgeon. Granted three months' leave of absence.
- Navy Intelligence:**
Official List of Changes in the Medical Corps of the United States Navy for the week ending May 27, 1905:
- ANDERSON, F.**, Medical Inspector. Ordered to report to the Command Officer, Marine Barracks, Washington, D. C., for duty at those barracks.
- BROWN, H. L.**, Assistant Surgeon. Detached from the Naval Station, Guantanamo, Cuba, and ordered to the *Texas*.
- CORDEIRO, F. J. B.**, Surgeon. Ordered to the *Yankee*, sailing from New York about June 7, 1905.
- GATEWOOD, J. D.**, Surgeon. Detached from the *Yankee* and ordered home to await orders.
- GRAYSON, C. T.**, Assistant Surgeon. Detached from the marine barracks, Washington, D. C., and ordered to the *Maryland*.
- HOYT, R. E.**, Assistant Surgeon. Detached from the *Texas* and ordered home to await orders.
- PUGH, W. S., JR.**, Assistant Surgeon. Detached from the *Prairie* and ordered to the naval station, Guantanamo, Cuba, with additional duty on the *Monongahela*, sailing from New York about June 2, 1905.
- SHAW, H.**, Assistant Surgeon. Detached from the *Yankee* and ordered home to await orders.
- STALNAKER, P. R.**, Assistant Surgeon. Ordered to the Naval Hospital, New York, N. Y.
- STOKES, C. F.**, Surgeon. Ordered to additional duty as a member of the Anatomical Board of the District of Columbia.
- WARNER, R. A.**, Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.
- WIEBER, F. W. F.**, Surgeon. Detached from the *Prairie* when put out of commission, and ordered home to await orders.
- ZALESKY, W. J.**, Assistant Surgeon. Detached from the Naval Academy and ordered to the *Yankee*, sailing from New York, June 7, 1905.

Births, Marriages, and Deaths.

Born.

WINGERSKY.—In Boston, Massachusetts, on Monday, May 8th, to Dr. A. S. Wingersky and Mrs. Wingersky, a son.

Married.

ANGLE—GARRETT.—In Danville, Virginia, on Tuesday, May 16th, Dr. James B. Angle and Mrs. Mary E. Garrett.

DAVIS—WETHERILL.—In Baltimore, Maryland, on Thursday, May 25th, Dr. W. A. Davis and Mrs. M. K. Wetherill.

LONGIEL—SMITH.—In Brooklyn, N. Y., on Tuesday, May 16th, Dr. Edward Longiel and Miss Lillian Smith.

PATTERSON—DAY.—In Mindanao, Philippine Islands, on Tuesday, March 28th, Dr. Robert Uri Patterson, United States Army, and Miss Eda Beryl Loraine Day.

SCHULTS—UNDERWOOD.—In Bowling Green, Ohio, on Tuesday, May 16th, Dr. John Ward Shults and Miss Eudora Florence Underwood.

Died.

ALTWATER.—In Baltimore, Maryland, on Monday, May 15th, Dr. Edward W. Altwater, in the sixty-ninth year of his age.

ASCH.—In New York, on Friday, May 19th, Dr. Jacob H. Asch, in the sixty-sixth year of his age.

ATTERBURY.—In Macon, Missouri, on Tuesday, May 16th, Dr. Charles Atterbury, in the seventy-ninth year of his age.

DICKINSON.—In Baltimore, Maryland, on Tuesday, May 23rd, Dr. Albert H. Dickinson, of Pennsylvania, in the seventy-seventh year of his age.

FISCHER.—In Pittsburgh, Pennsylvania, on Sunday, May 21st, Dr. Erwin Fischer.

GRIDLEY.—In Binghamton, N. Y., on Friday, May 19th, Dr. S. D. Gridley, in the seventy-second year of his age.

HARRIS.—In Pensacola, Florida, on Friday, May 19th, Dr. Hatten N. T. Harris, United States Navy.

HEWITT.—In Cincinnati, Ohio, on Wednesday, May 17th, Dr. S. M. Hewitt.

KLEINSCHMIDT.—In Washington, D. C., on Saturday, May 20th, Dr. C. H. A. Kleinschmidt, in the sixty-seventh year of his age.

LIME.—In Aberdeen, South Dakota, on Tuesday, May 9th, Dr. William M. Lime, in the eighty-fourth year of his age.

LOWENTHAL.—In Hoboken, New Jersey, on Sunday, May 14th, Dr. Ernst J. Lowenthal, in the ninety-second year of his age.

MILLER.—In Greenpoint, N. Y., on Monday, May 22nd, Dr. Maud Miller, in the thirtieth year of her age.

THOMPSON.—In St. Paul, Minnesota, on Monday, May 15th, Dr. J. W. Thompson, in the sixty-eighth year of his age.

XANTEN.—In St. Paul, Minnesota, on Tuesday, May 16th, Dr. Frank A. Xanten, in the fifty-second year of his age.

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WHOLE No. 1384.

Lectures and Addresses.

THE MODERN DOCTOR.*

By A. JACOBI, M. D., LL. D.,

NEW YORK.

Our first medical traditions date back to the East Indies and Egypt; our first real knowledge is derived from Hellas, the mother of the world's culture. Even Hellas had no regular physicians until the period of Lycurgus. It is true that Homer eulogizes the man of healing, but medicine was mostly theocratic. Gods, demigods, and their priests healed the sick. It was Apollo who smote men and armies with infectious diseases, and again relieved and saved them. But as there were always those who were sick and injured, attempts to aid them were the results of sympathy. Herodotus tells us that in Babylon the sick person was carried to the market place and took his choice from among the various cures advised by the multitude. In Greece the temples of the gods in which the priest practised celestial fraud and secured terrestrial experience, the tablets on which individual ailments and remedies were collected accumulated a store of available advice. But the translucent sky of Hellas did not permit of a predominance of obscurantism; her shrewd politicians and profound philosophers would not be satisfied with the mental slavery engendered by credulity; in the absence of manifold knowledge of natural things they began to philosophize.

Empedocles taught a theory of affinities—he called them love and hatred—that regulated the globe, which was composed of four elements, viz.: air, earth, water, and fire. In the animal body these were represented in blood, mucus, and yellow and black bile, and laid the groundwork for a humoral theory, while Democritus and Epicurus established the first atomistic theory and the solidist pathology. In the last century before Christ this was elaborated by that learned and

popular Greek physician of Rome, Asclepiades. Hippocrates was brought up in the theories of Empedocles, but never was there a more observing, empirical, reasoning, and practical mind than his; never a warmer heart, a more ethical conscience, or an intellect freer from hypothetical or unfounded assumption.

Neither Aristotle nor Plato appreciated Hippocrates at his full value. Though the former had all and more than the learning of his period, he was too much of a theorist like Plato himself to understand or to follow the great physician in his empiricism and the observation of facts. But it was Aristotle, and after him Herophilus, and two centuries later Galen, who added immensely to the knowledge of anatomy. Thereby they created a foundation for surgery, which during the reign of the school of Alexandria nobody had the unscientific tendency, rather prevalent with us, to separate from medicine. Galen could have continued to be the idolized creator of medicine to our own times if he had been able to keep apart from the speculations of Greek philosophy and had clung to the Hippocratic method of observing without theorizing.

Still, his means for obtaining knowledge were limited. His anatomy is that of animals; the teachings of the Koran, centuries afterwards, were opposed to the study of *human* anatomy, and both Galen and the medicine of the Arabs, while adding profusely to what we should call clinical and pharmaceutical knowledge, fell short of being the elaborators of Hippocratic medicine. Still, Galen and Aristotle controlled the thinking of the world until the era of Bacon, for fifteen hundred years.

Such an unbounded influence is never exerted by a single man anywhere except in religion or in science. In politics the gradual evolution of a nation, or of mankind, is not governed by an individual. No Alexander, or Cæsar, or Charlemagne, or Napoleon, or much smaller men with only a single thought in their heads like Bismarck, could have shaped the world anew, if the social and political situation had not favored

* An address delivered at the commencement exercises of the Washington University Medical Department, St. Louis, Mo.

them. History made *them*, but in science single men may make history. So did Paracelsus when he discarded the yoke of Galen, who had reigned undisturbed 1,600 years. So, towards the end of the eighteenth century, did Morgagni, when he introduced anatomical thinking into medicine; Haller, when he taught the functions of different organs, mainly the muscles, and discovered the existence of sensitive nerves, and of the different directions of nerve currents. So did John Hunter, when he established pathological anatomy and experimentation—for that is what he founded when he preached the paradoxical text: "Do not think, try"; Jenner, when he laid the foundation of sero- and organotherapy; Bichat, when he created histology. That is what Virchow did—guided by his predecessors and by Schwann and Schleiden—when he fixed the throne of life in the invisible cell; or Pasteur, when forever he demonstrated the omnipresence and omnipotence of the unseen microbe. "The universe itself is narrow," says the poet, "when compared with the vastness of man's brain."

Still, the few centuries following the time of Bacon and of Paracelsus were barren in their effect on clinical medicine. Sydenham, Boerhaave, Van Swieten, and Peter Frank were great and influential, but the foundation of medicine was not sound, and wanton systems followed one another both in philosophy and medicine.

The clouded mental atmosphere produced two peculiar systems, the modifications of which claim our attention this very day. They were Mesmerism and Hahnemannism. Mesmer was not always a fraud. Contrary to most frauds he was learned, but his mind was always tinged with mysticism. His very inaugural thesis, on the influence of the planets on the human body (1766), betrays him. He sank so far as to treat diseases by animal magnetism at a distance. Our present fakirs are only shallow imitations.

Hahnemann began his career with a paper published in 1796. Within a few years he completed his teachings, the principal of which were as follows:

The only vocation of the physician is to heal; theoretical knowledge is of no use. In a case of sickness he should only know what is curable, and the remedies. Of the diseases he cannot know anything except the symptoms. There are internal changes, but it is impossible to learn what they are; symptoms alone are accessible; with their removal by remedies the disease is removed. Their effects can be studied in the healthy only. They act on the sick by causing a disease similar to that which is to be combated, and which re-

solves itself into this similar affection. The full doses required to cause symptoms in the well are too large to be employed as remedies for the sick. The healing power of the drug grows in an inverse proportion to its substance. He says literally: "Only potencies are homœopathic medicines." "I recognize nobody as my follower but him who gives medicine in so small doses as to preclude the perception of anything medicinal in them by means either of the senses or of chemistry." "The pellets may be held near the young infant when asleep." "Gliding the hand over the patient will cure him, provided the manipulation be done with firm intention to render as much good with it as possible, for its power is in the benevolent will of the manipulator." Such is the homœopathy of Hahnemann, which is no longer recognized in what is called homœopathy to-day.

A modern critic (Tagel) says of Hahnemann's teaching that "his new system, which was announced with ferocity, and appeared unintelligible and crude to a sound mind, could not but impress the multitude, which did not differentiate between one bad logic and the other. His contempt for actual observations and experience pleased the ignorant, his violent criticisms of everything preceding him appealed to the unschooled protestant mind; indeed, he compared his cause with the fight of Protestantism against Catholicism; his very violence tallied with the revolutionary spirit of the time; the mysticism of the medicinal power of a substance when reduced to an unthinkable minimum was an astounding exemplification of the superiority of the spirit over the body; the ridicule and persecution to which his teaching and his vehemence exposed him were claimed as martyrdom."

Moreover, the homœopaths had a real martyrdom. Some sixty years ago the regular profession of the United States turned against them with the same vehemence that was exhibited by Hahnemann himself and his first apostles. That was taken by the American public as unfair; it always takes the side of those who are or appear to be persecuted. From that time dates the success of homœopathy in America, and its conquest of the hearts and minds of a large portion of the public. That is why homœopathy had a longer life than any other system which was the outcome of any man's mere thinking or mere imagining. Indeed, all systems are of that origin—Stahl's, Brown's, Rademacher's, Thomson's, no matter whose. To-day, however, medicine has reached that period of evolution which no longer permits it to be called a system. Since it came to be studied like one of the natural sciences, like biology, there are no schools any

more, but simply medicine. Homœopathy also has undergone changes like everything mortal in its own ranks. We in New York know that better than most States. Twenty-five years ago there were in our city a hundred medical shingles with the title homœopath painted on them. I believe there has not been one these ten years. The examination papers of the State Board of Examiners are the same for all the three boards, with the exception of those questions which refer to *materia medica*. A goodly number of the practitioners who are called by the public by their former name never use it themselves; there is no doubt that many who graduated from a homœopathic college and are called homœopaths by the ever faithful ladies of the hotel piazzas are satisfied to be practitioners of medicine. And I have reason to believe that the time is not distant when there will be no school, no sect, but medicine only. If a practitioner, after having, by passing his examinations, satisfied the people of the State that he is competent, chooses with the consent of his patient to regulate his therapeutic measures to suit himself or his patient, that is his own taste or business. For remember what we have sworn to in our Hippocratic oath: "I will follow that system of regimen which according to my ability and judgment I consider for the benefit of my patient." But I believe firmly that in a short time we shall have one board of examiners in place of three, and one solid body of medical men willing and competent to fight for the welfare of the public against quackeries of all sorts.

In New York State we had year after year to convince the legislature that the claims of so called osteopathy and others just as pretentious but less aggressive than Christian Science were contrary to common sense and the interests of the people. When lately I read before the committee of the legislature the following alleged definition of osteopathy—it cannot be learned by heart—as contained in the bill in which they asked recognition and a special board of examiners—please to listen: Osteopathy, means that science or system of healing which treats diseases of the human body "by manual therapeutics for the vital remedial forces within the body itself, for the correction of misplaced tissue and the removal of obstructions or interferences with the fluids of the body," all without the internal administration of drugs or medicines—and asked them whether they understood what it meant, and told them that I did not, I knew that this legislature at least was proof against the claims of osteopaths to have a board of State examiners of their own.

A few weeks ago a patient with the symptoms of a weak heart muscle, whom I had seen a few times, asked me whether I approved of his having

consulted, upon the advice of a friend, an osteopath. When I told him that I did not approve of being insulted by his asking me whether I consented to his consulting a quack he appeared crestfallen, and left. He reappeared after some little time to apologize, as he said, for having proposed a question I disliked to hear. My reply was: "Do not apologize to me, apologize to yourself. I can understand that there are ten thousand Catholics in New York who are cured of certain nervous diseases or disorders by kneeling before a Maria, or by praying to a saint; I can even appreciate that hysterical men and women are benefited by the confidence they have in what they are pleased to call Christian Science; but it takes a frame of what you call your mind and a mental darkness which are not intelligible to me to believe that any disease can be influenced by the anatomically and physically impossible feat of twisting a spinal bone this way or that way."

(To be continued.)

Original Communications.

HYPODERMATOCLYSIS.*

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In combating disease in the human organism there are three methods at our disposal; that is, there are three ways in which we may attempt to relieve our patients. First, by elimination; in this an effort is made to remove from the system the deleterious effects of disease. Second, the stimulation of the internal secretions, by this means increasing phagocytosis and the formation of antibodies. Third, the introduction of an antitoxic substance ready formed, into the circulation and endeavoring by a chemicobiological action to destroy either the germ or the toxine which it produces.

In calling your attention to the subject of hypodermatoclysis, I make no claim to have discovered something new, but only to have done considerable work in this line, and I think it a proceeding either not properly understood or greatly neglected.

A quotation from Huxley, which has been made to do much service of late, is quite appropriate here: "Let us sit down before *fact* as a little child, be prepared to give up every preconceived notion, and to humbly follow where Nature may lead." In order to go fully into the subject, I shall have to premise and call your memories back to the theories of protection and immunity. "This is essentially an age of progress and we find new and improved ways of approaching and solving problems. In this ad-

*Read before the Clinical Society, Portland, February 10, 1905.

vance we cannot fail to be forcibly impressed with the tendency of the age to discover and utilize more accurate and more practical methods of work; as medicine is placed more and more firmly upon a scientific basis, practical clinical methods of investigation with clinical studies of abnormal conditions and a scientific application of our knowledge in the treatment of disease take the place of theory.

"Practical clinical medicine is becoming the demand of the age. Speculative theories must give way in the presence of scientific realisms. Methods of greater accuracy and of more practical every day utility to the physician and surgeon must displace the earlier, uncertain, and less scientific methods of investigation and study" (1).

To properly study the practical application of a therapeutical method to the human economy, it is necessary to know the condition of the tissues to be affected both before and after the application—the modification or difference in these giving the result.

In the present state of our knowledge, it is somewhat more difficult to tell exactly how a remedy does good than it is to ascertain the fact that good has resulted from its use. Hypodermatoclysis no doubt acts to some extent by increasing the elimination of effete and toxic materials, but as it does not cause a large increase in the substance normally excreted by the kidneys, as proved by the normal or diminished amount of urea found in the urine after its use, it must accomplish its beneficent effect in some other way than by flushing out the system and diluting the toxins; there is no doubt a modicum of truth in this theory, but on the whole it is untenable.

The flushing out of the whole system and at the same time diluting and removing the toxins is a theory beautiful to contemplate in the abstract, and if it was only practicable we should have little trouble in curing our patients. An increase in the percentage of urea was expected after the use of saline solution, but in no case did this occur.

A study of the blood is of far more importance and gives us much valuable information. The theories of immunity while not heretofore applied to hypodermatoclysis seem to afford the most rational explanation of its beneficial action. There is a decided leucocytosis, and there is also a large increase in the number of erythrocytes produced by hypodermatoclysis. The leucocytosis has a direct bearing on the subject in the phagocytic theory of Metchnikoff and the erythrocytosis upon the oxygenation of the tissues; both profoundly affecting metabolism.

In an earlier part of this paper I spoke of calling to your minds these theories: I will now do so at

some length, using Sajous's (2) explanation (Sajous is quoted verbatim at times), the "Phagocytic theory of Metchnikoff is that the living cells seize upon and destroy the bacteria in the blood, the organisms that escape from one cell are seized upon by others, but if their multiplication is excessive they overpower the phagocytic leucocytes, and invade the blood stream. Various observers, Pfeiffer, Buchner, and others having demonstrated that the blood serum and other body fluids were likewise bactericidal; Metchnikoff ascribed this fact to the disintegration of the phagocytes, the properties of these cells being thus imparted to the serum. Bordet and other French observers showed this property to be due to two constituents of the plasma; the one (the specific immune body) circulates in the plasma according to Metchnikoff, and resists a temperature as high as 100° C. The other, cytase, thought to be derived from disintegrated phagocytes is destroyed at a temperature of 56° C. Cytase is considered by Metchnikoff as belonging to the category of trypsin. The view that the serum is endowed with bactericidal powers has been ably defended by Pfeiffer, Nuttall, and others. Buchner and Hankin isolated substances which they termed alexins, and to these bodies they ascribed the power to confer immunity. They were thought by Buchner to be derived from oxyphile leucocytes and kindred cells. Laschtschenka having isolated them from living leucocytes the bactericidal action was thought by Buchner to be due to a proteolytic enzyme similar to the ordinary digestive ferments. According to Gruber the bacteria cell walls were first made adhesive by the blood agglutinins and thus became vulnerable to the destructive action of the alexins.

"The side chain theory advanced by Ehrlich in 1897 aimed to harmonize the results so far reached in the study of natural and artificial immunity. This theory is not necessarily a complex one, and is based on recognized biological and chemical principles. The colonies of body cells differ from each other in their functional attributes. Nerve cells, muscle cells, gland cells, etc., each having a special affinity for certain drugs; the cerebrospinal cells having a special affinity for strychnine, the cardiac muscle cells for digitalis, the sweat and salivary gland cells for jaborandi.

"Now as toxins differ in no way from remedies in this particular, they are also specific owing to their affinities, toxin being also taken up by specific cells. This specific action represents the foundation of Ehrlich's theory. The theory itself is based upon the mechanism of cell nutrition in its mode of production of specific antitoxines, or bactericidal and antitoxic sera.

"The cellular protoplasm is very complex and Ehrlich assumes that each cell contains an active central nucleus and of groups of molecules or side chains; these extranuclear molecules he calls receptors. Since each of them has for its function the receiving of food molecules or haptophores (*ἀπρεψ*, to bring), a cell's nutrition is thus carried on through the affinity its *receptors* have for its haptophores.

"Unfortunately the receptors do not combine with nutritive substances only, but have an affinity for substances which may be their chemical analogues and which may include harmful bodies; thus a poison, toxine, or venom may contain the same elements and the same number of them as a nutrient molecule or haptophore, the atoms only being arranged differently (isomerism). Turpentine and oil of lemon each have the formula $C_{10}H_{16}$, though their properties are quite dissimilar. Ethyl formate and methyl acetate have the same molecular weight 74 and the formula $C_3H_6O_2$. It is possible then for a cell to take up any number of isomeric non-nutritive bodies, and when one of these happens to be toxic it is called a toxiphore. If the toxine is not sufficient to destroy the cell or inhibit its functions, the latter seeks to rid itself of the poison and to protect itself from any further aggression from this poison or its isomers. The toxic group of the haptophoric molecules attaches itself to the receptors and then reacts actively upon the cell proper; the receptors themselves being destroyed, the cell (in keeping with Weigert's theory of overproduction) not only reproduces them, but the process is so active that many more receptors are created than are required by the cell itself, and thus accumulate in the blood and lymph. These receptors still preserve their affinity for their specific haptophores, and their isomeric toxine; they therefore become cell protectors, capturing and holding the toxine before it reaches the cell."

Haffkine's prophylactic is a good illustration of this action, a toxine being introduced, the system forms its own antitoxine. I think it is probable that the saline solution stimulates the formation of receptors and thus protects. You know it is said by very good observers that the arrow poison used by the South Sea Islanders and other savage tribes is not effective against people who partake freely of salt in their food, although deadly to other animals. (8) Lambinet, quoted by Ashford and King, in their *Report of Anæmia in Puerto Rico*, found that immersion in a two per cent. solution of bichloride of mercury, or a three per cent. solution of lysol for one hour would not kill ova of the *Uncinaria Americana*, while a strong solution of salt was fatal. This is of course due to hyroscopic action and does not apply here. Again, Metchinkoff states

(and this is probably the gist of the whole matter) that his tryptic cytase acts only in the presence of salts, and that when relieved of its salts by dialysis the serum loses its hæmolytic power, but when the salts are restored to it this reappears. In pneumonia the chlorides disappear from the urine and accumulate in the lungs, as shown by Beale a number of years ago, their action in the lungs being no doubt to increase the efficiency of the protective action of the pulmonary fluids (3). Again the presence of proteolytic enzymes in the serum has been recently demonstrated by Delezenne and Pozerski, and the results confirmed by Hedin. The latter investigator states that the serum of the ox contains a weak proteolytic enzyme which acts in an *alkaline* medium. The origin of this enzyme we have traced as well as the increased alkalinity and the supply of salts necessary to render serum hæmolytic.

"The three prominent theories of immunity have several features in common, one of these is that the destruction of the bacteria in the blood serum is ascribable to a substance which Metchinkoff calls cytase. Buchner calls it alexin, and Ehrlich complement. Another is that the bactericidal body is derived from the leucocytes. Metchnikoff thinks it comes from the phagocytes. Buchner traced it to oxophylic leucocytes, while Ehrlich is inclined to believe that his bacteriolysins are derived from these cells. All three theories concur in recognizing that the blood destroys pathogenic organisms by means of a digestive (ferment) substance, and that this substance is derived from the white blood cells. This proteolytic ferment is believed by Buchner, Hankin, and Sajous to be supplied to the leucocytes by the ductless glands."

The sodium chloride solution itself probably has the action of a digestive ferment in the blood. A. Robin (4) announces that "a solution of a metal, in a proportion of .0009 to .0002 gramme to the cubic centimetre, has a most remarkable action when injected subcutaneously. It displays a physiological action, like that of a true ferment, out of all proportion to the minute amount of the metal employed. . . . The injection is followed by leucocytosis. Fourteen cases of pneumonia were treated and the crisis was hastened in each case, the temperature dropping to normal before the seventh day. . . . The metal ferments evidently stimulate the reaction of the organism, reinforcing the natural resisting powers and superposing on the vital and personal reactions a parallel activity revealed by the more rapid disappearance of the correlative symptoms of the infection. . . . The therapeutical use of the metal ferments is an attempt to apply in the clinic the new data furnished by physics and chemistry in the last few years in regard to radioactivity,

ionization, and atomic energy, diastases, zymases, minutely divided metals and catalytic phenomena." At this time when we are seeking antitoxic sera for all infectious diseases, saline solution is extremely useful and should be used in all cases when a specific antitoxine is not obtainable, as it acts much in the same way, only its field of action is greater and its applicability wider.

From experiments and observations which I have been able to make I can prove, I think, that the use of saline solution by hypodermatoclysis causes a decided increase in both the erythrocytes and the leucocytes. It is also probable, but not proved, except by the leucocytosis, that it stimulates the ductless glands to increased activity.

The following cases were undertaken to ascertain, if possible, the mode of action of hypodermatoclysis; the mode of procedure was this: A patient who was convalescent or suffering from some slight ailment was selected. The urine for twenty-four hours was saved and analyzed, on the day before the hypodermatoclysis was used, the twenty-four hours reaching up to the time of injection. Just before the saline solution was used, a count of the leucocytes was made and a hæmotocritic estimate made of the red cells. In some cases these were also counted. In a few cases an estimate of the hæmoglobin was made. Care was taken to make the counts and estimates on alternate days at the same hour, late in the afternoon, so that no meal had been partaken of for some five hours. From one thousand to fifteen hundred cubic centimetres of a nine tenths of one per cent. saline solution was injected and the leucocytic count and hæmotocritic estimates were made again in twenty-four hours; this was done in order to make a correct estimate of effects of infusion; an immediate count would have shown a lessening of both white and red cells, owing to greater fluidity of blood. The urinary analyses were made with particular reference to the chlorides and urates.

No differential count of the various forms of leucocytes was undertaken, as I regard them as transitional; belonging to the same class, presenting but slight differences in different situations:

CASE A.

	Erythrocytes.	Leucocytes.
	c.mm.	c.mm.
Before hypodermatoclysis.....	2,700,000	6,960
After hypodermatoclysis.....	4,500,000	11,800
Gain.....	1,800,000	4,840

A gain of 66 per cent. in red cells and of 69.5 per cent. of leucocytes.

CASE B.

	Erythrocytes.	Leucocytes.
	c.mm.	c.mm.
Before hypodermatoclysis.....	6,000,000	28,640
After hypodermatoclysis.....	5,000,000	48,000
Loss.....	1,000,000	Gain.....19,360

A loss of 16 per cent. in red cells, but a gain of 67.6 per cent. in leucocytes.

CASE C.

	Erythrocytes.	Leucocytes.
	c.mm.	c.mm.
Before hypodermatoclysis.....	3,700,000	8,600
After hypodermatoclysis.....	4,300,000	8,732
Gain.....	600,000	132

The percentage of gain here in reds was very good, amounting to 16 per cent.; the percentage of leucocytes was not materially increased, being only a little over 1 per cent.

CASE D.

	Erythrocytes.	Leucocytes.
	c.mm.	c.mm.
Before hypodermatoclysis.....	4,700,000	5,328
After hypodermatoclysis.....	4,900,000	6,397
Gain.....	200,000	1,709

The percentage of gain in red cells about 4 per cent.; in leucocytes over 30 per cent.

CASE E.

(Fleischel's)

	Erythrocytes.	Hæmoglobin.	Leucocytes.
	c.mm.	Per cent.	c.mm.
Before hypodermatoclysis.....	4,700,000	75	4,000
After hypodermatoclysis.....	4,900,000	104	8,680
Gain.....	200,000	29	4,680

A gain of a little over 4 per cent. in red cells. The leucocytes are more than doubled, being 117 per cent. gain. Hæmoglobin increased 29 per cent.

CASE F.

(Fleischel's)

	Erythrocytes.	Hæmoglobin.	Leucocytes.
	c.mm.	Per cent.	c.mm.
Before hypodermatoclysis.....	4,000,000	75	7,320
After hypodermatoclysis.....	4,200,000	80	12,928
Gain.....	200,000	5	5,608

A gain of 5 per cent. in red cells; 76.6 per cent. gain in leucocytes and 5 per cent. gain in hæmoglobin.

URINE.

CASE A.

Quantity in 24 hours.	Specific gravity.	Urea.		Chlorides.	
		Per cent.	Grains.	Per cent.	Grains.
Before hypodermatoclysis.....	1.015	833	2.7	123	0.4
After hypodermatoclysis.....	1.015	772	2.35	205	0.625

A marked increase in the chlorides, but a diminution in the quantity of urea excreted.

CASE B.

Quantity in 24 hours.	Specific gravity.	Urea.		Chlorides.	
		Per cent.	Grains.	Per cent.	Grains.
Before hypodermatoclysis.....	1.028	787	5.1	15.43	0.1
After hypodermatoclysis.....	1.014	752	2.2	162	1.05

Again an increase of chlorides and a decrease in urea. Quantity of urine increased greatly.

CASE C.

Quantity in 24 hours.	Specific gravity.	Urea.		Chlorides.	
		Per cent.	Grains.	Per cent.	Grains.
Before hypodermatoclysis.....	1.026	228	2.8	106	1.3
After hypodermatoclysis.....	1.028	207	2.4	123	1.425

Another increase of chlorides and a decrease of urea. Slight increase in quantity of urine.

CASE D.

Quantity in 24 hours.	Specific gravity.	Urea.		Chlorides.	
		Per cent.	Grains.	Per cent.	Grains.
Before hypodermatoclysis.....	1.018	262	2	68	0.52
After hypodermatoclysis.....	1.011	250	1.1	131	0.575

Urea again decreased, chlorides increased, as is quantity of urine passed.

	Quantity in 24 hours. c.c.	CASE E.				
		Specific gravity.	Urea.		Chlorides.	
			Grains.	Per cent.	Grains.	Per cent.
Before hypodermatoclysis	925	1.026	314	2.2	164	1.15
After hypodermatoclysis	1,660	1.016	461	1.8	220	0.86

Quantity of urine passed nearly doubled, urea diminished from 2.2 per cent. to 1.8 per cent., though, owing to increase in urinary secretion, the actual quantity of urea increased.

	Quantity in 24 hours. c.c.	CASE F.				
		Specific gravity.	Urea.		Chlorides.	
			Grains.	Per cent.	Grains.	Per cent.
Before hypodermatoclysis	870	1.019	282	2.1	148	1.1
After hypodermatoclysis	750	1.019	208	1.8	122	1.05

A decrease in percentage of both urea and chlorides.

The strength of the salt solution I have generally used was the so called normal physiological, which is 0.6 of 1 per cent. Recently I have been using a 0.9 of 1 per cent. solution, as according to Mathews (5) (*Annals of Surgery*, August, 1904), which strength of solution has the same freezing temperature as the blood. "If the solution is too concentrated the red cells shrink; if too dilute they first swell and later part with their hæmoglobin. The question of shrinking or swelling of the cells is determined by the osmotic effect and not by the chemical composition of the fluid. The osmotic behavior of blood plasma and saline solution is shown by a method based on the fact that two solutions having the same freezing point have the same osmotic pressure. Hemotocrit determination of the salt solution in which red cells neither shrink nor swell gives about 0.9 per cent. This then seems to be about the proper strength to use."

The physiological effect of hypodermatoclysis (probably) is to stimulate the ductless glands, causing an increase of the internal secretions. Certainly an increase of the leucocytes with a consequent increase of the enzyme, cytase, or alexin, increased phagocytosis, with an increase of Ehrlich's receptors; a very decided addition to the salts of the serum with an increase or restoration of its hæmolytic power; an increase in the alkalinity of the serum which, as has been shown, adds greatly to its bactericidal properties. The clinical effects of hypodermatoclysis are to raise the blood pressure, and to strengthen and regulate the pulse. The increase of the erythrocytes enables the blood to carry more oxygen, and the respirations are deeper and less rapid; the blood and tissues are more thoroughly oxygenated; the skin becomes moist (and warm if cold before). Diuresis is increased; the mind becomes clearer, sleep is promoted, the appetite is improved, the patient is encouraged, and there is a feeling of well being.

The following cases will illustrate the good effects of hypodermatoclysis:

CASE I.—Hæmorrhage and Shock.—This man was brought to the Marine Hospital at Louisville, Ky., suffering from the following injuries: The right leg had been torn off at the knee by being caught in the hawser line of a steamer, as she was being tied up. The line had become entwined around the man's leg and as the vessel swung around, the leg was first lacerated and fractured and then pulled off. Both bones of the left leg were also fractured. The shock was intense; there had been great loss of blood, the man being almost exsanguinated; hypodermatoclysis was begun at once, hot salt solution being used, and a rapid amputation at the middle third of the thigh was made. The man had bled so much before reaching the hospital, that there was no oozing from the stump; not even a jet from the femoral when pressure above was removed. The vessels could only be tied by knowing their relations; this all occupied about three quarters of an hour and during this time 1,000 c.c. of saline solution had been absorbed and the pulse at the wrist was perceptible. No one present thought the man could live, but the hypodermatoclysis was kept up and 3,000 c.c. was injected and absorbed in the next eight hours; that is, up to 9 a. m. At this time the patient was conscious, the pulse fast, but regular; during the day 2,000 c.c. more of the solution was used, the patient was given beef juice, wine, etc. This man recovered and when last I saw him was a living monument on a wooden pedestal, a pillar of salt, as it were, proclaiming the efficacy of hypodermatoclysis.

CASE II.—La grippe. Double pneumonia. White, male, age 31 years, place of nativity, Maine. Entered the hospital suffering from influenza. In a few days he developed pneumonia in left lung. The clinical notes state: Pronounced dullness at apex of left lung, both behind and in front, with crepitant râles in left side posteriorly; also considerable pain in left side; mucous and moist râles throughout chest; hyperresonance on right side; temperature, 40° C.; pulse weak and irregular; stimulants and creosotal were used. Two days later (November 21st) the right lung noted as being affected like the left, percussion showing marked dullness on both sides with crepitant and moist râles throughout chest. Pulse weak and irregular; missing every seventh beat, gaseous and easily compressible. No effusion in pericardium. Strychnine and nitroglycerin every four hours. November 22nd, patient extremely weak, pulse irregular, missing one in every five beats and wavering. Respirations, 60 a minute, temperature subnormal 35.8° C., about 96.5° F. Skin cyanosed and bathed in cold perspiration, pupils dilated, man seemed to be dying; 1,500 c.c. hot saline solution injected under the skin of abdomen (hypodermatoclysis), patient reacted, skin became warm, pulse stronger and more regular, missing one in twenty. Stimulants continued, strychnine, digitalis, etc. November 23rd, man again in collapse, temperature 36° C., pulse thready, 120 a minute; hypodermatoclysis again resorted to, 1,500 c.c. of solution being used; patient reacted slowly, slept some through the night, first good sleep he has had for several days. From this time patient improved and made a good recovery.

There was no swelling or febrile reaction in any

of the cases. One case, of rheumatism, in which there was some swelling at the site of puncture, with a rise in temperature, was thrown out.

In a number of cases of enteric fever when the patient was extremely ill, with a low muttering delirium, subsultus tendinum, dry skin, dry cracked tongue, etc., I have found that the use of from 1,000 to 1,500 c.c. of saline solution by hypodermatoclysis produced a refreshing sleep, with subsidence of delirium, and a moist skin and tongue. It is in fact in just these cases where we seem to have done all we can and nature appears to be giving up the struggle that hypodermatoclysis comes in and often saves life. With this treatment there is a lessening of mortality, a more satisfactory convalescence, the patient is made comfortable, and there is less thirst with an increase in the amount of urine secreted.

According to Clark and Norris (6) the intraperitoneal infusion of saline solution minimizes the dangers of pyogenic infection. I seldom make a laparotomy without infusing into the abdominal cavity a quantity of saline solution just before tying the last stitch.

(7) Heidenburg (*Roussky Vrach, N. Y. Med. Jl. and Phila. Med. Jl.*, April 23, 1904) calls attention to the uses of saline solutions subcutaneously in the treatment of the insane. The results of this treatment consist in calming the excitable patients, promoting sleep and appetite. It is indicated in mental diseases of infectious and autotoxic origin. As a rule the insane bear these infusions well and do not object to them.

Indications: Personally I can speak of hypodermatoclysis only in hæmorrhage, shock, uræmia, puerperal eclampsia, typhoid fever, pneumonia, and anæmia; in these cases it often saves life and always does good.

In poisoning from illuminating gas, ether, and opium this procedure is highly recommended, as it dilutes the poison and favors elimination. In diseases attended with great loss of body fluids, such as cholera, cholera infantum, enterocolitis, the remedy is of great service. It is also one of our best remedies in septicæmia. On account of the leucocytosis it produces, saline solution should be used in puerperal sepsis. As before stated it is excellent in rheumatism and infectious diseases generally. The remedy is recommended in diabetic coma, restoring consciousness and prolonging life.

Hypodermatoclysis is not a remedy for everything. To the surgeon I would say, use it always after hæmorrhage, in shock, and often to prevent shock; he will find it his *best* friend; to the obstetrician in eclampsia, and after post partum hæmorrhage, provided the hæmorrhage is well under control. To the physician, I say use it in

anæmia, enteric fever, and pneumonia; in all of these it will help him, and in the last two mentioned will often save a precious life when all else has failed.

Since writing above I have had excellent results in several cases of rheumatism, both muscular and articular, by use of hypodermatoclysis; in one case the pains disappeared as if by magic.

I am indebted to Pharmacist Charles W. Stephenson for making the urinary analyses, and to Dr. F. Leo Quigley for making the blood counts.

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Howard University, of Washington, D. C., graduated the following in medicine on May 25th:

Thomas Austin, Milton H. Auter, York W. Bailey, Allen Everett Beatty, John Wesley Salter Beckett, Norman Hamilton Brewster, David Thomas Cardwell, James Cleyborne Carper, Wallace B. Christian, Frank Frederick Davis, Edward V. Fitzgerald, S. Bernard Hughes, John C. Hunter, Mary Anna Israel, James F. Johnson, A. St. Clair Jones, Malchiah Maxwell Lucas, Hamilton St. Clair Martin, William Jackson Parks, Charles Sumner Taylor, and William James Thompkins.

American Chemical Society.—The thirty-second annual meeting of this society will be held at Buffalo, June 22nd to 24th, in the rooms of the Buffalo Academy of Natural Sciences. Papers will be heard as follows:

Address of Welcome, by Mr. Herbert P. Bissell; Response, by Mr. Francis P. Venable; The Classification of the Carbon Compounds, by Mr. Marston T. Bogert; Some Recent Advances in Physiological Chemistry, by Mr. John H. Long; The Electro-chemical Industries of Niagara Falls, by Mr. Francis A. J. Fitzgerald; Tellurium, by Mr. Victor Lenker. Reports from universities and colleges on research work.

Baltimore University School of Medicine.—The annual commencement of the Baltimore University School of Medicine took place on May 3rd. Appended is a list of the graduates:

Max D. Bier, of New Jersey; E. E. Brophy, of New York; W. A. Dietrich, of New Jersey; Edward W. Gardner, of New York; M. A. Godfrey, of Massachusetts; Thomas I. Kealy, of Pennsylvania; John C. Kibler, of Pennsylvania; Daniel H. Leddy, of Rhode Island; A. D. Lindemann, of New York; B. F. Matheny, of West Virginia; S. W. Riddell, of West Virginia; D. E. Ritter, of West Virginia; Victor I. Shapiro, of Massachusetts; A. J. Thome, of Pennsylvania; Z. A. Thompson, of West Virginia; J. W. Webb, of West Virginia.

OBSERVATIONS ON THE DIAGNOSIS AND TREATMENT OF HERPES ZOSTER.*

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NEW YORK,

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It is my desire to bring to your attention the efficacy of certain therapeutical measures which in my experience have been of benefit in the treatment of herpes zoster, and I hope to be able to convince you of the value to the patient in all cases of an early diagnosis and of immediate active treatment. A study of the literature of the subject will show that the treatment recommended consists of internal remedies for the pain and local applications for the eruption. In my opinion the principles guiding the administration of internal remedies ought to be based especially upon the character of the disease, although remedies for the relief of pain and local treatment for the eruption should be employed.

In order to form a correct diagnosis one should necessarily be familiar with the symptoms of the disease as it usually occurs and likewise with other symptoms showing unusual characters. The symptoms of this disease vary in accordance with the severity of the affection, the location of the eruption, and the aetiology of the disease.

Herpes zoster may be defined in broad terms as an acute inflammatory disease of a definite duration and course, characterized by the presence upon the skin of lesions which when fully developed are vesicular in character with a tendency to coalesce and form bullæ. The lesions group to form patches of various sizes and the lesions of a single patch are usually of about the same age, although they may differ in age from the lesions of other patches or even from the other groups of the same patch. The eruption is almost always unilateral and situated on a definite anatomical area corresponding generally to the region supplied by one of the cranial or spinal nerves.

The region ordinarily affected is the dorsopectoral in which the disease involves the intercostal nerves. The lesions commence as papules and become vesicles when fully developed. An erythematous condition of the region occupied by the fully developed lesions usually precedes the appearance of the characteristic zoster eruption. This erythema is limited usually to the region supplied by the special nerve or nerves affected and extends generally some distance beyond the area of the eruption, and again it sometimes appears diffusely over large areas of the body where

the characteristic vesicular lesions do not form. This early erythema may be absent or possibly very slight and may be sharply limited to the individual areas corresponding to those occupied later by the separate groups of vesicles. It may be present only in a portion of the affected nerve region, as some of the groups of vesicles may arise upon apparently a normal skin, others upon a part showing a mottled reddish appearance and others upon a well marked diffuse erythematous area. This erythema diminishes markedly or entirely upon the appearance of the vesicles, although an erythema in connection with the individual vesicle formation is always present, each vesicle having an erythematous base of greater or lesser extent.

Red miliary papules quickly appear upon this erythematous base; these generally develop within a few hours to twenty-four or more into vesicles that vary in size from a pin head to a pea. The lesions are arranged into groups of different sizes. The groups form patches of greater or less size which are irregularly distributed over the affected area. The lesions of a single group vary in number from two, three, or more to perhaps ten, fifteen, twenty, or more, and the groups are separated from each other by normal skin. Isolated lesions are found frequently some distance from the groups forming the large or small patches. Some of the lesions in a formed group may not develop into vesicles, but abort at the papular stage. The lesions, however, have a tendency to increase in size and become fully developed vesicles that may coalesce to form larger or smaller bullæ. Such is the case especially with the lesions in the central part of a group.

These vesicles and bullæ show but few changes in character for several days. The clear serous contents then become turbid and finally puriform and as a rule dry into yellowish brown crusts in about a week to ten days after their appearance, leaving a dark red or pigmented spot which may disappear later. There are many cases in which cicatrices or pigmentation remain permanently, but this is infrequent when the disease is located in the pectoral region. The eruption lasts from one to two, or even three weeks, usually running its natural course in about two weeks, which course may be curtailed and also modified in severity by certain therapeutical measures.

The above summary description of the eruption represents a classical case of zoster pectoralis as regards the objective characters. There are, however, many variations; thus, there are cases in which only an erythematous stage with small papule formation occurs *without* vesicle formation and in which the life duration of the lesions is lim-

*Read before the Medical Society of the County of Westchester, N. Y., March 21, 1905.

ited to a few days. Cases have been reported where no eruption has occurred, not even an erythema, the diagnosis having been made on the location and character of the pain.

Hæmorrhage into some of the vesicles of the lesions may also occur and brownish crusts form upon drying of the contents. This form occurs oftener in elderly persons or in those of lowered nutrition or with a dyscrasic condition. The following is the history of a case at present under my care:

A. B., aged 65 years, occupation, laborer. The patient is apparently in good physical condition and without any record of previous serious illness. The eruption is an example of zoster lumbosacralis and consists of a large number of patches of various sizes, the largest one containing fully one hundred lesions. The lesions vary in size from a pin head to a pea and only a few of the larger lesions have coalesced to form bullæ. A large number of the lesions did not continue to the development of well formed vesicles, but seemed to abort in an early vesicular stage, the contents being serosanguineous in character imparting to the lesions a dark red color. Some of the lesions contained very little blood and others had clear serous contents. The case was one of zoster with hæmorrhage into some of the lesions and was not therefore one of pure hæmorrhagic zoster. Brownish crusts covered the lesions which crusts were subsequently thrown off in the usual manner. The entire cutaneous area occupied by the lesions showed a hæmorrhagic exudation into the tissue giving the surface a dark color.

Previous to the appearance of the eruption there was a numb feeling of the part—anæsthesia—as the patient could prick himself with a needle without causing any pain. He had also anorexia, fever, and sleeplessness. The numbness disappeared three days later and one day before the appearance of the eruption. It was followed by sharp, lancinating pains which continued in varying degrees for several days until he was treated for this condition. The case is still under my care, hence at the present time a complete history of it cannot be given nor a statement made whether there will be a recurrence of the pain.

The microbic origin of the disease may be assumed from the history of this case as evidenced in the (1) prodromal symptoms, (2) definite course and, more particularly, (3) hæmorrhagic character of the exudation in a large number of the lesions, while some of the other lesions contained clear serum.

There is a form called zoster hæmorrhagicus in which the hæmorrhagic vesicle is the type. The vesicles usually burst in this form and an ulceration occurs with destruction of tissue, as there is always more or less destruction of the cutis papillæ. After perhaps a period of two or three months the part heals by granulation or cicatrization.

This hæmorrhagic form seems to occur more frequently in zoster occupying some portion of the head region, especially zoster ophthalmicus.

A mixed infection occurs in some cases from pyogenic organisms, resulting indirectly from scratching or other injury to the lesions, and an impetiginous-like condition arises which may make the original zoster lesions difficult of recognition.

Cases of bilateral zoster occur exceptionally either on corresponding regions or on those quite distinct from each other.

The eruption is preceded in the majority of cases by pain in the region where the cutaneous lesions appear. This pain varies from a dull aching or throbbing to a sharp lancinating, and is often burning or itching in character, accompanied at times by paroxysms most severe at night. It may be so intense as to interfere with the use of the muscles of the part and when situated in the thoracic region may cause the physician to suspect an attack of pleuritis. It may even affect neighboring nerves outside of the diseased cutaneous area and may be quite disproportionate in intensity to the extent of the eruption. Sometimes pain may be absent, especially in children, but, as already mentioned, it is usually present in a greater or less degree in nearly all cases.

This difference in the amount of pain is due possibly to a difference in the intensity of the inflammatory process at the seat of the cutaneous lesions, or to the injuring action of this process on the spinal ganglia. It might also be attributable, in the case of children, to a difference in the histological structures of the parts at this period of life, or to a lessened virulence of the organisms and their toxins in consequence of which there is less injury to the tissues or to both.

As an example of long continued hypersensitiveness and even pain I will cite a case I saw some weeks ago of a woman aged 45 years, who had had a severe attack of zoster occipitocollaris, one year ago. As reported to me, the eruption consisted of patches that were both numerous and large. The lesions were well developed, forming large bullæ in most of the patches and lasting about twenty days before drying up. This patient informed me that she had never been entirely free of pain, tenderness, itching, or discomfort in the affected region since the time of the eruption, although there were intervening periods in which the condition was apparently almost normal.

I have knowledge of one case in which severe neuralgia lasted over twenty years until the death of the patient from cancer of the stomach. This patient was obliged to resort to morphine for the relief of the pain and became eventually addicted to the morphine habit.

There is often a painful swelling of the corresponding lymphatic ganglia occurring at the same time, or even preceding the cutaneous eruption. This primary or secondary lymphadenitis and the lymphangitis which sometimes follow suppuration of the vesicles may be the cause of painful phenomena.

Other premonitory symptoms, such as fever, malaise, headache, and digestive disturbances are quite frequent and tend to show an incubation period and the infectious nature of the disease. These prodromal symptoms may persist several days after the eruption appears, but they usually disappear rapidly at that period. The pain, however, often continues much longer and, as previously stated, when persisting after the eruption it is obstinate to treatment and has been known to last months or even years, rendering life more or less miserable. These severe and persistent pains seem more likely to occur in aged or neurotic individuals, and may remain absent for weeks at a time and reappear with greater or lesser severity.¹ I am satisfied that the importance of endeavoring to prevent these pains is often not sufficiently considered when a case of zoster first comes under our professional care.

There may occur, after the healing of zoster, a muscular paralysis, although quite rare, which is localized to the region previously occupied by the eruption. In such cases there are presented the ordinary symptoms that are observed in muscular paralysis of children as regards muscular atrophy and the reaction of degeneration. Hardy has reported one case of fatal ascending myelitis following a thoracic zoster. Facial paralysis in connection with cervical zoster is the most frequently observed form of paralysis. Hutchinson has reported one case where there was a total paralysis of the motor oculi communis nerve with ptosis and mydriasis occurring six days after the eruption.

I will now pass around a number of illustrations of pectoral zoster, as it usually appears in this region, and which form I have especially attempted to describe. You will note in these illustrations: the region of the body occupied by the eruption, the number of groups of lesions, the large number of lesions in a group, the marked similarity in age of the lesions of a single group, the frequent difference in ages in the lesions of the different groups, the inflamed base or seat of

the lesions, and the vesicular and bullous character of the lesions; also the puriform appearance of many of the vesicles and bullæ, especially in the central part of the patches.

As showing variation in the number of groups, I will report a case lately under my observation:

Case of a girl, 10 years of age, who complained of pain over the spine, first dorsal region, followed by three small areas of inflammation, upon which well marked lesions appeared the following day. These inflamed areas appeared, one opposite the first dorsal near the spine, a second near the right mamilla, and a third between the mamilla and the anterior median line. The temperature on the day of the first appearance of the erythematous patches was 100°, and on the following day (the time of commencing formation of vesicle lesions) was 99.7°.

Blood examination showed a condition of secondary anæmia. There was no diminution or increase in the number of leucocytes or of red corpuscles.

The lymphatic glands of the axilla of the same side were inflamed, tender, and much enlarged, and there was considerable pain on the right side of the thorax in the area afterwards occupied by the eruption.

Following is a description of the eruption as it appeared in the three areas occupied by the lesions: Two papular lesions situated closely together half an inch from the median line and opposite the first dorsal vertebra, both pin point in size, slightly elevated, reddish in color, the redness disappearing on pressure and returning quickly with a feeling of resistance in the part, showing exudation into the tissues. Both lesions were exactly of the same age and were situated upon a reddish base. One inch below and very slightly further from the spine than the first lesion there was a small patch, one third of an inch in horizontal and one sixth of an inch in perpendicular diameter, sharply limited, elevated, reddish in color, the redness disappearing upon pressure. Observing the spot immediately after pressure showed the apparently erythematous patch to be composed of three individual lesions, little papulovesicles, pin point in size.

From the lower angle of the scapula on an area extending from the lower border of the scapula to the ninth rib and from one and one half inches to the right of the posterior median line, and one and one half inches to the outer side of the lowest point of the scapula, there was a patch formed by five groups of lesions. The largest group was situated near the spinal cord and was one and one half inches in perpendicular diameter and one and one quarter inches in transverse diameter, and was composed of over thirty lesions; these lesions, forming a single large group, were also arranged to form smaller groups.

The lesions of the groups varied in size from that of a small pin head to four or five times that size, but were evidently of the same age and character, varying *only* in size. They were sharply limited, elevated, reddish in color, and in a vesicopapular stage, slightly more papular than vesi-

¹As an example of zoster coupled with severe persistent neuralgic pain in aged persons, I will mention a case in a man, aged seventy-five years, who one year ago had zoster dorsospectoralis of the usual duration as regards the eruption. This patient has ever since suffered from intense and continuous pains to the present time, experiencing exacerbations in damp weather. He did not receive any treatment during the eruptive period of the disease. Numerous other similar cases might be cited.

cular. Two of the groups at the lower border of the scapula, consisting of about one dozen lesions in each group, presented similar characters as regards color, size, etc., to the lesions just described. One group, which was lowest and nearest to the axillary line, contained one lesion like those already described, and very small pin point sized lesions, evidently of the abortive type, that is, lesions that will not develop beyond the papular stage. The fifth group of lesions was situated directly below the first described and consisted of a large pea size patch which, upon pressure, was seen to be composed of three small papulovesicles, with the skin between them reddened, so as to cause the little group of lesions to appear as one large lesion.

There were no lesions from the seat of these now described until the mammary region was reached. One half of an inch above and to the inner side of the right mamilla was a patch, triangular in shape, one inch in length, from apex to base, and one half an inch in diameter at the base, which base lay toward the shoulder and the apex was directed downward and inward. It was composed of three separate groups of lesions, the oldest of which, situated in the angle of the base nearest the shoulder, was large, pea-sized, elevated, with a reddish periphery, the redness disappearing partly upon pressure.

The central portion was covered by a honey-like crust, beneath which was clear serum that upon pressure easily flowed from beneath the crust. There was a triangular shaped group in the other angle of the base forming a reddish patch one half inch in its long diameter by one fifth of an inch in breadth at the base. It appeared as an acute inflammatory lesion, elevated, and showing an early papulovesicle formation along the central part of the ridge. With the magnifying glass it was seen to be composed of six little papulovesicles, each pin head in size, having a reddish periphery and a slightly paler centre.

The third group, forming the apex of the triangle, was composed of about eight commencing vesicles, five of which were united so that the individual lesions could be recognized only by means of a magnifying glass. Two at the very apex were isolated and were not quite as far in development as the others, being very slightly elevated, pale reddish in color, and showing no signs of vesicle formation. The right mamilla was abnormally red in color, as shown by comparison with the pale color of the left mamilla.

A small group, one inch to the inner side of the mamilla, and on a level with it was composed of three lesions, each isolated, the intervening skin being very slightly erythematous. Each lesion was pin head in size, elevated, with a reddish periphery and the central part was vesicular in character.

One half way between this group and the median line, on a level with the lower border of the ensiform cartilage and extending to one half an inch from the anterior median line, was a patch more or less circular in shape and about one inch in diameter, which was composed of six individ-

ual groups of lesions of varying sizes. Two of the larger groups were composed of ten to fifteen lesions, respectively, showing vesicle formation with a little yellowish crusting upon some of them, while others did not even show a well developed papule formation and were, doubtless, abortive lesions. The other groups were composed of lesions, from three to four to one half a dozen papulovesicles, all of which were of the same age. In none of the patches present on the body, except in the small patch near the mamilla, had lesions coalesced, nor were bullæ present.

The patient was placed under treatment to be described later. In six days the lesions had all dried up, the papules present not proceeding to vesicle formation; that is, the disease was apparently aborted. The neuralgic pains disappeared completely on the fourth day of the eruption. A slight tenderness of the affected axillary lymphatic glands continued a few days longer.

I will now describe a case lately under my care showing an unusually small number of patches and few lesions in a patch, with some of the lesions of very slight development:

A case of zoster dorsoabdominalis, lasting about ten days, and accompanied with considerable neuralgic pain in the region affected. There were three small patches, one near the spine, a second slightly anterior to the axillary line, and a third near the anterior median line, the last represented by an erythematous patch with two very small papules.

The disease started in the patch situated near the axillary line by the formation of one small papule upon a slightly erythematous base, accompanied by considerable pain. Two days later a half a dozen new papules appeared, arranged as a group upon a marked erythematous base of about one and one half inch in diameter. These became vesicular, some coalesced to form bullæ which lasted one week, then dried up, forming crusts which gradually disappeared, leaving a reddish surface. The patch near the spine consisted of only a few lesions which aborted before becoming well developed vesicles. The two very small papules near the anterior median line did not develop into vesicles, but dried up after an existence of two days.

A feeling of lassitude preceded the outbreak of the eruption and upon its appearance the temperature arose to 101°, but in forty-eight hours became normal. The neuralgic pain and tenderness of the abdominal muscles continued with considerable severity for two weeks.

I report this case on account of the considerable general disturbance of the system in connection with a very slight cutaneous eruption, which shows that the injury to the sensory nerves is not necessarily in proportion to the number of the cutaneous lesions or to the extent of the patches formed by them.

Lesions do not always form upon an erythematous area. Recently, in a marked case of zos-

ter lumbosacralis, in some of the patches and notably a large patch on the external surface over the knee, consisting of about forty lesions, the lesions were isolated and situated upon otherwise apparently normal skin. Smaller patches on the extensor surface showed also a similar condition. Two patches on the inner surface of the thigh had a general erythematous base.

Zoster may appear on any part of the body, although about sixty per cent. of the cases reported have appeared on the trunk. Zoster of the extremities is comparatively rare. Regarding other varieties the clinical picture and symptoms are the same in all of them—the only difference being in the location and severity of the disease in different cases, the most severe being those of the head region.

Illustrations which I will pass around show right zoster sacrocralis; right internal brachial zoster; one case in which it is to be noted that the lesions extended to the palm of the hand, and even to the finger tips, and another case in which the lesions are situated on the extensor surface of the arm and dorsal surface of the hand, including the fingers. I also show you illustrations of zoster of the head, and it will be observed how severe the disease may be in these cases.

There is a subvariety of facial zoster, zoster ophthalmicus, to which it may be advisable to devote a short time, owing to the serious character of the eruption in this region. This form occurs in nineteen out of twenty cases of cephalic zoster. The region supplied by the supraorbital and frontal nerves is often the only part affected. The cutaneous lesions occupy the forehead and anterior half of the scalp.

The eruption in ophthalmic zoster occupies especially the inner half of the upper eyelid. If it is situated on the external commissure the lacrimal nerve is affected. The upper eyelids are very oedematous; usually there are conjunctival injection and photophobia and the supraorbital neuralgia is apt to be severe. The injury to the eye structures may be quite serious; there may be iritis, keratitis, or even panophthalmitis with destruction of the eyeball and possibly pyæmia with a fatal termination. Ophthalmic zoster is therefore the most serious of all the forms of the disease. The Gasserian ganglion is almost always tumefied, and there may even be hæmorrhagic exudation into its structure as appears in some specimens which I have in my possession. Cases have been reported where paralysis of the muscle of the eye with ptosis, strabismus, and disturbances of accommodation have occurred. The frequency of ocular complications makes an early prognosis of ophthalmic zoster one of reserve.

When the nose is affected the nasal nerve takes part in the process. The law of Hutchinson that the eye is affected if the nasal nerve is affected has been accepted as a general law, although some exceptions to it have been observed.

DIAGNOSIS.

The prodromal symptoms, the unilateral location, the special anatomical distribution corresponding to the nerve distribution of one or more nerves, the grouped arrangement of the lesions, the rapid development of the lesions into vesicles, which are not acuminated and do not readily rupture, the tendency to coalescence, of some of the lesions to form bullæ, the marked similarity in age of the lesions composing a single group or even a patch, the frequent difference in age of the lesions of different patches and groups, the adenopathy so frequently present, and the pain and distress associated with the disease usually enable the physician to make the correct diagnosis.

Zoster might be confounded with the peripheral forms of herpes as herpes facialis or progenitalis or with cases with an herpetiform or zosteriform eruption as seen after traumatism or in connection with neurotic conditions as hysteria, etc., or with some cases of vesicular eczema. Some writers regard cases of peripheral herpes as being forms of the same disease as herpes zoster, and one frequently finds in literature such cases described as cases of zoster, especially when the eruption occupies a considerable area. These cases, recurring as they frequently do, have even been described as examples of recurring zoster.

Without entering into a long discussion of this subject, to show the fallacy of such a wide significance to the term zoster, I will consider in this paper herpes zoster as a special disease, distinct from all forms of pure peripheral herpes or other herpetiform eruptions. In peripheral herpes the lesions are frequently bilateral, the anatomical distribution occupying only a part of the territory supplied by a nerve; they form more rapidly; their life duration is usually very much shorter, lasting only a few days—two, three, or four days, rarely a longer period—the lesions are grouped; the groups are usually very small, and few in number; perhaps there is only one group. While there is more or less heat and burning in the part, there is not the severe pain which is generally present in zoster.

If the eruption is situated around the mouth and nose, the acute catarrhal condition usually present makes the diagnosis an easy one. The nearest approach in clinical character of a herpes that I have I now pass round. In it the herpetic

eruption occupies both sides of the face. The eruption will be seen to consist of patches, some containing only a few vesicles, while others contain a large number. The lesions of a patch seem to be of the same age, but the lesions are smaller in size than those of zoster, and they do not coalesce to form bullæ as would likely occur in the latter. If the lesions are confined to one side of the face and reach to the middle line the diagnosis will possibly be in doubt for a short time.

The majority of the cases, if not all of those on record, which have apparently been caused by traumatism, show sufficient variations from ordinary cases of zoster to enable a diagnosis to be made. The term zosteriform eruption which has been applied by some writers to these cases is a suitable one. Some of the cases described as zoster following traumatism are possibly cases in which the traumatism had no part in the production of the disease. So also these cases described as herpes zoster hystericus by Kaposi should be classed as a zosteriform eruption and not cases of true zoster. The clinical symptoms, especially the manner of appearance and mode of extension of the lesions and their course and distribution, show an aetiology distinct from that of the zoster I have been describing.

I saw some time ago a case of herpetiform eruption in the dorsolumbar region in which the distribution of the cutaneous lesions was unilateral, consisting of several patches. The lesions were papulovesicular in character, and those of the different patches were not of the same age. The patches varied in size from half an inch to two inches in diameter and were circular in form. The eruption appeared suddenly, attended by itching. The lesions soon ruptured and were followed by a slight desquamation and a continuance of the itching. There was no tendency to an extension beyond the original size of the patch by the formation of new lesions, and the eruption disappeared in about ten days. This is the history of an outbreak which the patient said had occurred in the same location about once a month for nearly two years. The diagnosis was made of a neuritic or toxic eczema. The urine was examined and found to contain sugar. Zoster was excluded in this case on account of the small size of the vesicles, their early rupture, the itching, the non-tendency to coalesce and form bullæ, and the absence of grouped lesions to form a larger patch. These very similar characters in all cases of neuritic eczemas in patches enable one to make the diagnosis from zoster.

(To be concluded.)

THE THERAPEUTIC VALUE OF MARMOREK'S ANTITUBERCULOUS SERUM.*

By ARTHUR J. RICHER, M. D.,

MONTREAL.

Specific sera for the cure of tuberculosis have during the last ten years occupied the attention of bacteriologists and therapeutists alike.

The last product of the kind, Marmorek's antituberculous serum, is really worthy of more than passing notice. Of the seven advanced cases (some hopeless) which I reported in September, 1904 (1), four have kept up to their improved condition. Since then I have submitted nine incipient tuberculous patients (pulmonary) and the results have been uniformly good. In some instances improvement was very marked within forty-eight hours, accompanied by corresponding modifications in the physical signs. Among the patients of the incipient class thus treated in no single instance did any untoward symptom become manifest. Upon the healthy subject the serum remains without effect. I have inoculated as much as 10 c.c. (in myself) at one sitting without being in any way inconvenienced. In detail I will describe but one, my first incipient case.

A girl of twenty years of age, whose personal antecedents were negative except for an attack of measles at five years and whooping cough at six years; her family history told us that her mother died of pulmonary tuberculosis four years before after an illness of two and a half years. Father living and well. One brother died of tuberculous meningitis eight years before. Four younger sisters living and well.

This patient confessed impaired vitality about six months previous to my seeing her and, when examined, complained of complete anorexia, in fact a perfect disgust for food, dyspnoea upon slightest exertion, accompanied by a dry cough and occasional night sweats with some degree of wasting.

When examined (July 9, 1904) she had a pulse of 110 and an afternoon temperature of 101°. The right lower lobe was the seat of complete consolidation both back and front. Two days later she entered the hospital (private ward) and was kept in bed under supervision for three days without any change taking place in the symptoms; she was then given 5 c.c. of the serum. The next afternoon the temperature had come down to 99.3°; she was given another 5 c.c., which brought down the temperature to 98.3°, after which the afternoon rise never exceeded normal. The pulse was visibly affected, coming down to 80 within five days, while the appetite at once became voracious. Patient was allowed out of bed ten days after first inoculation and was sent to the country, remaining away two months only, during which time she received four inoculations of serum of 5 c.c. each.

When examined again, on September 30th, noth-

* Read at the first meeting of the National Association for the Study and Prevention of Tuberculosis, held in Washington May 18 and 19, 1905.

ing but a small area of impaired resonance could be detected at extreme base behind. She has been examined a number of times since and the lungs are now clear, having remained so since November 1, 1904. The results in the remaining eight patients were quite as good, but, as they were treated more recently, cannot be pronounced upon. A significant fact, however, is that in all incipients thus treated the effect of the serum seems to have been truly specific, not one patient failing to react favorably.

Jacqueroed (2), Arthur Latham (3), de Rothschild and Brunier (4), Montalti (5), Klein and Jacobsohn (6), Schwartz (7), Frey (8), Lemieux, and I have reported upon quite a number of cases, but in all instances these were either advanced, chronic, or quite hopeless, yet with a good percentage of successes.

The method of giving the inoculations in series of six or ten with periods of rest has not seemed to me to be quite rational. The quantity of toxine elaborated by the tubercle bacillus is small and the elaborating is very slow. Why, then, should large quantities of antitoxine be given?

Usually I inoculate 10 c.c. during the course of three days, giving 2 c.c. the first day and 4 c.c. each subsequent day; then I allow a period of rest of at least ten days, sometimes fifteen, proceeding in the same way until 50 c.c. have been injected. After an examination of the patient, if the results are good, I believe it to be wise to continue the inoculations every month, one of 5 c.c. being administered for four or five months in order to keep up the passive immunity conferred by the antitoxine.

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1. *Montreal Medical Journal*, September, 1904.
2. Jacqueroed, *Revue de médecine*, May, 1904.
3. Arthur Latham, *Lancet*, April 9, 1904.
4. De Rothschild and Brunier, *Progrès médical*, April 23, 1904.
5. Montalti, *ib.*, April 30, 1904.
6. Klein and Jacobsohn, *Bulletin général de thérapeutique*, July 30, August 8 and 15, 1904.
7. Schwartz, *Allg. Central-Zeitung*, No. 41, 1904.
8. Frey, *Münch. med. Wochen.*, No. 44, 1904.

Graduates of the Medical Department of the University of Buffalo.—Those who have received the degree of doctor of medicine are:

Herman David Andrews, Eugene Ross Linklater, Louis Hengerer, Channing Elias Beach, George Adam Becker, Arthur Charles Schaefer, Edward Philip Reimen, David Cohn, William Bernard Burlingham, John Matthew Flannery, Isaac Sernoffsky, Thomas William Connors, Norton Henry Good, Harry Edward Brainer, Joseph Schweitzer, Samuel Kavinoky, Descum Clayton McKenny, Charles William Bethune, Joel Sperans, Victor Albert Paschellas, all of whom reside in Buffalo; Hadley Thomas Cannon, of Elmira; Willis Joseph Sullivan, of Dunkirk; William Hopkins Prudden, of Lockport; George Clayton Fisk, of Belfast, N. Y.; Joseph Asher Peaslee, of Randolph, N. Y.; Abraham Lande, of Elmira; Frederick Michael Lemen, of Dansville; George Breton Jackson, of Canadea, N. Y.; Edwin Carlton Foster, of Hammondsport, N. Y.; Charles Eugene Paddleford, of Paddleford, N. Y.; Carl M. Fiero, of Peoria, N. Y.; Albert Elgin Mott, of Bowmansville; Leo Francis Simpson, of Rochester; Frank Elliott Perkins, of Copenhagen, N. Y.; Lewis Nelson Eames, of Lee Centre, N. Y.; Stephen Mortimer Hill, of Cazenovia, N. Y.; and Herman Walter Johnson, of Gowanda.

ORBITAL SARCOMA: WITH REPORT OF A CASE AND A DISCUSSION OF RADICAL OPERATION, X RAY THERAPY, AND ELECTRO-CHEMICAL STERILIZATION.*

By G. ORAM RING, A. M., M. D.,

PHILADELPHIA,

OPHTHALMIC SURGEON TO THE EPISCOPAL HOSPITAL; CONSULTING OPHTHALMOLOGIST TO THE AMERICAN ONCOLOGIC HOSPITAL; FELLOW OF THE COLLEGE OF PHYSICIANS, ETC.

The legitimate differences of opinion regarding the proper method of attacking this comparatively rare, but always extremely grave, form of malignant neoplasm, will, I trust, abundantly justify the following study:

Agnes Walker, aged 6 years, was brought to my service at the Hospital of the Protestant Episcopal Church, July, 1904. She was seen during my temporary absence by my colleague, Dr. Van Pelt, and by my chief of clinic, Dr. Bromley. The following history was elicited:

The child from birth had been subject to convulsive seizures, which were without periodicity, and were due to gastrointestinal disturbances.

Some obstruction to nasal respiration, with a mucous flow, was noted for some months previous to any postocular development, which symptoms ceased when exophthalmos was first noted. The family history was exceptionally good, and as regards the subject in question, negative.

The vision was apparently normal in each eye; in the right eye mobility was unimpaired, media clear, fundus showed entire absence of gross lesions. No exophthalmos. Left eye, exophthalmos pronounced, the globe being pushed forward quite three quarters of an inch, the additional displacement being downward and slightly outward. Mobility was especially impaired in the vertical meridian.

The left globe was normal, barring some engorgement of veins externally, as well as those radiating from the centre of the disc.

It was impossible to press the globe back into the orbit. Examination over the globe, as well as over the temple, with the stethoscope, failed to reveal either murmur or pulsation. Palpation under the orbital rim, near the inner canthus, indicated a solid nodular growth, extending toward the outer orbital margin, and apparently well back and downward toward the floor. It was firmly fixed and was likewise without fluctuation and pulsation. Preauricular and cervical glands were not involved. The lids were stretched, especially the upper, and showed a purplish discoloration, with marked venous distention.

At the time the child was admitted to the hospital, July 24th, the exophthalmos was increasing, and Dr. H. C. Deaver was asked to see the

* Read before the Ophthalmic Section of the College of Physicians of Philadelphia. December, 1904.

case in consultation. He advised ligation of the internal carotid, which was promptly and most skilfully done by him.

For two weeks the growth seemed to remain in abeyance, when the parents insisted on removing the patient to her home for a week; at the end of which time she returned with a distinct increase in its proportions, a new nodule being easily felt at the upper and outer orbital margin.

The case was now placed under my care and enucleation of the eye and growth advised, with possible orbital evisceration.

My colleague, Dr. Joseph S. Gibb, examined the nose and throat, transilluminating the maxillary and frontal sinuses. The results were negative.

At my request, my friend and former teacher, Dr. Risley, kindly examined the little one, and, while inclining to my diagnosis of orbital sarcoma, suggested an exploratory incision, with a view of establishing the diagnosis with certainty, relating to me the case of an adult patient who presented a somewhat similar train of symptoms. The diagnosis of sarcoma, in this instance, had been made by three ophthalmic surgeons of wide experience. Notwithstanding this Dr. Risley decided to make an exploratory incision, that is to say an external canthotomy followed by an incision into the most pronounced portion of the so called malignant growth, only to find the case one of benign frontal sinus disease, appropriate treatment of which caused immediate and pronounced betterment of all the symptoms.

Barring this suggested modification by Dr. Risley, all of the surgeons who had examined the patient agreed as to the need of operative measures for the removal of the growth.

Osteoplastic resection of the outer bony wall of the orbit, after the method of Krönlein, was carefully considered, but the position of the growth made such operative interference inadvisable.

On October 11th, under ether anæsthesia, with the assistance of my colleague, Dr. Joseph Gibb, the outer canthus was divided with a free incision down to the periosteum.

This was followed by a second incision just within the upper orbital margin, beginning with a point corresponding to the external, and extending to the internal canthus.

Thus partly freed, the upper lid was turned backward, and with a slight further dissection the growth was partially exposed. Careful palpation confirmed my previous judgment that the growth did not involve the frontal sinus, but extended along the roof of the orbit from the internal to the external border.

Its further reach was well down to the orbital floor posteriorly, making enucleation of the eye absolutely necessary.

This was followed by a dissection of the growth, which was rather difficult, especially above. Indeed it was loosened at that point by inserting the closed scissors between the orbital wall and the growth, thus in part shelling it out.

There was a free hæmorrhage which was readily controlled. The orbit was carefully explored

for any remaining foci of induration. The outer canthus was restored with several stitches, and the orbit packed with iodoform gauze, moistened with sterile unguentum petrolati.

At the end of forty-eight hours, when the wound was dressed, there was a moderate swelling of the tissues surrounding the seat of operation and some œdema of the right eyelids. The temperature did not rise above 100.4° , and dropped to normal on the fourth day. The child was permitted to get out of bed at the end of two weeks.

The pathological report, made by Dr. Edward A. Shumway, is as follows: The tissue submitted for examination proved to be a round cell, non-pigmented sarcoma, which had invaded the connective tissue of the orbit. There is a moderate amount of inflammatory reaction, and part of the tissue stains poorly, either from necrosis, or from degenerative changes subsequent to the operation.

Dr. William Egbert Robertson, pathologist to the Hospital of the Protestant Episcopal Church, also made a thorough examination of a portion of the growth and reported it as a round cell sarcoma (non-pigmented).

My personal experience in this type of disease in addition to the history herein reported, is limited to one other case.

A young man otherwise healthy came to me with an orbital sarcoma, which in this instance, followed the kick of a horse on the right temple. The growth extended into at least two of the accessory sinuses and was regarded by Dr. Richard Harte, the general surgeon on duty at the time, and by myself as inoperable. Coley's fluid was given a fair trial, but was of no appreciable avail. This experience occurred several years ago, before we had any knowledge of x ray therapeutics.

It is well known that retroocular sarcomata originate mainly in the connective tissue of the orbit and less frequently from the lacrymal gland, and the bony wall or periosteal lining.

It is fortunately true that the tendency of orbital tumors is to extend forward and outward, rather than backward toward the brain, but when we consider that such a growth may penetrate the optic foramen or superior orbital fissure into the middle fossa, and that in the event of caries or absorption of the roof of the orbit may find its way into the anterior fossa, it would seem but reasonable that in view of a possibly successful operative outcome, radical measures are abundantly justified. The chances of recurrence are greatly reduced if the growth is encapsulated. If the tumor reappears, we assume that a nidus of disease was allowed to remain, or that a new secondary growth has developed.

Quite frequently metastatic growths appear in distant organs and occasionally within the skull

cavity; and as Bull has said, "the more developed the cellular element, the more rapidly does the sarcoma grow and the farther does it extend along the small blood vessels and lymphatics."

As the secondary growth is richer in cells than the primary, it is likely to develop with much greater rapidity and it is our purpose to inquire whether in the event of such development, especially if it is at or near the seat of the original disease, we may not attack it with a reasonable promise of success by the application of one or other of the more recent modifications of the electrical currents.

Before doing so, however, it may be well to consider the following brief references to the method of treatment advised by the authors and compilers of several of our modern text books on ophthalmology. These will serve to indicate what has been the general trend of treatment of this most important and discouraging type of disease.

That these suggestions are likely in future to be materially modified by the further development of electrotherapeutics admits, I think, of little question.

Fuchs states that orbital sarcomata are rounded, rather soft, and sharply defined because enclosed in an envelope of connective tissue, and he believes that small, encapsulated sarcomas can be cleanly enucleated with preservation of the remaining orbital contents. Large tumors, if not circumscribed, of course demand exenteration. Noyes advises early and complete removal. De Schweinitz writes, "if the sarcoma is encapsulated, it should be removed with preservation of the eyeball, if possible," but adds, "if the tumor is malignant, the eye should, in most instances, be excised with the entire contents of the orbit." If originating from traumatism, he regards operative interference as distinctly contraindicated. No mention is made of the sarcomata of young children as being especially subject to recurrence.

Dr. de Schweinitz told me that personally he had seen but one case of orbital sarcoma in a child where, I believe, because of evidences of systemic involvement, no operative measures were considered.

W. T. Shoemaker, in a chapter on orbital diseases of unusual merit, in the recent work of Ball, suggests early removal, accepting the modern view that every primary malignant growth is at first purely local and furthermore agrees that malignant tumors are more safely removed with all the orbital contents. The best results claimed by the general surgeons for operations for malig-

nant growths, according to this writer's figures, range from fifteen to twenty-five per cent.

Reeve, in the Posey and Wright treatise, advises early removal by operation of orbital sarcoma; but later modifies this statement in the announcement that the consensus of opinion is against operation in orbital sarcoma of children, inasmuch as they are apt to be of the round cell variety and, therefore, most malignant. They are held to be inoperable in the sense of assured and possibly hastened recurrence.

Dr. Herman Knapp, than whom no one perhaps has had a more extended experience in this type of disease, advises me that all the orbital sarcomas upon which he has operated have recurred, with one exception where he made a very extensive and radical removal. It was on the temporal side. All the soft parts in the lateral side of the orbit were removed, including the ocular muscles and the periosteum. The eyeball shrank and was finally attached to the bony wall of the outer side. The patient was a young man otherwise healthy. The operation was performed twenty-five years ago. His last visit to Dr. Knapp was made about three years since.

Dr. Knapp has had no experience in the use of the x rays, or with other means than extirpation.

Dr. Buller, of Montreal, in the *System* by de Schweinitz and Randall, advises early and complete removal.

In a recent letter received from Dr. Buller he very kindly sent me a photograph of a fibrosarcoma of both orbits, involving the whole periosteum of both orbital cavities which produced symmetrical proptosis:

"The growths were removed as completely as possible without destruction of the eyeballs, but there was already blindness from pressure on the optic nerves. The child was apparently well for some months, when fresh growths made their appearance about the scalp and head. After this, the patient's health failed rapidly and he died of exhaustion some months later. This case is not recorded and is different from any case Dr. Buller has ever seen."

Dr. L. Webster Fox, in the *Annals of Ophthalmology* of the present year, and again in his recent text book, reports a very favorable result in the treatment of a case of sarcoma, involving the orbit and the maxillary and ethmoidal sinuses. The case was clearly inoperable and was apparently cured by about fifty exposures to the x ray.

Dr. Fox's experience has been so uniformly unfavorable as regards recurrences after orbital excision for sarcoma, that he is strongly inclined invariably to refuse to operate.

Desiring to have an expression of opinion regarding the results of x ray treatment of sarcomata, I wrote to a number of the gentlemen especially identified with that line of work and have been favored with replies, a few of which I briefly append:

Dr. Charles Lester Leonard has had excellent results in sarcomata of face and neck, and has seen similar good results in the practice of friends in various parts of the country. The brilliant results achieved by certain workers in the field of Röntgen therapy must be ascribed to advances in technics. Superficial lesions will yield to almost any technics. Success in treatment of the deeper growths has resulted in a better adaptation of the various qualities of this agent to the cellular character and relative situations of the various lesions in different portions of the body. This adaptation is not yet sufficiently accurate to produce uniformly good results. While the x ray treatment has a beneficial action in recurrences, the effect is less brilliant than upon the original growth.

Dr. Kassabian has utilized this method of therapy in upwards of thirty cases during the past five years. Five of the thirty cases were primary, the remainder recurrent and evidencing signs of general sarcomatosis. Under heroic dosage of x rays a temporary alleviation of pain and diminution of secretion were noted. The primary cases were submitted to the rays from three to four months; of the thirty patients studied, all died. No orbital case was seen and the average age of the patients was fifty years.

Dr. Pfahler, in addition to the case reported by Dr. Fox and himself of orbital sarcoma, reports an angiosarcoma of the face completely removed; an osteosarcoma of face treated for one year and arrested; a round cell sarcoma of lip and nostril and antrum and an angiosarcoma of cheek improved; other advanced cases treated with no apparent result.

Being somewhat conversant with the method of treatment of malignant growths by electrical sterilization successfully inaugurated by Dr. G. Betton Massey, of our own city, and having in mind the utilization of this process in the event of a recurrence *in loco*, I asked Dr. Massey for an expression of his experience in the treatment of orbital sarcoma in children and likewise his opinion regarding the probable outcome of the application of the method in this particular case, with a description of the technics. Dr. Massey's reply is as follows:

"Until a method is discovered whereby these apparently parasitic implantations can be combated by serum treatment, it is evident that our chief recourse must be some form of removal or destruction of the infected tissues, and electrochemical sterilization offers several very important advantages as to operative procedure in accomplishing this. These advantages adapt it pe-

cularly to orbital growths of this nature, owing to their deep penetration, wide bases of contact with surrounding tissues, the free vascular supply of both the growth itself and of its peripheries.

"By electrochemical sterilization we may, within a few minutes, bloodlessly devitalize the growth itself, and carry the sterilization with great precision not only to the irregular limits of the penetrating neoplasm, but beyond the limits into the healthy tissues, thus not only devitalizing all infected cells of the growth proper, but sterilizing a narrow region beyond which the infected cells may be latent. A further advantage is that the edge of the necrosed area thus produced is sealed temporarily, preventing both operative infection and absorption of the chemicals, which drain away as the slough is thrown off by the natural forces.

"In small sarcomata, the method is not only ideal and free from risk, but should present a large percentage of absolute successes.

"In large growths, we have to encounter not only the possibility of failure to destroy all outlying cells, but the risk to the cerebral structures from large currents and the later risk of secondary hemorrhage, if large vessels, supplying the growth, have not been destroyed beyond the diseased points, for diseased vessels are likely to fail to close properly at the line of demarcation when the slough separates.

"A remarkable case, not heretofore reported, came under the writer's attention in 1890. A boy, 5 years old, received an injury to the right eye, when he was 4 years old, necessitating enucleation of the eyeball. One year later, when he was first seen by the writer, a tumor projected from the orbit as large as a man's fist, with a pedicle filling the entire orbit. The tumor projected beyond the face at least five inches, and was a most horrible deformity and source of suffering to a remarkably pretty little child.

"Knowing but little of the limitations of the cataphoric sterilization and destructive process at the time, an effort at relief was made, the child being placed under ether, and as much as 1,200 milliampères applied with several mercury-coated zinc points attached to the positive pole of the battery, which were thrust into the base of the growth, while the negative pole was pressed against its tip, thus preventing the brain from being a part of the circuit. The puncture points bled very freely, showing the extremely vascular nature of the growth. As the current was turned on, the zinc mercury points were ionized or dissolved, and the growth quickly necrosed in its whole extent into a whitish gray mass. The current was turned off at the end of fifteen minutes, the negative pole transferred to a pad on the patient's back, and the current turned on again in this monopolar manner, the current now traversing the brain itself, doubtless in a concentrated current through the optic foramen. This was done in order that the base itself should be adequately sterilized. Unfortunately my notes fail to state the strength of the current attained in this way, though it is thought to have been about five hundred milliampères, for the pulse and respiration failed immediately and the child was dead.

Efforts at resuscitation were continued for some time, but ineffectually.

"In a previous case of sarcoma of the lower portion of the orbit and within the antrum, in an adult, five hundred milliampères had been used with good effect on two occasions, resulting in a notable arrest of the progress of the growth; and, more recently, 350 milliampères had been applied in the very apex of the orbit in a case of rodent cancer, resulting in cure. Judging from these experiences, I should limit a monopolar application in this situation, where much of the current may traverse the cerebral structures, to between 350 and 400 milliampères in an adult, and a still lower current in a child.

"I wish to add that such currents are required only in a major application to a large growth. Small growths may be destroyed by one or more minor applications under the influence of cocaine or eucaine."

The following conclusions seem warranted from a study of these methods:

1. The difficulty in accurate diagnosis under certain conditions entirely justifies an exploratory excision with removal of a section of growth for microscopic study, said exploration likewise serving to determine the ramification of the tumor.

2. The brilliant results achieved by a number of accurate observers in the field of Röntgen ray therapy justify the immediate tentative application of the method before any radical operation is attempted. If unsuccessful in removal of the growth, the virulence of the latter will probably be decreased and the dangers of metastasis lessened. (Leonard.)

3. If the sarcoma is encapsulated, operative intervention without orbital evisceration promises a successful outcome.

4. In view of the almost constant recurrences after orbital evisceration, the removal of the growth itself is regarded as sufficient unless the periosteum or bony wall is involved.

5. The encouraging results reported from the cataphoric sterilization of malignant growths in other parts of the body seem to warrant the utilization of this method in the orbit, due care being exercised as to strength of current used. (Massey.)

6. Future experience must determine whether better results will be achieved by using this method for the original growth, or reserving it for recurrence *in loco*.

7. If operation has been performed and the growth has recurred, we have at command these two valuable methods of attack.

Note, May 23, 1905. As a matter of precaution, x ray applications were begun at the end of the third week after operation and continued at varying intervals until the present writing (eight months after operation), without the slightest evidence of recurrence.

1000 CHESTNUT STREET.

THE DETECTION OF METHYL ALCOHOL.

By HEYWARD SCUDDER, M. D.,

NEW YORK,

MEMBER OF THE CHEMISTS' CLUB.

In a recent number of this *Journal* Dr. Wiley gave directions for a test for methyl alcohol which need some explanation in view of the present general interest in the subject of the use and toxicity of wood alcohol.

The test was devised by Dr. Mulliken and myself in order to furnish a rapid means of detecting methyl alcohol in the presence of ethyl alcohol (ethyl alcohol is the ordinary alcohol of commerce, known also as grain alcohol). The essential features are the oxidation of methyl alcohol to formaldehyde by a heated copper spiral and the detection of the formaldehyde by resorcin in the pressure of concentrated sulphuric acid. Strong alcoholic solutions should be diluted with three volumes of water before oxidation. After oxidation, one drop of a one half per cent. solution of resorcin is added and the mixture is poured down the side of a test tube containing about two cubic centimetres of concentrated sulphuric acid, held in a slanting position so that the solution does not mix with the acid, but rests on top of it. In the presence of formaldehyde a ring, white at first then red, forms at the junction of the two layers. If more than a trace of formaldehyde is present, on gentle shaking, flocks of a characteristic red color appear through the upper layer. Acetaldehyde, the oxidation product of ethyl alcohol, gives a ring and flocks of a yellow or brown color when similarly treated.

Phloroglucin and sulphuric acid give no satisfactory distinction between formaldehyde and acetaldehyde, so far as my experience goes. Dr. Wiley tells me that he will publish further details on this point. It is possible, however, to use phloroglucin in alkaline solution as will be shown later.

IMPROVED TESTS.

Trillat's test, recommended by Dr. Wiley (abstracted in the *Analyst*, 24, 212), can be carried out satisfactorily only by an experienced chemist. Very small variations in the procedure or in the purity of the reagents affect the test in such a way as to render the conclusions of no value. Several chemists who have worked with it have published statements that it cannot be relied on to distinguish between methyl and ethyl alcohols. The test is of value if carried out carefully with a full understanding of the possible sources of error.

Dr. Mulliken and myself published in the *American Chemical Journal*, 24, 444 (1900), an improved test for methyl alcohol, which is much more delicate and not much more complicated than our original test. The difference is, that after oxidation the solution is freed from acetaldehyde by boiling. For ordinary work the boiling can be done in a test tube, stopping when there is no odor of acetaldehyde. For more delicate and satisfactory work the boiling is done under reduced pressure at a low temperature.

Haigh has recently published a test (*Pharmaceutical Review*, 21, 404) in which after oxidation with a copper spiral the filtered solution is boiled in a test tube to remove acetaldehyde, is then poured into a porcelain dish, and an alkaline solution of phloroglucin added. This gives a red color with formaldehyde that remains for two or three minutes. With acetaldehyde there is a faint red color that quickly disappears. The test is simple. But at times I have had trouble with it, since the distinction between the two aldehydes is one of degree of color and of permanence. A weak solution of pure methyl alcohol may give a color that fades so quickly that one cannot be sure that methyl alcohol is present.

GENERAL CONSIDERATION OF TESTS.

No test, dependent on the formation of an odor or of a color, can be relied on under all circumstances. This fact, of common knowledge, is usually forgotten even by chemists of considerable experience. Tests in ordinary use are devised for special cases where only a limited number of foreign compounds are present, and may fail entirely if any other compound is present. In medical work the best known instance of this is the effect of drugs and of compounds formed pathologically in the tests for albumin and sugar in urine.

To be certain that any particular compound is present, it is necessary after making a color or odor test, to isolate the compound in a fairly pure state and form some derivative of it that has a definite melting point or boiling point. The combination of these two tests gives cumulative evidence of great value.

But in cases of daily occurrence, as in this test for methyl alcohol, it is possible to be quite sure of a test if certain precautions are taken to remove compounds that might interfere. In testing for methyl alcohol the chief compound that gives trouble is ethyl alcohol. All the tests recognize this fact and various methods are adopted

to prevent its interfering. In a wine or liquor there may be a number of other compounds that will render any particular test useless. The removal of such compounds is often a matter of great difficulty. The subject is treated quite fully in the last article by Dr. Mulliken and myself. The following general principles are taken from that article and from tests that I have made since its publication:

1. No test involving any preliminary treatment of a solution (such as oxidation) can be relied on, if the original solution before this treatment gives a reaction with the reagents used for the final test.

2. If phenols, alkaloids, or organic bases are known or suspected to be present, this preliminary test of the original solution must always be made.

3. If the original solution becomes turbid or opaque after the addition of two volumes of water, it must be purified before testing.

4. It is always advisable to distil a solution that is to be tested, and only to test that part of the distillate that comes over between 50° and 100° C. The distillation is much more effective, and smaller amounts of methyl alcohol can be detected, if some fractionating device is used. A Hempel tube about 20 centimetres long and two centimetres wide, filled with glass beads, answers most purposes.

FORMALDEHYDE FORMED FROM ETHYL ALCOHOL, ETC.

It might be supposed since the final test is for formaldehyde that a more delicate test for formaldehyde would be of advantage. This is not the case, since ethyl alcohol and many other compounds when oxidized by heated copper give sufficient formaldehyde to be detected by any very delicate test. This can readily be proved by a modification of Jandrier's test. A few drops of a saturated alcoholic solution of gallic acid are added to the oxidized solution, which is then run down on top of concentrated sulphuric acid, as in the test with resorcin. If formaldehyde is present a green or blue ring forms at the junction of the layers. This test for formaldehyde is very delicate and satisfactory, not being interfered with by many compounds.

Trillat's test involves a preliminary oxidation by chemical reagents. It is possible that under certain conditions a small amount of formaldehyde may be formed in this test by compounds other than methyl alcohol, thus explaining the misleading results sometimes obtained. At present there is no definite knowledge on this point.

THE EXPERIMENTS OF SAUERBRUCH IN THE FIELD OF ŒSOPHAGEAL SURGERY.

By DEWITT STETTEN, M. D.,

NEW YORK.

During my service in the past half year at the surgical clinic in Breslau I have had the opportunity frequently to assist Dr. Sauerbruch in his recent experiments with the pneumatic cabinet, and have had ample chance to observe its practical working. In the *Zentralblatt für Chirurgie* No. 4, 1905, Sauerbruch has published a preliminary communication regarding certain operative methods rendered possible by his negative pressure chamber, and it is of these that I desire to write.

After the possibility of successful employment of the cabinet had become established, the first and most interesting question to be solved was the feasibility of bringing the intrathoracic portion of the œsophagus into the domain of modern surgery. This was attempted in Breslau both on animals and man, but with unsuccessful results. The difficulty of the œsophageal suture and the susceptibility of the pleura to infection were not diminished by the cabinet and the chances of successful operation upon the œsophagus at first appeared exceedingly slight.

Only during the last three months, after untiring experimenting and endless modification of his operative technique has Sauerbruch been more successful. Indeed, in the past quarter of a year he has positively demonstrated, at least experimentally, that the intrathoracic portion of the œsophagus can be successfully operated upon by the transthoracic route. He has proved that such operations, including resection, are not only feasible, but even simple and comparatively harmless.

The theory of the subject and the almost obvious fact of the superiority of his method are clearly shown by Sauerbruch in several earlier publications, but more especially and at length in the *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, Vol. XIII, No. 3, 1904.

The cabinet is built of glass and iron and capable of being rendered air tight. The size is about 14 cubic metres, allowing ample room for patient, operator, and, if necessary, three or four assistants. The negative pressure is produced by means of an electric suction pump and the density of the atmosphere is controlled by a water valve in connection with a mercurial manometer. A reserve hand pump excludes the possibility of accident due to chance failure of the working of the electric motor. An opening at one end permits the head of the patient to be free and a rubber collar around the neck of the patient is a simple device to prevent leakage of

air. The anæsthesia is given from without. There is also an appliance whereby all parts but the thorax of the patient can be kept at normal atmospheric pressure, thereby avoiding venous stasis; in experiments upon animals, however, this arrangement has been found superfluous.

By means of a two door system people can enter and leave the cabinet, without altering the pressure. The illumination is electric and the connection with the outside world is by means of a telephone.

Aside from a slight feeling of tension in the ears, which rapidly disappears and which can be prevented if the exhaustion is not too rapid, the people in the cabinet experience absolutely no disagreeable symptoms.

As remarked, all the operations were done in this new cabinet under a negative pressure of 10 to 12 mm. of mercury. This permitted absolutely safe operation so far as the question of pneumothorax was concerned. As a matter of fact, this danger no longer enters into consideration. Dogs exclusively were used for the experiments. The opening in the chest was made by means of an intercostal incision, originally proposed by v. Mikulicz at the last German Surgical Congress. According to Sauerbruch, the three main factors of especial importance in the surgical work on the œsophagus are: (1) Strict asepsis; (2) substitution of the Murphy button for the suture; (3) rapid production of adhesions by means of some such substance as Lugol's solution. I might add, (4) the relieving of tension on the operated œsophagus by lodging a part of the stomach in the pleural cavity.

Two operations have been carried out with particular success, namely, œsophagogastrostomy, or anastomosis between the œsophagus and stomach, and resection of the intrathoracic portion of the œsophagus. I shall briefly outline both operations, drawing freely from Sauerbruch's original description.

Œsophagogastrostomy.—The left pleural cavity is opened in the fifth intercostal space. After systematically incising skin, fascia, and muscle layers, the pleura is caught with a forceps and opened with scissors, about in the same manner as the peritonæum is usually opened in abdominal operations. With the finger or a grooved director as a guide, the pleural incision is extended to the limits of the superficial wound. The ribs are separated and held apart by the hands of an assistant.

The lung which of course does not collapse, but which moves regularly in respiration under the wound, is pushed upward by carefully placed tampons; and the aorta and œsophagus, with the anastomosing vagi, are brought into view.

The œsophagus is grasped by a clamp directly above the œsophageal opening of the diaphragm and drawn into the wound. The cardiac portion is thus

put on the stretch and is seen as a grayish white band 1 to 2 cm. in width, just above the diaphragmatic ring. The pleural, and then the peritoneal layers covering this portion, are next divided and in this manner the abdominal cavity is opened. Through this opening the stomach can be easily drawn into the thorax. The vagi should be spared and the oesophagus must not be too extensively isolated from its surrounding tissue.

The female portion of the Murphy button, fixed on an oesophageal bougie, is now passed into the stomach by an assistant from without the cabinet. The operator grasps this half of the button with his right hand, fixes it in the interpleural portion of the stomach, preferably the fundus, while the bougie is withdrawn.

In a similar manner, the male portion of the button is passed into the oesophagus, fixed in a suitable place, and turned so that the cylinder projects into the anterior wall. By means of small incisions over the respective cylinders, the stomach and oesophagus are opened and adapted to the two parts of the button. Holding the oesophagus in his left, the stomach in his right hand, the operator closes the button. The necessity of any suture at the point of anastomosis is entirely obviated.

After making sure that enough stomach has been lodged in the pleural cavity to allow of the excursions of the diaphragm without tension, a circular suture line is laid at the diaphragmatic ring, connecting stomach and diaphragm. The anastomosis, the diaphragmatic suture, and the pleura are sponged with Lugol's solution, the pleural cavity is irrigated with physiological salt solution, and the intercostal incision is closed in three layers.

Thirteen dogs have recently been operated upon with only three deaths. The cause of death in all three cases was hernia of the stomach, due to imperfect diaphragmatic suture and cardiac compression. All the fatalities occurred many days after operation and could have been easily avoided by careful suture and proper rest.

Resection of the Oesophagus.—The preliminary details are identical with those of the operation already described. The female portion of the button is fixed in the intrapleurally lodged fundus of the stomach, and the male portion in the oesophagus, 2 cm. above the upper limit of the segment, is selected for resection. The button is first closed, the oesophagus is clamped with the Doyen enterotribe, ligated and resected, care being taken not to injure the vagi.

The lower stump is invaginated into the stomach by means of a purse string suture. Invagination is difficult for the upper stump, owing to the friability of the oesophageal tissue, but the upper stump can be easily covered by the intrapleural portion of the stomach. The use of the Paquelin cautery might further simplify matters. The final steps are exactly the same as in the anastomosis operation.

Resection was performed on eleven dogs in succession, with no deaths. As much as 7 cm. was resected in one case.

That these operations are anatomically possible in man has been proved by Sauerbruch by his studies on the cadaver. The conditions correspond for all practical purposes with those found in dogs.

As to the indications for these operations on the human subject, it must be acknowledged that they are extremely limited. The anastomosis might be considered in cases of oesophageal diverticula in the lower oesophagus but, primarily, the procedure would be a rational method of dealing with impermeable cicatricial stenosis at or near the cardia. Although the literature on the subject is rather meagre, I am convinced that these cases are not as rare as is generally supposed. While house surgeon at the German Hospital, New York, in the service of Dr. Willy Meyer in the fall of 1903, I had the opportunity of observing such a case—one which resisted the most carefully planned and elaborately executed attempts to abolish the necessity of a gastric fistula.¹

In malignant stricture, the operation would scarcely supplant the comparatively very much safer gastrostomy. I can conceive of no possibility where, merely as a palliative measure, oesophagogastrostomy might be performed instead of the customary operation, although Sauerbruch seems to think that even here it might be indicated.

Of course, in cases of cicatricial stricture, the operation must be so modified that the gastric half of the button is introduced directly and handled as is usual in abdominal work. The oesophageal portion, however—and this, as Sauerbruch very properly emphasizes, is the important point—can be introduced as was done in the experiments, without the necessity of primary incision or secondary suture.

The resection could be thought of in incipient cancer of the lower part of the oesophagus. When one considers how early diagnosis has been advanced in recent times, by means of perfected oesophagoscopy and the probatory excision depending thereon, the above suggestion may not really seem as fanciful as might at first be assumed.

Sauerbruch asserts that both operations can be performed on the oesophagus as high as the root of the lung and even higher if necessary. Since, however, the higher the operation the greater the necessity for lodging more stomach in the pleural cavity, thereby interfering with the function of the heart, it appears to me that both methods are practically limited to lesions of the cardia and that part of the oesophagus directly above it, necessitating only a small interpleural pouch of stomach.

Sauerbruch has been developing also several other methods, which he will fully describe, giving detailed observations on the above mentioned operations in a monograph soon to be published. He mentions two in his article in the *Zentralblatt*, and

¹ A complete history of this case has already been published by Willy Meyer in the *Zentralblatt für Chirurgie*, No. 26, 1904, in which he suggests the use of the Sauerbruch cabinet as an aid to further operative interference.

I take the liberty of making brief reference to them.

One is an operation in two stages for resection of the upper part of the œsophagus, by means of a plastic substitution of the defect, and the other is a resection of the cardia, also in two stages, by what he calls the invagination method.

The first stage of this latter operation is intrathoracic. The cardia is separated from the diaphragm and invaginated by means of a circular suture. The diaphragm is then sewed to the stomach, as in the other operations, and the thorax is closed as usual.

After two weeks a laparotomy is performed and the stomach is opened. The invaginated cardia is amputated. Suture of the stomach and abdominal wall follows. Sauerbruch thinks that this operation might be applied to cases of circumscribed tumors of the cardia.

Sauerbruch's further publication is naturally awaited with great interest. I do not purpose to anticipate his conclusions, but, in summing up, I wish to lay stress upon certain general aspects of the question.

I freely confess that the direct practical value of these experiments of Sauerbruch is small. I readily admit that the indications for applying them to the human being are very limited, although I most positively believe that such indications do exist.

What I especially desire to emphasize, however, is that the practicability of extensive surgical work upon the œsophagus has become an established fact, without specifically referring to a definite application of these methods. More than this, the experiments show what can be done in the cabinet and, when one remembers that it is considerably less than a year that the new cabinet has been in working order, it requires no great imagination to conceive of the enormous possibilities that have been opened by the Sauerbruch system, not only as regards œsophageal work, but also in the domain of the surgery of the lung itself, the pleura, ribs, mediastinum, and diaphragm.

228 WEST ONE HUNDRED AND THIRTY-EIGHTH STREET.

Medical Society of Northern Virginia.—A meeting of several physicians and surgeons was held on May 17th in Alexandria, Va., when an organization was effected, to be known as the Medical Society of Northern Virginia. The following officers were elected for the ensuing year: President, Dr. R. M. Slaughter, of Fairfax county; vice-presidents, Dr. G. T. Vaughan, of Washington, and Dr. M. W. O'Brien, of Alexandria; secretary and treasurer, Dr. A. A. Rittenour, of Alexandria. The next meeting of the society will be held in November in Alexandria.

A CASE OF TRAUMATIC APHASIA.

By CHARLES PHELPS, M. D.,

NEW YORK.

The comparative infrequency of traumatic disturbance of speech, and the uncertainty which often exists as to its effective lesion, give some special interest to cases like the one which follows:

The patient, a lad 13 years of age, was struck upon the head by a brick thrown from a considerable height. He was at once admitted to the hospital, and after operation two hours later was found to have a compound depressed fracture of the vertex, fissured anteriorly and posteriorly, with one anterior fissure extending into the left middle basic fossa. His temperature on admission was 99°; pulse, 96, and respiration, 28. He was conscious, his mental condition was normal, and he had no general symptoms. Later he vomited undigested food and slept heavily. On the second, third, and fourth days his temperature varied from 99.8° to 100.4°, and his pulse from 90 to 110, and there was still no sign of mental or physical disturbance. An ophthalmic examination made by Dr. Callan disclosed a slight descending neuritis in either eye. At seven o'clock in the evening of the fifth day his temperature was 99.8°, his pulse was 84, and no symptoms had developed. At nine o'clock it was discovered that he was unable to name what he desired—a drink—though he possessed otherwise the power of voluntary speech, and there was no other apparent change in his condition. On the following morning careful examination discovered no symptoms except the disturbance of speech. He had no paralysis or areas of anæsthesia, the reflexes were normal, control of the sphincters was retained, and the special senses were unimpaired. The right pupil was moderately dilated. The temperature through the day was 99.8° to 101°, and the pulse from 80 to 100. His mental condition was alert and intelligent. He understood speech and musical tones, as well as printed and written words, could call to mind objects named, could comprehend simple gestures, and had some power of speech, which progressively diminished through the day. On the other hand, he had total sensory anomia—auditory, visual, tactile, gustatory, and olfactory. He recognized various objects—pencil, paper, orange, salt, sugar, castor oil, etc.—by the several senses, but could give to none a name. This condition was determined by getting negative responses as long as wrong names were suggested, and immediate recognition of the right ones. He could write neither voluntarily nor at dictation. In the morning he could copy fairly well, but only a single word in the afternoon. He could read aloud neither written nor printed words. On the seventh day his general condition remained normal; temperature, 99.8°; pulse, 80. His speech disturbances were unchanged except that his

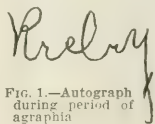


FIG. 1.—Autograph during period of aphasia

vocabulary was still further diminished. From the seventh to the tenth day his temperature still ranged from $99^{\circ}+$ to $100^{\circ}+$ and his pulse from 80 to 88. On the morning of the seventh day two replies to many questions were

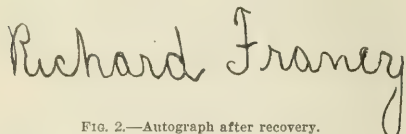


FIG. 2.—Autograph after recovery.

elicited—"good morning" and "I feel better." In the afternoon his only reply to all questions was "Yes" or "No." On the eighth and ninth days he for the first time spoke of his own initiative, and was able to command short sentences, but was still unable to name objects which he recognized. On the eighth day he could read and repeat one, and on the ninth day two words—not more. On the tenth day he could read long sentences, and could name any object presented, as well as write and read writing. On the eleventh day, the sixth of his loss of speech, no aphasic symptoms remained except a little hesitation in reply when questioned too rapidly or for too long a time.

There were no subsequent symptoms, though the patient was detained in the hospital for some weeks, on account of his cranial wound.

The field of ætiological inquiry in this case and in others of its kind can be restricted to traumatic conditions. Its history before and after the injury eliminates the possibility of the existence of any form of toxæmia or of nervous disorder.

The immediate intracranial lesions resulting from traumatism are: Hæmorrhage, epidural, pial, or cortical; limited or diffused meningeal or cerebral contusion; laceration; and a little later a possible meningeal inflammation or cerebral disintegration. The remoter effects of cerebral injury, abscess and atrophy, may be disregarded in this connection.

The reasons for believing that no form of superficial hæmorrhage compressing Broca's convolution or the temporal lobe produces recognizable disturbances of speech have been considered elsewhere¹ with some particularity. Compression to be effective must be applied with force and precision. In epidural hæmorrhages the compressing force is so diffused and minimized by the intervening fibrous shield of dura mater that even when excessive in amount it is deficient in both the essential conditions of sufficiency and concentration. Discarding theoretical considerations, the loss of consciousness which must always attend such cases will itself abrogate speech and all other manifestations of intellectual life. In cases of moderate hæmorrhages of this class, in which

consciousness is retained or restored, there is probably no one recorded in which any form of aphasia has been attributed to this cause; and in none of the writer's personal observations of cumulative epidural hæmorrhages, in which consciousness was gradually lost before death or relieved by operation, were aphasic symptoms recognized at any time during their progress.

Theoretically nearly the same mechanical conditions should render the pial hæmorrhage, or the subarachnoid serous effusion of meningeal contusion, equally ineffective factors in the production of disturbances of speech. Although the dura mater no longer reduces compressive force, the lesser amount of even the largest hæmorrhages of this form compensates for its absence. Practically the observation of a very large number of instances in which such subdural effusions were the essential lesion, and in which consciousness had been retained for a more or less lengthened period, has failed to show even a single one in which the faculty of speech had been disturbed. There have been cases reported in which motor, and perhaps other forms of aphasia, have been attributed to localized pial hæmorrhage, but none in which lesion of the brain tissue has been excluded. In a case previously quoted in this connection, a limited superficial hæmorrhage was regarded as the cause of a loss of speech; and though some improvement resulted from the removal of the clot, the continuance of the aphasic condition for years afterward sufficiently indicates a deeper seated lesion unrelieved by operation. No surgeon of course after trephining for the relief of aphasia would feel justified in subcortical exploration; so that in all such cases the cause must remain undetermined, except as it may be learned from a knowledge of attendant symptoms.

If the hæmorrhage localized in some part of the speech zone proves to be of cortical origin, it must still be regarded as a concomitant rather than as a causative factor in the production of the speech defect. There will be not only the underlying laceration, but additionally the inevitable adjacent limited contusion which may directly involve the centre itself.

In recapitulation, it is to be said of hæmorrhages in general in their relation to aphasia that when large their compression force is too diffuse, and when small that it is too slight to make them effective; or that they are associated with other lesions which are directly operative in its production. It is unnecessary at the present time to raise the question whether intracranial hæmorrhage by simple compression ever directly causes any functional defects, or whether these are sole-

¹ *Injuries of the Brain*, Phelps, 1897-1900, p. 183.

ly dependent upon nutritive changes induced by coincident circulatory disturbances.

The cause of traumatic aphasia, then, must be sought in lesion of the brain tissue which forms the speech centres involved. This lesion is a contusion with or without laceration. It is a hyperæmia and œdema in greater or less degree, limited or diffuse, often with punctate hæmorrhagic extravasations, and in a certain number of cases accompanied by laceration of the cerebral cortex, which is primary, or of the subcortex, which is likely to be secondary and due to disintegration of tissue by continued intracerebral hæmorrhage.

The writer's record of personal observations of head injuries now numbers 958 cases, in rather more than 2 per cent. of which there was some degree or form of aphasia. Seven cases were fatal, and of these five were the subject of necropsy, all of which exhibited well marked lesion of the cerebral tissue. In three of them there was laceration of the left temporal convolutions, in one hæmorrhagic softening of Broca's centre, and in one, not properly in this series, there was structural change, due to displacement and infiltration in the course of a tumor's growth; and all had been attended by general symptoms of severity indicative of cerebral lesion. The operative case revealed only a small clot and an "apparently normal cerebral surface," but as there had been distinct symptoms of cerebral trauma, and the aphasia was unrelieved by operation, there can be no doubt that the effective lesion was subcortical and that the small hæmorrhage was without significance. There is no difficulty in explaining cases of aphasia which are immediate and permanent, or at least long continued, and accompanied by high temperatures, loss of rectal and vesical control, hemiplegia, and mental impairment, on the justifiable theory of cerebral laceration and disintegration. Even in such cases, unless following pistol shot wound or other positively known direct injury, there still may be doubt whether with or without laceration in other regions of the brain the lesion of the speech centres may not be the simple form of contusion. It has not proved to be the fact that a diagnosis of laceration in cases of cerebral contusion is in all cases possible.

The larger class of traumatic aphasias, transitory in character and accompanied only by trivial general symptoms, must be regarded as the result of contusion of a lower grade in which the hyperæmia and œdema are in more moderate degree. The post mortem inspection of cases of cerebral contusion shows these characteristic conditions, not only in widely varying degree,

but often confined to definitely limited areas or even to individual lobes. The observation of symptoms has equally shown this variation in degree and localization. It has also shown that the circulatory disturbance and serous accumulation are unstable, increasing and diminishing at times in the progress of the case to recovery.

The intercurrent of aphasia in the course of recovering cases of cerebral contusion is explicable only by some reference to the progressive pathological changes which occur in this form of injury. The primary effect of violence applied to the head, when sufficient to produce symptoms is, observing a distinction made by Crile² between collapse and shock, cerebral collapse, a suspension of function in greater or lesser degree of the cerebral vasomotor centres, not necessarily attended by an extension to the general vasomotor system. This is immediately followed by a paralytic distention of the cerebral arteries and veins and a condition of capillary anæmia. If the injury is sufficiently severe, and the vascular disturbance is not at once relieved, minute thrombi are formed in the smaller vessels with punctate hæmorrhagic extravasations into the tissues of the region involved. After the lapse of an appreciable interval of time the brain tissue becomes œdematous and swollen. These several pathological conditions, according to their limitations of degree and extent, are attended by corresponding symptoms. From an extremity of violence life may cease almost at once from anæmia of the respiratory centre. The usual primary indication of cerebral injury is unconsciousness, due to the more general anæmia, and its degree and prolongation remain the measure of damage done during the whole primary period of simple vascular disturbance. At its maximum it is profound and prolonged; at its minimum it is scarcely more than a momentary mental confusion or transitory somnolence. Life may terminate during this period; recovery may ensue before the secondary process has begun; primary unconsciousness may merge in its later form; or after an interval, in which consciousness is more or less completely restored, it is again lost or clouded from the later process of increasing œdema and the nutritive changes by which it is accompanied. During the continuance of these periods of primary and secondary vascular and nutritive disturbance many other so called pressure symptoms are manifest, the consideration of which is not essential to the present purpose. If to the intracerebral pressure there should chance to be added an intracranial compression from some form of hæmorrhage or

² George W. Crile, *Blood Pressure*. Cartwright Prize Essay for 1903. Phila., 1903, p. 19.

from a pial serous effusion, symptoms of course may be more severe and more rapidly developed. If some cerebral centre is at the same time lacerated, focal symptoms will be immediate, and will be evident with the return of consciousness, and in some instances at an earlier period; and as the lesion will be permanent, or at least of long continuance, the functional loss will be of corresponding duration; or if such centre is involved in a limited contusion, the loss or impairment of function will occur only in the later stage, when nutritive disorder has been intensified. As these later functional losses are the result of temporary conditions, they are also temporary, and as both vascular currents and serous exudations are subject to variation, they are also often variable in degree and sometimes recurrent. Illustrations of such transitory defaults in function are not infrequent. Transient and inconstant paralyses, anæsthesias, and paræsthesias, as well as aphasias, will be found in the record of many cases; and by the process of exclusion they can be attributed to no other cause than the changes which have been noted as occurring in and limited to the centres themselves.

The case detailed in the beginning of this article becomes comprehensible in the light of these pathological considerations. The early vomiting and somnolence of this patient, and the later slight optic neuritis, indicate some general contusion, while the lack of these symptoms makes it clear that it was inconsiderable in degree. The later development of speech disturbances further indicates a special lesion of the speech zone, as might naturally follow a fracture of the left middle basal fossa, while their postponement till the fifth day and their transitory nature still further indicate that the lesion was progressive or secondary and not destructive in character. These conditions can only be fulfilled by the acceptance of the facts of cerebral contusion as they have been here stated. The escape of the auditory and visual word centres from implication was probably due to a limitation of the lesion to the inferior portion of the zone and failure of the œdema to rise to their level.

The manner in which fatal pressure in cerebral contusion is brought about has been variously explained, and though the question is admittedly not within the scope of the present paper, it is of sufficient interest to justify brief reference. The theories of von Bergmann,³ Hill,⁴ and Courtney,⁵ are familiar. The most recent and most satisfac-

tory exposition is that of Cannon,⁶ founded upon experimentation made in the Physiological Laboratory of the Harvard Medical School. He at first objects to the theories of the writers mentioned that "a mechanical filtration of fluid is called upon to raise a pressure greater than its source," and asserts that "they fail to regard sufficiently the processes occurring in the brain tissue deprived of its proper blood supply." His own views are stated in the following quotation:

"The facts of the ground here covered remain: that injuries to the brain interfere with its proper blood supply, that such interference causes an increased osmotic pressure within the tissues and a consequent taking up of water from the surrounding plasma. The swelling and œdema of the brain after head injuries, therefore, are not wholly due to passive transudation, as Hill and von Bergmann have maintained, but are mainly the result of an active process in the tissues themselves; a force many times greater than blood pressure and amply sufficient to produce all the pressure symptoms and account for all the signs of intracranial tension which the clinical cases of cerebral trauma often manifest."

The ultimate effect of cerebral injuries acting through the primary and secondary disturbances of the circulatory disturbances, as determined by experimentation upon the lower animals, is a disintegration of the nerve cells.

114 WEST FIFTY-FIFTH STREET.

Association of Medical Librarians.—This association concludes to-day its eighth annual meeting in Boston. Discussions have been held on such subjects as the construction of library buildings, the proper situation of reading rooms, book stacks, etc., how to bring the library to the attention of physicians, how to increase the circulation of medical books, particularly in the country, the care of hospital reports, and what books a library with limited resources should procure.

Health Statistics in Chicago During May.—There were 105 fewer deaths from all causes reported in May, 1905, than in May, 1904—representing a decrease of 5.2 per cent. in the annual death rate per 1,000 of population. Among the causes showing increase over May, 1904, are: Acute intestinal diseases, 7; bronchitis, 6; cancer, 4; convulsions, 8; heart disease, 50; measles, 32; nervous diseases, 29; smallpox, 6; suicide, 15; violence other than suicide, 23; whooping cough, 57. Among those showing decrease are: Apoplexy, 16; Bright's disease, 29; consumption, 19; diphtheria, 10; pneumonia, 146; scarlet fever, 8; typhoid fever, 8.

⁶ W. B. Cannon, Cerebral Pressure Following Trauma. *Am. J. Phys.*, 1901-2, p. 91.

³ Von Bergmann, *Deutsche Chirurg.*, 1880.

⁴ Hill, *Phys. and Path. of Cer. Cin.*, Lond., 1896.

⁵ Courtney, *Tewkesbury Prize Essay*, 1838. *Bost. M. and S. J.*, 1899, v. 140, p. 237.

Our Subscribers' Discussions.

A SERIES OF PRIZE ESSAYS.

Questions for discussion in this department are announced at regular intervals. So far as they have been decided upon, the further questions are as follows:

XXXIX.—How do you treat erysipelas of the face? (Answers due not later than June 15, 1905.)

XL.—What are your views on the obstetrical binder? (Answers due not later than July 15, 1905.)

XLI.—By what honorable means may a young physician best promote his success in practice from the business point of view? (Answers due not later than August 15, 1905.)

Whoever among our subscribers (with the limitations mentioned below) answers one of these questions in the manner most satisfactory to the editor and his advisers will receive a prize of \$25. No importance whatever will be attached to literary style, but the award will be based solely on the value of the substance of the answer. It is requested (but NOT REQUIRED) that the answers be short; if practicable, no one answer to contain more than six hundred words.

Only subscribers to the NEW YORK MEDICAL JOURNAL AND PHILADELPHIA MEDICAL JOURNAL (including regular and volunteer officers of the Medical Corps of the United States Army, Navy, and Marine Hospital Service, commissioned or under contract) will be entitled to compete, and all persons known to be engaged in medical journalism are disqualified. This prize will not be awarded to any one person more than once within one year. Every answer must be accompanied by the writer's full name and address, both of which we must be at liberty to publish.

The prize of \$25 for the best essay submitted in answer to question XXXVIII has been awarded to Dr. James Stratton Carpenter, of Pottsville, Pa., whose article appeared on page 1112.

PRIZE QUESTION NO. XXXVIII.

THE PREVENTION OF DISEASE OF THE VERMIFORM APPENDIX.

Dr. Gustav Hausser, of Cincinnati, writes:

The prevention of disease of the vermiform appendix resolves itself chiefly into paying strict attention to the hygiene of the gastrointestinal tract, avoidance of constipation, thorough mastication and digestion of proper and well cooked food, avoidance of overindulgence in food and alcoholic stimulating drinks, avoidance of excessive strain upon a relatively weak abdominal wall, proper protection of foreign bodies which may have been swallowed, and the early and thorough treatment of any gastrointestinal disorders.

That the increase of appendicitis during the last decade is chiefly due to more advanced methods of diagnosing, there can be no doubt, the increase, therefore, being more apparent than real, many of these cases formerly passing under various other names, such as typhilitis, perityphlitis, paratyphlitis, enteritis, intestinal obstruction, ovarian inflammations, salpingitis, peritonitis, and numerous others. But that there is some

increase cannot be denied by even the most skeptical, this increase, in all probability, being due to our modern mode of living, whereby in the keen competition of making a livelihood we become careless and negligent of natural physiological needs. If more care were given to natural and hygienic rules, I am quite sure that the percentage of appendicitis cases would be greatly reduced.

The most prolific cause of appendicular trouble is probably overretention of feces, due to the ever prevalent constipation; and to this our chief attack should be directed, as the mass of undigested residue in the cæcum and colon undergoes decomposition, causing irritation and inflammation in and about the region of the appendix, which may result in a simple catarrhal inflammation or infection with the pathogenic microorganisms always more or less present in the large intestine.

The prevention of constipation should begin in early childhood; the mothers should be given explicit instructions as to the importance of carefully watching the stools of their children, who, when old enough to understand, should be impressed with the importance of daily and thorough evacuations of the bowels. Should chronic constipation exist, this should be treated on the lines laid down for this at times obstinate condition—namely, cultivating regularity, a diet of well cooked, but chiefly coarse foods, plenty of vegetables and fruit, a liberal amount of water between meals and at bedtime, outdoor exercise, massage of the abdomen, and, lastly, drugs, in the form of light hepatic stimulants, such as sodium phosphate, Carlsbad salts, etc., and tonics to the intestinal muscular fibres, of which cascara sagrada and nux vomica are types.

It is not only necessary to have daily evacuations, but these should be large, and the patient should feel as if the bowels had been emptied. The bowels may move every day, but yet not sufficiently to empty them, causing small portions of the stool to be left behind, which may remain for days or even weeks, as is frequently shown by large enemas washing out scybala, although the patient may give assurance that the bowels have moved every day.

Secondly, but scarcely of less importance, the subject of proper digestion must be dealt with. The careless and hurried manner of taking food cannot be too strongly condemned; the food not being thoroughly masticated, digestion is frequently incomplete, with decomposition and flatulence resulting. The teeth should be in the best possible condition, and should always be kept so;

food should be thoroughly masticated and the meal never hurried; too much stress cannot be laid upon the avoidance of overindulgence in food and stimulating alcoholic drinks. Never should so much be taken as to cause a feeling of fulness or distress after eating. The food should be well cooked, and any tainted, spoiled, or partially decomposed food should be avoided, as it frequently teems with microorganisms. A diet of a moderate amount of meat with carbohydrates and a large amount of vegetables and fruit is the best under ordinary circumstances.

Should indigestion at any time exist, this should be promptly and thoroughly treated. Decomposition and flatulence should also receive prompt attention, after removal of the offending mass with castor oil or some other equally efficient purge. The drinking water, if suspected of being impure or contaminated by sewage, should be thoroughly boiled before use.

If foreign bodies, such as small particles of lead, beads, fruit stones and seeds, pins, fish bones, etc., have been swallowed, although these are not so much a causal factor of appendicitis as was formerly thought, yet they should receive careful attention, as in a certain percentage of cases, although small, they have been found in or about the appendix; therefore if such bodies have been swallowed, a liberal diet of food leaving a large residue should be given, such as potatoes, rolled oats, and bread. The residue from these food stuffs, surrounding the foreign body, guards its sharp edges and prevents the possible dropping of it into the opening of the appendix or the production of irritation around it.

An attack of appendicitis having occurred and the patient recovered, with no indications for immediate operation, the case then probably being of the catarrhal form, a recurrence may be prevented in a large number of cases by exercising proper care and attention. All of the above named admonitions should be strictly enforced. Particular attention must be given to thorough evacuation of the bowels. All jarring, violent jolting, excessive strain upon the abdomen, as caused by heavy lifting, excessive gymnastics, and violent straining at stool, should be interdicted, for fear of breaking down protective adhesions which may have formed.

If at any time pain or a feeling of fulness is experienced in the region of the appendix, which occurs most frequently after errors in diet or from a sluggish, constipated condition of the bowels, a large soap enema (one to two quarts) or one of olive oil (one pint) should be given, the patient lying upon the back with the hips elevated and

the body slightly inclined toward the left, thus thoroughly flushing the large intestine and removing any feces which may have collected. A purge of castor oil or a saline should also be given per os. Rest in the recumbent posture, until all pain is gone, should be taken, and during this time only a light diet allowed, consisting of, milk, soft boiled or poached eggs, rice, rolled oats, and toast with tea or coffee.

As to operative interference, this should be given consideration in all cases, as the mortality under modern methods of operation is very slight in the simple catarrhal form; and especially is this true of the interval operation, for the dangers attending the leaving of an appendix once diseased in the abdomen far exceed those of the interval operation. If but one attack has occurred, and objections to an operation are made, a second attack may often be prevented by using care and the proper precautions; should, however, a second or third attack follow, it behooves us to urge its removal. Should signs of pus or a fulminating gangrenous form be suspected at any time during or after an attack, an operation is indicated, and it is by far the safer course to pursue, as at any time a general peritonitis may develop.

In conclusion, I wish to state that should any abdominal operation be performed, and the appendix be within easy access and the condition of the patient permit of a prolongation, it is justifiable for the surgeon to remove the appendix and thus save the patient from the danger of any future appendicular trouble.

Therapeutical Notes.

NOTES ON THE NEWER MATERIA MEDICA.

(Continued from page 909.)

Anchylotaphin is a remedy for helminthiasis and is understood to contain 15 per cent. of creosol.

Anticongestine is a mineral poultice compound which consists of a mixture of aluminum and magnesium silicates, with boric and salicylic acids, iodine, potassium iodide, iron carbonate, gaultheria, eucalyptus, thymol, and peppermint, incorporated with glycerin, and put up as a proprietary preparation.

Barutin is described as a double salt of barium-theobromine and sodium salicylate. It is recommended in veterinary practice as a diuretic.

Borol is the name of a mild antiseptic solution intended for use as a gargle or irrigating fluid, which contains sodium borate, 12 grains; sodium carbonate, 12 grains; sodium benzoate, 5 grains; glycerin, 90 minims; eucalyptol, $\frac{1}{4}$ minim; thymol, $\frac{5}{16}$ grain; menthol, $\frac{1}{8}$ grain; oil pinus pumilio, q. s. in each fluid ounce of solvent.

Collaurin is the trade name for colloidal gold, a preparation which is administered internally in the treatment of cancer, syphilis, and scrofulous conditions.

Cysto-lithia is an effervescent compound of cystogen and lithium tartrate, which is put up in tablets containing three grains of each ingredient. The tablets are said to possess uric acid solvent properties, and to act as an alkaline, urinary antiseptic. The tablets are put up and sold in glass tubes, each tube containing 12 tablets.

Dentalone is a saturated solution of chloretone in a liquid composed of oil of cloves, oil of gaultheria, and oil of cassia, which is recommended for treatment of exposed nerves in decayed teeth.

Digitalone is a standardized solution of digitalis of an activity equal to one tenth the strength of fluid extract digitalis U. S. P., which is intended by the makers, Parke, Davis, and Company, of Detroit, for either hypodermic or internal administration.

Dimopyranum is another name for pyramidon.

Emollientine is an ointment containing alum, carbolic acid, isarol, lead oxide, corrosive sublimate, and zinc sulphocarbonate, which is recommended in the treatment of burns, scalds, and lacerations.

Eserine oil consists of a solution of eserine salicylate in olive oil, which affords a painless method of applying eserine to the eye. The solution when made according to directions is sterile and keeps indefinitely; its action upon the eye is asserted to be prompt and painless.

Flavorone is a culture of selected and tested lactic acid germs, which is used for the purpose of ripening cream for butter making and as a ferment in the manufacture of cheese. The ferment is in the form of a powder inclosed in gelatin capsules. It can also be employed for the extemporaneous preparation of a palatable butter-milk.

Formawn is the shorter trade name adopted for chlormethylmenthoether, already described. When brought into contact with warm water formawn splits up into its component parts—menthol, formaldehyde, and hydrochloric acid.

Glyphocal is the name of a compound syrup of the glycerophosphates, containing the glycerophosphates of calcium, sodium, potassium, magnesium, and iron, together with pepsin and diastase. The syrup is also put up in combination with malt extract and hæmoglobin.

Guaia tonic is a preparation of guaiacol and creosote, with quinine, strychnine, and hypophosphites, which has been introduced into medicine by the Searle and Hereth Company, of Chicago, Ill.

Indoform is a salicylic acid methylene acetate, which is produced by the reaction of formaldehyde on acetyl salicylic acid. It is a white pow-

der having a sour, astringent taste, with a melting point of 108 to 109 degrees, which is with difficulty soluble in cold water, but is more soluble in hot water. The preparation decomposes in the system into its constituent parts, and is said to be useful in the treatment of gout, rheumatism, and neuralgia. It is given in doses of one to three tablets, each containing 0.5 gramme, during meals or after eating.

Iodalia is a granulated, saccharated, organic iodine compound in combination with tannin, which is said to afford an agreeable vehicle for administering iodine to children, it being well tolerated. Each teaspoonful is said to contain 1 grain of iodine combined with tannin.

Laxatol is an aromatic laxative tablet, the active principle of which is phenolphthalein.

Methaform is the name adopted by Frederick Stearns and Company, of Detroit, Mich., for a trichlorotertiary butylalcohol. It is another name for a product which is already on the market under several different names.

Phthisocan is the name given to a solution of potassium guaiacolsulphonate in simple syrup, flavored with tincture of orange.

Renetone is a diuretic and antilithic compound which is said to owe its activity principally to the presence of an ammonium formaldehyde compound described as hexacystine. It also contains lithium benzocitrate, buchu, digitalis, tritium, potassium nitrate, and oil of juniper berries, the whole being contained in an alkaline medium.

Sal-Ethyl is represented to be a chemically pure ethyl salicylate, which, it is asserted, has certain advantages over the natural as well as the artificial methyl salicylates. The therapeutical indications are the same as those for oil of wintergreen.

Thyreoidectin is a preparation obtained from the blood of animals which have been previously deprived of their thyroid glands. It is a reddish brown powder, which is put up in capsules containing 5 grains each in bottles of 50 capsules. The dose is one to two capsules three times a day.

Veratrone is a standardized non-alcoholic sterile preparation of veratrum viride, of one fourth the strength of the U. S. P. fluid extract of veratrum, which is intended for administration either per os or hypodermically.

Zinc Perhydrol is a compound which occurs in the form of a white powder, insoluble in water and consisting of 50 per cent. of zinc dioxide and 50 per cent. of zinc oxide. On the addition of acids it liberates hydrogen dioxide. This new preparation is of use as an antiseptic in the treatment of wounds, especially of ulcerating sores, and has the advantage of sodium dioxide of not forming a caustic substance on the addition of acids, or on decomposition in the body, but an inert substance—zinc oxide. It should be used in combination with mineral oils, such as petrolatum, in 10 per cent. ointments.

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AND

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POLITICS AND SANITATION IN PHILADELPHIA.

Among the results of the recent political disturbance in Philadelphia, by which the mayor of the city appears to have overthrown the Republican organization, which so long has controlled the business of government, it is reported in the newspapers that the number of assistant medical inspectors will be reduced. Two years ago twelve assistant medical inspectors were employed in attending to the placarding of houses in which there were cases of acute infectious diseases. With the inauguration of the new mayor Dr. Edward Martin was appointed director of the Department of Public Health and Charities. Soon after assuming the duties of his office Dr. Martin caused the staff of assistant medical inspectors to be increased to fifty. In addition to their duties of placarding houses for cases of contagious diseases, the inspectors were required to visit the public schools and send those pupils home who presented evidences of infectious or transmissible ailments. At the same time the list of diseases which should be reported to the Bureau of Health was much increased.

We have noted in our columns from time to time the activities of the assistant medical inspectors, and we wish to express approval of the manner in which their work has been done and to say that the policy of Director Martin appears to

be enlightened and modern in every way. The wisdom of a reduction of the force of assistant medical inspectors we question. The removal of these positions from political influence, on the other hand, will be productive of nothing but good. As the service is now conducted, a young physician desirous of a position on this staff must pass a civil service examination, and he is then placed on an eligible list. Before he is appointed, however, he is required to receive the endorsement of the leader of his ward. It can readily be seen that the personal approval of a ward leader is a very important factor in determining a man's capability to fill the position of assistant medical inspector!

These offices pay a salary of \$1,200 a year to each incumbent. Out of this, we understand, the inspector has to make contributions to the Republican city committee, to the ward committee, and to the division committee. In addition, he is called upon to buy tickets to fairs for the benefit of political clubs and to contribute to sundry other causes of a political nature, so that the actual amount received by the inspector is about \$950 yearly. The wonder is that up to the present time the city of Philadelphia has been able to get as good men as have been obtained to accept these positions. We repeat, if these places can be divorced from this kind of politics, nothing but good can come to the Department of Public Health and Charities.

INFANTILISM IN ACUTE DISEASE.

In our issue for May 27th, under the title of Influenza and Preceding Hysteria, we mentioned an interesting report of a case of infantilism, occurring as a feature of influenza, presented before the Paris Hospital Medical Society by Menetrier and Bloch. At a subsequent meeting of the same society (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, May 11th) M. Achard reported several instances of the same mental condition occurring late in the course of typhoid fever. M. Achard thought that it was not very uncommon in this disease, and it does not appear from his communication or from the discussion evoked by it that the occurrence is necessarily

connected with any preceding morbid state of the nervous system.

A striking example of puerilism in typhoid fever absolutely unconnected with any such preceding pathological condition was mentioned by M. Siredey. The patient, a man forty-nine years old, was of more than ordinary intelligence and occupied a position in business that called for great mental activity. His typhoid fever was severe, defervescence did not begin until the end of the fourth week, and there were so many relapses that his real convalescence did not set in before the middle of the third month. Infantilism accompanied his progress toward recovery, and was of a pronounced character for two weeks. He showed the most eager solicitude concerning matters of no moment, but gave himself no concern about his business affairs, and never spontaneously mentioned his children, to whom he was devotedly attached.

It will be remembered that Dupré attributed the *puérilisme mental* described by him to "*ménin-gisme*," and in the discussion in question some stress was laid on the severe implication of the cerebral cortex and the meninges in typhoid fever, but it seems not altogether improbable that the infantilism is due to simple exhaustion, and this idea appears to be borne out by its occurring late in the progress of typhoid fever, after the beginning of defervescence. In influenza, as we all know, the same exhaustion comes on remarkably early.

A NEW OCULAR SYMPTOM OF EXOPHTHALMIC GOITRE.

In the *Gazette médicale de Nantes* for May 20th M. Teillais recounts having met with three cases of exophthalmic goitre in which a deep brown pigmentation of the cutaneous surface of the eyelids was noticeable. In the first instance he was disposed to regard the phenomenon as accidental, but the second and third examples led him to look upon the pigmentation as intimately connected with the cause of the disease. According to his observations, the brown color is diffused evenly over the lids, being bounded above by the eyebrow and below by the inferior orbitopalpebral furrow. The conjunctiva is not pigmented.

The effect of the pigmentation is to heighten the apparent extent of the exophthalmia and to intensify the fixity of gaze observed in the subjects of the disease.

This pigmentation, though it has been observed by others, is not sufficiently common to be of much diagnostic value, but it does seem to coincide with an unusual activity of the morbid process that lies at the root of the trouble, for it may accompany the onset of the manifestations and then disappear, or it may come on in a late recrudescence. It is not always uniform, Schroetter having observed a case in which irregularity of its distribution was a feature, accompanied with changes in the subcutaneous tissue, both of which phenomena he attributed to an anomaly of the secretory action of the thyroid gland. Teillais is inclined to accept the theory that exophthalmic goitre is due to overaction of the thyroid, while myxædema depends on defective action or absence of the gland, and he cites in support of this view the temporary exophthalmia that sometimes results from excessive thyroid medication.

THE PRICE OF A GENTEEL OCCUPATION.

The ambition to secure bread and butter earning positions in life in the occupations somewhat snobbishly designated as genteel, comprising clerical and professional positions, is rapidly adding a new and important factor in the ætiology of physical and moral degeneracy. The idea that manual labor and mechanical pursuits of various kinds are the very essence of nobility in bread winning is rapidly becoming only a tradition. The children of both the poorer and the great middle class, speaking from the standpoint of material prosperity, have come to consider the occupations of their fathers and mothers as essentially degrading. This growing prejudice of youth against manual labor and in favor of so called genteel occupations is a deadly and insidious social and moral poison. The young man born of industrious, hard working parents scorns his father's mechanical or day labor occupation and aspires to something better. He has perhaps a smattering of education, merely enough to stimulate ambitions that he can never gratify. To him

work with the hands—honest labor—has no features of dignity to commend it. The consequence is he either makes a desperate effort to qualify for the ranks of the already overcrowded professions or enters some clerical occupation, in which his chances in the battle of life are much less brilliant than his father's, whose occupation, while, from the standpoint of the snob, less genteel, was far more productive of material results. The father perhaps has been able to give his family modest comforts and perhaps a few luxuries in life, to which the family of the would-be genteel son, should he be so misguided as to marry and raise a family, is likely to be a stranger.

The daughter of the mechanic or other wage worker sees nothing respectable or ennobling in the use of the broom, the mop, and the washboard, which have been part of the everyday life of the mother who bore her, and yearns for the shop and the store, with their temptations and starvation wages. She as well as her brother has acquired in all probability a smattering of so called education. This faulty education is often just sufficient to excite dangerous ambitions—ambitions that are decidedly the unhealthful product of their environment in the minds of children of the poor. So far as the young girl is concerned, these ambitions are not likely to be gratified legitimately; whither they often lead, every sociologist knows. The daughter of the mechanic and wage worker spurns domestic service and abhors matrimony in her own sphere. Or if she does not altogether spurn domestic service, and is willing to enter matrimony in her own sphere of life, she has a contempt for domestic service, although she is willing to become a slave for the benefit of the man she marries and the family she rears. Where the young woman has a contempt for domestic service, and is adverse to matrimony in her own sphere, the men of the sphere above her are not slow to take advantage of her ambitions, but not always in a way conducive to her best interests in the battle of life.

The physical and moral degeneracy attendant upon overwork and underpay is nowhere so evident as among those engaged in the so called genteel occupations. Malnutrition among the underfed is not so infrequent among genteel workers

as might be imagined. When the individual who is inured to manual labor or to a mechanical pursuit is thrown out of employment, which, by the way, he rarely is, except under conditions for which wage earners are themselves largely responsible—for example, in the case of strikes—he has practically no difficulty in reestablishing himself in another job, in which he can make a respectable living for himself and for his family. With the genteel occupant of a clerical or professional position the reverse is true. Great difficulty is experienced in getting a suitable position. The suffering on the part of such an individual is far greater than that of those individuals who are not used to the refinements of civilization, and who indeed have no particular ambition to gratify in that direction. His mode of living and that of his family, if he has a family, are keyed up to a plane from which it is difficult for him to descend without considerable shock to his finer sensibilities. The ranks of the criminal are recruited to a certain extent from those who prove to be the weaker vessels in the struggle for existence among the so called genteel workers. In the case of women so employed, recruits for the grand army of prostitutes are more abundant than in the case of women of a less refined class, who are inured to harder methods of earning a livelihood. Other things being equal, the young man or woman with a trade has, upon the average, a far better chance in the battle of life than the individual of professional and clerical occupations.

A comparison of the combined incomes of a large number of mechanics of the higher grades with the aggregate incomes of a similar number of individuals drawn from the so called genteel occupations is very suggestive. I will mention a case in point. From a certain large city in the United States two representative regiments were recruited for service during the Spanish-American war. One of these regiments, sometimes facetiously termed the "dude regiment," was composed of men from the so called genteel or professional classes. The other regiment, which did not stand so high intellectually or socially, was composed almost altogether of workmen of the higher class, such as machinists and engineers, but to a certain extent was made up of miscel-

laneous wage workers. In estimating the sacrifices that were made by the members of the two regiments, it was discovered that the combined incomes which were lost to the members of the last mentioned regiment amounted to a sum which, in round figures, was three times the amount represented by the combined incomes of the members of the more genteel organization.

The old idea paramount in the minds of our forefathers was that manual labor and mechanical pursuits of various kinds were not only respectable, but an essential part of the young man's education. The old fashioned father believed that his duty was, not only to give his son a fair degree of education, but a trade upon which he could rely for a livelihood and to which he could have recourse at any time in case he should have difficulty in earning a living in some occupation which to him was more congenial. There is a tendency of late in certain quarters to revive interest in manual training of various kinds as an essential factor in education and in the making of useful and self-sustaining citizens. This is a theme which I do not care to elaborate at this time, but that it is a most important one the more progressive and thoughtful practical educators of the world are firmly convinced. The practical bearing of the foregoing lies in the proposition that the rise and fall of criminality, prostitution, pauperism, and, in short, all of the brood of social diseases of which degeneracy is the parent, correspond with the ups and downs of material prosperity of the social integers.

G. FRANK LYDSTON.

VEGETARIANISM.

Dr. John M. Swan, of Philadelphia, has made some interesting observations of a sickly vegetarian, one whose parents and grandparents also were vegetarians, and he reports them in the June number of the *American Journal of the Medical Sciences*. Incidentally Dr. Swan remarks that a strict vegetarian must take a large bulk of vegetable food in order to obtain the necessary amount of protein, and that the large mass of carbohydrates necessarily ingested must hinder the normal chemical processes in the body, on account of the fermentations that are likely to take place in the intestinal tract. "Writers," he says, "seem to be agreed that the use of a strictly vegetable

diet, while it may permit of a normal amount of work at times, will not permit of sustained effort, nor will it allow users to meet sudden calls for increased exertion."

PHLEGMONOUS INFLAMMATION OF THE STOMACH.

Dr. Hermann Merkel (*Centralblatt für innere Medizin*, 1905, No. 10; *Berliner klinische Wochenschrift*, May 8th) reports a remarkable case of this rare affection, one in which the extent of the gastric wall involved was very great. The inflammatory process extended to the serous coat, resulting in fatal fibrinopurulent peritonitis. It is said that thus far only seventy cases of primary diffuse gastric phlegmon have been recorded, and that in only three of them was the trouble associated with other pathological conditions of the stomach. In Merkel's case it took its origin in a chronic ulcer.

THE ESMARCH BANDAGE IN THE HANDS OF LAYMEN.

In these days of "first aid" there is considerable danger that hæmostatic measures designed only for temporary use may be kept in operation long enough to be fraught with danger to the integrity of the distal part of a limb. Among them is the Esmarch bandage, and it would be well to bear in mind that, according to Ahlberg (*Nordiskt medicinskt Arkiv*, xxxvii, 3; *Zentralblatt für Chirurgie*, May 27th), it should not be allowed to remain in place for more than three hours.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 12th.—New York Academy of Medicine (Section in General Surgery); New York Academy of Sciences (Section in Chemistry and Technology); New York Medicohistorical Society (private); New York Ophthalmological Society (private); Medical Association of the Greater City of New York; Society of Medical Jurisprudence, New York; Gynecological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private); Corning, N. Y., Medical Association.

TUESDAY, June 13th.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Medical Union (private); Buffalo Academy of Medicine (Section in Medicine); Kings County, N. Y., Medical Association; Rome, N. Y., Medical Society; Medical Society of the County of Rensselaer, N. Y.; Newark, N. J., Medical Association (private); Trenton, N. J., Medical Association; Clinical Society of the Elizabeth, N. J., General Hospital and Dispensary; Northwestern Medical Society of Philadelphia; Practitioners' Club, Richmond, Ky.; Richmond, Va., Academy of Medicine and Surgery.

WEDNESDAY, June 14th.—Medical Society of the Borough of the Bronx, New York; New York Pathological Society; American Microscopical Society of the City of New York; Society of the Alumni of the City (Charity) Hospital; Society for Medical Progress, New York; Philadelphia County Medical Society; Lenox Medical and Surgical Society (private).

THURSDAY, June 15th.—New York Academy of Medicine; Brooklyn Surgical Society; New Bedford, Mass., Society for Medical Improvement (private); Medical Society of the City Hospital Alumni, St. Louis; Atlanta Society of Medicine.

FRIDAY, June 16th.—New York Academy of Medicine (Section in Orthopaedic Surgery); New York East Side Physicians' Association; Manhattan Medical and Surgical Society (private); Clinical Society of the New York Postgraduate Medical School and Hospital; Baltimore Clinical Society; Chicago Gynecological Society.

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 3, 1905:

	June 3.		May 27.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	727	17	888	19
Diphtheria and croup	320	27	331	26
Scarlet fever	152	14	184	15
Smallpox	1	..	..	..
Chickenpox	113	..	141	..
Tuberculosis	393	142	470	163
Typhoid fever	38	4	32	4
Cerebrospinal meningitis	71	60	76	60
	1,815	264	2,116	287

The German Hospital Training School, of Brooklyn, graduated the following nurses on June 1st: Catherine Vettel, Mary Bryan, Helen Louise Muehlich, Marie Track, Ella Teresa Seaman, Catherine Dorothea Fredericka Ruehs, and May Smith.

Queens-Nassau Medical Society.—At the annual meeting of the Queens-Nassau Medical Society, held at the Nassau County Court House, Mineola, on June 1st, Dr. William J. Burnett, of Long Island City, was elected president and Dr. William Irving Barnes, of Oyster Bay, vice-president.

Manhattan State Hospital.—The eighth annual graduation exercises of the training school for nurses of this institution were held at Ward's Island, New York city, Wednesday, June 7th, at 4 p. m., with the following programme: Overture, orchestra; invocation, by the Reverend Rufus Duff, hospital chaplain; address, by the Honorable John C. Coleman; march, orchestra; address, by the Honorable Homer Folks; presentation of diplomas; waltz, orchestra; address, by the Reverend Thomas J. Campbell, S. J.; benediction, by the Reverend Alfred Blewitt, hospital chaplain; march, orchestra.

A New Downtown Emergency Hospital.—Within the next week a new hospital will be established in the downtown district that will relieve the congestion of the Hudson Street Hospital in cases of emergency. The House of Relief is to be located at 93 Gold Street, in the Printing House Square district. The hospital was to have been opened earlier, but the work was delayed so that it will be another week before patients will be received. The new hospital will take in a district from which all accidents are now taken care of by Hudson Street Hospital. Hereafter the new House of Relief will care for those who are injured along Newspaper Row and at the Brooklyn Bridge entrance.

The Medical Association of the Greater City of New York.—A stated meeting of this associa-

tion will be held at the New York Academy of Medicine, on Monday, June 12, 1905, at 8.30 p. m. Order of exercises: Report of the Committee on the Death of Dr. John H. Hinton, by Dr. Ransford E. Van Gieson, chairman; discussion on Hyper trophy of the Prostate and Its Treatment, to be opened by Dr. Lewis S. Pilcher; Perineal Prostatectomy by an Original Technique, with Illustrations, by Dr. Parker Syms; discussion continued by Dr. Carl Beck, Dr. Willy Meyer, Dr. Ramon Guiteras, Dr. Eugene Fuller, Dr. Robert Holmes Greene, Dr. Joseph Wiener, Jr., Dr. James Pedersen, and Dr. William Bedford Brown. J. Lee Morrill, M. D., treasurer, 67 East Seventy-ninth Street; P. Brynberg Porter, M. D., recording secretary, 150 West Eighty-fourth Street.

Long Island College Hospital.—This institution graduated the following on June 1st:

Frederick M. Albers, Horace G. Baldwin, Oscar Best, Charles F. Baxter, Albert W. Beck, David T. Bishop, Siegfried Block, George E. Borden, Robert O. Brockway, Henry W. Brody, Jacob L. Brower, Julius Cohn, Edward T. Curran, William T. Doran, George M. Dunaif, Willis J. Evans, Israel Feigenoff, John D. Freitag, Jr., Joseph Friedmann, Edward H. Gershenson, Charles Ginsberg, Isaac E. Gluckman, Joseph W. Goldsmith, Henry Goodman, Louis Harris, George H. Hicks, Jr., Moses M. Housepian, A. B., Frank W. Hover, Robert Y. Hubbard, Charles Hyman, Samuel M. Hyman, Gerald Kasper, Ph. G., Henry B. Kessler, Hyman Kleban, Benjamin Kleinberg, Charles Clyde, Herman Levinson, Ph. G., George R. Lewis, William E. Lippold, David Livingstone, John P. Lynch, Morris W. Mootnick, Alexander Nechamkin, Alfred H. Parsons, A. B., Julius Phillips, Edward Precht, Charles Reigod, William Rex, Ph. G., Henry U. Robinson, William H. Rogers, Jr., Ph. G., Samuel Rosenberg, Jacob Rosenbluth, Simon Rothenberg, Irvine J. Russell, Aaron Samuelson, Harry Schneider, Frederick Schroeder, Jr., Ph. G., Adolf I. Schwartz, B. L., B. S., Maurice Schwartz, Martin J. Sgier, Max Slutsky, Joseph W. Stevens, Frank Stockman, Alec N. Thomson, Claude H. Topping, Arthur S. Unger, Theodore L. Vosseler, Ph. G., Egbert H. P. Ward, A. B., Cassius H. Watson, B. S., Daniel D. Whedon, Fred R. Williams, Jean F. Wolfs. Frederick J. Schweigart receives a certificate and will receive a diploma this month.

Personal.—Dr. Charles E. Atwood, who has been connected with Bloomingdale for the past thirteen years as assistant physician, has resigned, and leaves July 1st to spend a year in Europe to complete his studies in various hospitals and laboratories there, after which he expects to return to New York to enter the practice of medicine.

Dr. August Hoch, for about twelve years connected with the psychological laboratory at the McLean, at Waverley, Mass., succeeds Dr. Atwood as first assistant and special clinician, which, it is hoped, will result in an increased activity in the Bloomingdale laboratory.

The Jamaica Hospital has two new house surgeons in Dr. M. Thomas Powers and Dr. Louis Clark, both graduates of the College of Physicians and Surgeons in Manhattan. The former physicians, Dr. J. Cameron Gain and Dr. Morsch, have engaged in private practice. The former will continue in Jamaica and the latter will open an office on Sumner Avenue, Brooklyn.

Dr. Fredric Griffith has been appointed a member of the International Peace Conference, to be held in Lucern, Switzerland. Dr. Griffith attends as the accredited agent of the Pennsylvania State Society.

PHILADELPHIA.

Marriages.—Dr. Benjamin K. Fletcher and Miss Sara Redman were married on June 1st.

Dr. John Cooke Hirst and Miss Maud Wilson Boyd were married on June 1st.

Jefferson Alumni Dine.—The annual banquet of the Alumni Association of the Jefferson Medical College was held in the Bellevue-Stratford on June 1st. Dr. Hobart A. Hare and Dr. J. Chalmers Da Costa responded to toasts.

University of Pennsylvania Alumni.—The alumni of the medical department of the University of Pennsylvania enjoyed an outing at the Orchard, Essington, on June 1st. Athletic sports and a collation furnished the entertainment.

Methodist Hospital Training School Commencement.—Miss Matilda Cantrell Degen, Miss Rosalie Anna Ferree, and Miss Grace Alverson Hayman received diplomas at the commencement exercises of the Methodist Hospital Training School for Nurses on June 1st.

The Annual Meeting of the American Neurological Association was held in the College of Physicians on June 1st, 2nd, and 3rd. The afternoon session of June 2nd was held in the new medical laboratories of the University of Pennsylvania. A smoker was given at the Art Club on the evening of June 1st by the Philadelphia Neurological Society. A luncheon was given at the University Club on Thursday, June 1st, and a luncheon was given at the Art Club on June 2nd.

Scientific Society Meetings for the Week Ending June 17th.—Monday, June 12th, Wills Hospital Ophthalmic Society. Tuesday, June 13th, Kensington Branch, Philadelphia County Medical Society; Philadelphia Pædiatric Society; Botanical Section, Academy of Natural Sciences. Wednesday, June 14th, Philadelphia County Medical Society. Friday, June 16th, American Philosophical Society. Saturday, June 17th, West Philadelphia Branch, Philadelphia County Medical Society.

Philadelphia County Medical Society Programme.—The following will be the programme of the Philadelphia County Medical Society at its meeting, June 14, 1905: Dr. T. Turner Thomas, Fractures of the Head of the Radius; Report of Two Cases; An Experimental Study, Preliminary Communication; Dr. Moses Behrend, A Case of Perineal Prostatectomy Performed with the Aid of Young's Tractor; Dr. W. Wayne Babcock, Cervical Rib with Resulting Gangrene of the Fingers; Dr. L. H. Bernd, Uterorectal Fistula; Operation; Recovery.

Fellowship Foundation for Jefferson College.—Dr. W. W. Keen, professor of surgery in the Jefferson Medical College, has presented \$5,000 to the trustees of the college to found a memorial to his wife, to be known as the Corinna Borden Keen Research Fellowship. Whenever the accumulated income of the principal is \$500 it is to be awarded to a graduate of Jefferson College,

who has graduated not less than one year or more than ten years before, who shall apply it to the expenses of original research approved by the faculty. It is expected that the first award will be made in 1907.

Jewish Hospital Training School.—The commencement exercises of the Jewish Hospital Training School for Nurses were held at the hospital on the evening of May 30th. The following young women received the diplomas of the school:

Miss Rebecca Lipschutz, Miss Gertrude Payton, Miss Clara M. Collins, Miss Olivia O. Oakey, Miss Olga Schoettle, Miss E. M. Henning, Miss Ray Kotinsky, Miss Clara Sanderson, Miss R. Blumstein, Miss Lolo F. Krout.

The Matilda Kaufman gold medal was awarded to Miss Rebecca Lipschutz for the highest general average. A special prize of \$55.00 was awarded to Miss Gertrude Payton for having received the highest average in practical nursing. Dr. Bernard Kohn delivered the address.

The Health of the City.—During the week ending May 27, 1905, the following cases of transmissible diseases were reported to the bureau of health:

	Cases.	Deaths.
Malarial fever.....	1	0
Typhoid fever.....	102	13
Scarlet fever.....	37	7
Chickenpox.....	59	1
Diphtheria.....	69	1
Cerebrospinal meningitis.....	6	1
Measles.....	61	1
Whooping cough.....	32	2
Tuberculosis of the lungs.....	28	56
Phthisis.....	31	37
Erysipelas.....	6	2
Puerperal fever.....	2	1
Tetanus.....	1	1

The following deaths were reported from other transmissible diseases: Tuberculosis, other than tuberculosis of the lungs, 11; diarrhoea and enteritis under two years, 20. The total deaths were 400, in an estimated population of 1,438,318, corresponding to an annual death rate of 14.46 per 1,000 population. The total infant mortality was 79; under one year, 62; between one and two years, 17. There were 30 still births; 13 males and 17 females. No unusual meteorological phenomena were reported by the weather bureau.

Concerning Physicians' Fees.—On the evening of May 26th, the Philadelphia County Medical Society, the Chester County Medical Society, and the Delaware County Medical Society held a joint meeting at the College of Physicians, which was addressed by Dr. J. N. McCormack, of Bowling Green, Ky., chairman of the organization committee of the American Medical Association. This joint meeting was held in pursuance of a resolution of the State Medical Society directing the censorial districts to hold at least one meeting yearly, at which the societies forming those districts should meet together. In the course of his remarks Dr. McCormack said that physicians in Pennsylvania received less compensation for their services than those in any other section of the country. He advised the physicians in the first censorial district of Pennsylvania to unite in an endeavor to have their services more adequately compensated. In Philadelphia many phy-

sicians gave office advice for fifty cents, and made visits to the patients' homes for one dollar. Many practitioners attended obstetric cases for ten dollars. Such fees he ventured to consider absurd compensation for the service rendered. The multiplication of free dispensaries and the competition of the large number of physicians for practice tended to keep fees down to these figures. He was mindful of the saying that the physician should practise his profession for the good of humanity and not for mere dollars and cents. Among the first duties of the physician, however, was that to his family; to keep them from want during his life and after his death; and that to himself, to provide for his own mental equipment so that his advice might be of the best. On fees such as had been mentioned as illustrations these two objects could scarcely be accomplished. We should like to see Dr. McCormack's views as to the adoption of a uniform scale of fees prevail.

Jefferson Medical College Commencement.—

The eightieth annual commencement of the Jefferson Medical College was held in the Academy of Music on June 2nd. The occasion was marked by the presentation of a portrait of himself to Dr. William S. Forbes, professor of anatomy, by the four classes. The presentation speech was made by Dr. Addinell Hewson. Dr. Forbes was also presented with a silver loving cup by the Medical Alumni Association of the University of Pennsylvania in recognition of Dr. Forbes's services in securing the passage of the anatomical acts of 1867. Dr. George A. Piersol, professor of anatomy in the University of Pennsylvania, made the presentation speech. The degree of M. D. was conferred upon the following candidates by the president of the trustees, William Potter:

Frank Cook Abbott, John Walter Barr, Lawrence F. Berry, Joseph Walter Beyer, Joseph Albert Biello, James C. Borland, Guy A. Brandberg, Arthur J. Brew, Charles P. Bryant, John L. Burkholder, Charles C. Cooner, Frank T. Davis, Jr., Frederick M. Davenport, Seward R. Davison, Robert T. Donnelly, George F. Doyle, Harrison A. Dunn, Edward A. Eichman, Gilbert A. Ferguson, George T. Fluke, Howard G. Fortner, Edgar N. Fought, Samuel Friedenburg, Malcolm Z. Gearhart, William H. Glick, Dayne H. Griffith, John Parker Harley, Charles Garfield Hayes, Louis Benjamin Heimer, William C. Heisey, Daniel W. Henry, John Daniel Hogue, John Robinson Hoskins, Henry O. Jones, Ralph Chester Kell, Frederick W. Killian, Guy A. Knight, Parry B. Larimer, Charles A. Lehman, Charles E. Lerch, Alfred A. Lühr, C. H. McCallum, John M. McCanna, Samuel L. McCarthy, Robert P. McCready, Francis J. McCullough, William J. L. McCullough, Ralph W. McDowell, William B. McKenna, Lloyd Russell Mace, James P. McFarlane, James Carre Magee, Ernest George Maier, Lorenzo F. Milliken, Irvin R. Mohnay, Thomas A. Monahan, Edward L. Morrison, Charles C. Moyer, H. J. E. Newnam, Alex J. Orenstein, Thomas C. Park, Alex B. Raff, Victor M. Reynolds, Edward E. Rhoads, William Fay Ross, John Timothy Ryan, LeRoy H. Saxe, Herbert N. Scheetz, Emil S. Schneider, Louis Schwartz, George Harvey Severs, Thomas Emmet Shea, George Siggins, John Reid Simpson, Frank C. Smathers, Samuel Calvin Smith, Wayne L. Snyder, George Sonneborn, George Sigars Spence, James N. Stanton, Samuel Stern, Harry M. Stewart, Francis X. Strong, Richard F. Taylor, Perry McD. Tibbins, Vere Treichler, Edward M. Vaughan, Isaac R. Vincent, Victor C. Wagner, Raymond K. Weber, Mark Dye Weed, Julius Leon Werner, John Joseph Wiley, Ernst T. Williams, Thomas L. Williams, John D. Wilson, William J. Winters, James W. Wood, Roy Lowry Young, of Pennsylvania; Albert E. Austin, Maximilian D. Bloomfield, Daniel F. Clancy, Edward Cooper, Francis A. Cregg, Fred O. Elder,

Clark B. Holbrook, Harold M. Howard, Hugh E. McCaffrey, Elmer W. Mitchell, Thomas J. Norton, Timothy D. Sullivan, Stephen E. Vosburg, of Massachusetts; Theophilus H. Boysen, Jr., Warren T. Clark, Abraham P. Fishman, Thomas B. Lee, Harry E. Lore, Egbert G. Mackenzie, William A. Robinson, James H. Underwood, Walter F. Wood, of New Jersey; Morris M. Caldwell, Major I. Fleming, James H. Harper, Henry H. Harrison, Livingston F. Johnson, Arthur T. Pritchard, Arthur E. Shaw, Samuel L. Stringfield, of North Carolina; Halsey S. Bramble, Tello J. d'Apery, Alexander Eisenstadt, William H. Ferrier, Edward S. Pope, George A. Riker, Herbert W. Thomssen, of New York; Charles G. Alderman, John N. Eyanson, Samuel A. Mumford, James J. Stanton, Garett Van Sweringen, of Indiana; Clarence F. Bernatz, William F. Brown, Earl C. Carhardt, Charles R. Garrett, Lindus La Rell Riggs, of Iowa; Frank A. Ewers, Charles D. Gamble, Levi A. Ruhl, Edison B. Starr, of Ohio; Walter W. Ellis, Horace E. Evans, Edward M. Vaughan, of Delaware; Ferdinand P. Herff, Rice R. Jackson, Thomas E. Williams, of Texas; Harry B. Hanchett, William H. Tallmadge, Jr., of Connecticut; Hanchey J. Hallett, William H. Nix, of Illinois; Robinson Bosworth, Charles A. Riley, of Vermont; Benjamin F. Shuttleworth, Gabriel F. Tucker, of West Virginia; Ray C. Brown, of Maine; Oliver J. Miller, of Florida; Jesse L. Rains, of Idaho; Sterling P. Rumph, of Indian Territory; John G. Abbott, of Minnesota; Noel C. Womack, of Mississippi; Sidney A. Cooney, of Montana; Charles H. Harmon, of New Hampshire; Fred Jay Ziegler, of Oregon; Howard E. Blanchard, of Rhode Island; Hugh B. Sprague, of Utah; Charles C. Warner, of Washington; Howard McCrum Snyder, of Wyoming; George F. Gootrey, Robert G. Jackson, of British Columbia; Morris Reichard, of Hungary.

Class day exercises were held by the graduating class in the Broad Street Theatre on June 1st. The following were the class officers: President, Ferdinand P. Herff; vice-president, Harry Myrrel Stewart; secretary, Samuel Archer Mumford; treasurer, Wayne Lawson Snyder.

GENERAL.

The Woman's Medical College, of Baltimore, graduated, on May 31st, Mrs. Elsie M. Casey and Miss E. Blanche Stirling.

Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the June 13th meeting of this body is Massage, which will be opened with an address by Mr. V. R. Ulrich.

The Türk Festival.—For the purpose of commemorating the notable part taken by Türk in establishing clinical laryngoscopy, the Vienna Laryngological Society has resolved to hold a festival in the year 1908.

A New Orleans Clinic, to be conducted exclusively by women physicians, has been opened at 1824 Annunciation Street, in that city. The attendants are Dr. Sara T. Mayo, Dr. Susanna T. Otis, Dr. Cora Bass, Dr. Elizabeth Bass, Dr. Clara C. Glenk, and Dr. Clothilde Janquet.

Bishops College, Montreal, Medical Faculty.—This institution graduated the following on May 23rd:

F. W. Avis, C. S. Carmichael, R. B. Cunningham, George W. Gallatly, F. D. Gill, E. H. Lawson, Arthur J. Moseley, Horace G. MacKerrow, R. H. McRae, M. W. H. Pitman, N. Schacher, A. H. Silverman, H. M. Vartanian, Paul Villard.

Personal.—Dr. A. M. Fernandez de Ybarra, of New York, has recently been appointed corresponding member and official representative in the United States of the Medical Association of

Puerto Rico. Dr. de Ybarra is special correspondent of *El Siglo Medico*, of Madrid; the *Gaceta Médica Catalana*, of Barcelona; *La Escuela de Medicina*, and *Cronica Médica Mexicana*, of the City of Mexico, and the *Boletín de la Asociación Médica de Puerto Rico*.

Dr. Walter W. Kingsbury has been selected to succeed Dr. Clark K. Peterson as house physician of the Malden, Mass., Hospital, to begin his term on July 1st.

Dr. David Streett, dean of the faculty of the Maryland General Hospital, has announced the hospital staff selected for the ensuing year, as follows: Resident physician, Dr. L. B. Cavens; assistants, Dr. Robert L. Blake, Dr. Ernest H. Gaither, Dr. B. W. Carey, Dr. Clarence B. Collins; in charge of lying-in hospital, Dr. George Rosenbaum; resident pathologist, Dr. L. E. Langley.

Dr. John B. Murphy has resigned the chair of surgery in the Northwestern University, Chicago, and will accept the same position at Rush Medical College. The change from one medical school to the other does not affect the relations the physician holds with Mercy Hospital, of which he will continue to be the chief surgeon. Dr. Murphy has been with the Northwestern University Medical School for the last four years.

Dr. Porter E. Williams, of Bunceon, Cooper County, has been elected superintendent of the Fulton, Mo., Hospital for the Insane for a term of two years, beginning June 13th. Dr. J. F. Harrison, of Benton City; Dr. E. E. Evans, of Hallsville; and Dr. W. C. Lewis, of Pike County, were elected assistant physicians in the institution for a similar term.

The Medical College of Virginia has created the chair of Orthopædic Surgery and appointed Dr. William P. Mathews to the place. Dr. Mathews has been for a long time professor of anatomy, and Dr. Clifton W. Miller was his assistant and demonstrator. Dr. Miller, who is regarded as eminently qualified for the position, will take charge at the opening of the new session this fall.

The Massachusetts Medical Society.—The one hundred and twenty-fourth annual meeting will be held at 9 a. m., Wednesday, June 14, 1905, in the building of the Massachusetts Charitable Mechanic Association, on Huntington Avenue, Boston. Meetings of sections will be held in the Medical Library, 8 The Fenway, on the preceding day, Tuesday, June 13th. The following papers are expected to be heard:

Some Interesting Features Connected with the Outbreak of Smallpox at North Adams, Mass., in 1904, by Dr. L. A. Jones, of North Adams; Ocular Vertigo, of Interest to the General Practitioner, by Dr. B. P. Croft, of Greenfield; A Clinical and Laboratory Study of the Therapeutic Value of Hydrochloric Acid in Diseases of the Stomach, by Dr. R. F. Chase, of Brookline; The Medical Treatment of Hyperacidity and Gastric Ulcer, by Dr. F. C. Shattuck, of Boston; at 4 p. m., Dr. Lewellys F. Barker, late of Rush Medical School, Chicago, professor of medicine in Johns Hopkins University, will give an address on Methods in Medicine; Applied Anatomy of the Frontal Sinuses, by Dr. H. P. Mosher, of Boston; discussion by Dr. H. A. Lohrop; Symptoms and Treatment of Diseases of the Frontal Sinuses, by Dr. F. C. Cobb, of Boston; discussion by Dr. S. J. Mixer; What the Suburban Surgeon is Doing in the Abdomen, and How He Does It, by Dr. C. E. Durant, of

Haverhill; discussion by Dr. M. H. Richardson; Early Diagnosis of the Surgical Diseases of the Urinary Tract, by Dr. Benjamin Tenney, of Boston; The Causes of Disability After Fracture of the Lower Leg (a preliminary report), by Dr. F. J. Cotton, of Boston. At 8 o'clock p. m. in John Ware Hall, the Shattuck Lecture, by Russell H. Chittenden, Ph. D., of New Haven, Conn., Some Problems of Intermediary Metabolism. A Demonstration of Clinical and Laboratory Methods Used in Medicine, organized by Professor W. T. Councilman, and to be conducted as follows: Dr. C. J. Blake, Methods of Diagnosis in Diseases of the Ear; Dr. J. B. Blake and Dr. C. A. Porter, Methods of Physical Diagnosis in Surgery; Dr. J. T. Bowen, Methods of Diagnosis in Skin Diseases; Dr. Richard Cabot, Methods of Physical Diagnosis in Internal Medicine; Dr. H. A. Christian, Demonstration in Pathological Anatomy; Dr. E. A. Codman, Methods in Diagnosis by Means of X Ray; Dr. Algernon Coolidge, Jr., Methods of Diagnosis in Diseases of the Nose and Throat; Dr. R. L. Emerson, Methods in Examination of Urine; Dr. H. C. Ernst, Methods in Bacteriology; Dr. A. H. Gould, Methods in Estimating Coagulation Time of Blood; Dr. R. C. Larrabee and Dr. A. E. Austin, Methods in Examination of Blood; Dr. Timothy Leary, Methods in Legal Medicine; Dr. F. T. Lord, Methods in Examination of Sputum; Dr. P. T. Murphy, Methods in Cytopathology; Dr. Franz Pfaff and Dr. E. P. Joslin, Methods in Gastric Diagnosis; Dr. J. H. Pratt, Methods in Examination of Feces; Dr. J. J. Putnam, Methods in Neurology; Dr. Theobald Smith and Dr. H. W. Hill, Methods Used in Board of Health Examinations; Dr. Paul Thorndike, Methods of Diagnosis in Genitourinary Diseases; Dr. J. H. Wright, Methods of Rapid Anatomical Diagnosis.

At 12 o'clock m. the annual discourse will be made by Dr. Charles A. Drew, of State Farm, Bridgewater. At the close of the discourse the annual dinner will be served, and the Fellows of the society, called in the order of seniority, will march in procession to Grand Hall. Notice will be given ten minutes before the formation of the procession, and in the interval Fellows are requested to assemble in Exhibit Hall.

Statement of Mortality in Chicago for the Week Ending June 3, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and 1,932,315 for 1904:

	June 3, 1905.	May 27, 1905.	June 4, 1904.
Total deaths, all causes.....	467	454	452
Annual death rate per 1,000.....	12.22	11.89	12.18
By sexes—			
Males.....	245	266	277
Females.....	221	188	175
By ages—			
Under 1 year.....	73	99	61
Between 1 and 5 years.....	71	35	32
Over 60 years.....	87	102	95
Important causes of death—			
Acute intestinal diseases.....	23	17	21
Apoplexy.....	11	12	18
Bright's disease.....	37	33	41
Bronchitis.....	14	11	6
Consumption.....	47	62	67
Cancer.....	17	28	18
Convulsions.....	6	7	9
Diphtheria.....	8	1	5
Heart diseases.....	59	43	33
Influenza.....	0	1	0
Measles.....	0	7	2
Nervous diseases.....	24	19	24
Pneumonia.....	40	48	67
Scarlet fever.....	1	0	4
Smallpox.....	0	0	0
Suicide.....	14	0	9
Typhoid fever.....	7	3	8
Violence (other than suicide).....	31	33	24
Whooping cough.....	15	11	0
All other causes.....	95	105	96

Another death from cerebrospinal meningitis—the ninth since the first of the year—occurred in the Cook County Hospital, May 29th. The victim was a resident of the city, a tailoress, aged

22 years, who had not been away from the city recently. There are two more cases in the hospital, both Italian immigrants, recently arrived via New York. Of the nine fatal cases thus far, in five the disease was contracted elsewhere. The diagnosis in six cases was verified by lumbar puncture. The contamination of the public water supply, caused by the excessive precipitation of May—5.14 inches, or 1.64 inches more than the May average of thirty-five years—disappeared during the week. Only a slight increase of the impure water disease death rate has been caused by the May rainfall—not at all commensurate with the degree of contamination shown by the chemical examinations, as interpreted by the standards which were reliable before the opening of the drainage channel. The public health indications at the beginning of June—one of the two most healthful months of the year—are entirely satisfactory.

Licensed to Practise in Louisiana.—The following were licensed on May 8th to practise medicine in Louisiana:

Miss C. C. Jauquet, Stewart C. Johnson, J. T. Halsey, L. O. Clark, Ernest Bloom, J. A. Slack, R. B. Pryor, F. Hamilton, H. R. Shands, J. Santer Mueller, R. A. Kearney, M. D. Haspell, R. E. Chalker, E. J. Riche, J. M. Ehler, J. R. Mahone, Jr., J. A. Seawell, J. E. Henderson, J. M. Mosely, C. B. Harrington, W. A. Fletcher, S. L. Hollingsworth, A. J. Newman, J. P. Freisen, P. J. Kahle, A. K. Naugle, C. E. Lehmberg, C. W. Phillips, B. C. Abernathy, T. R. Sartor, R. H. Wheat, J. H. Norman, Jr., P. B. Salaticht, J. W. Mayes, A. H. Boerey, J. K. Thomb, H. L. Lazarre, J. W. Pluchet, W. A. Boyce, F. O. Darby, G. O. Sanders, F. W. Champerois, John Pugh, C. J. May, C. T. DeLoach, J. M. Wheelis, Charles A. Evans, R. A. Comaux, Howard Clarke, P. J. Kerlin, C. E. Hutchinson, V. B. Reynaud, J. L. Purser, W. H. Brent, W. J. Schmidt, Judge James, A. S. Walker, John Tolson, S. N. Jordan, R. W. Vincent, P. W. Bohnay, J. C. Denman, J. H. Hargrave, J. A. Joyner, M. Williams, W. T. Wilkinson, Jr., F. H. Watson, J. F. Pugh, Jr., J. O. Duhan, L. F. Magruder, J. O. Pratt, H. C. Cole, E. L. Lackert, J. C. Burdette, E. E. Dickinson, T. E. Sanders, M. L. Nance, Jr., E. W. Mahler, J. G. Yearward, F. V. Jordan, J. E. Garrison, A. R. Carter, J. M. Cunningham, S. J. Pate, G. C. Boudousqui, W. T. Jones, F. A. Baker, Louis B. Crawford, H. E. Connor (colored).

The West Virginia State Medical Association held its thirty-eighth annual meeting in the Board of Trade Hall, Wheeling, W. Va., May 24 to 26, 1905. The following papers were read:

The Teachings of Failures, by Dr. F. L. Hupp, of Wheeling; The Palliative Treatment of Prostatic Hypertrophy, by Dr. H. E. Sloan, of Clarksburg; Preoperative and Post-operative Treatment of Surgical Cases, by Dr. J. E. Cannaday, of Paint Creek; Appendical Abscess—Pathology and Treatment—Report of Cases, by Dr. S. M. Mason, of Clarksburg; Injuries of the Head—Report of Cases, by Dr. Henri P. Linsz, of Wheeling; Anatomical and Physiological Principles Involved in the Symptomatology of Brain Traumatism, by Dr. J. Schwinn, of Wheeling; Office Treatment of Rectal Diseases, by Dr. William M. Beach, of Pittsburg; "Symposium" on Pneumonia: Ætiology, by Dr. S. S. Wade, of Morgantown; Pathology, by Dr. L. O. Rose, of Parkersburg; Symptoms and Signs, by Dr. W. W. Tompkins, of Charleston; Treatment, by Dr. L. D. Wilson, of Wheeling; Tuberculosis, by Dr. J. W. Preston, of Keystone; Pseudomembranous Croup, by Dr. S. W. Bush, of Parkersburg; Cases and Experiences of Interest, by Dr. W. H. Sharp, of Parkersburg; Diseases of the Kidneys, by Dr. M. McNeilan, of Parkersburg; Rupture of the Bladder, by Dr. J. R. Cook, of Fairmont; The Importance of Early Diagnosis of Intraocular Lesions, by Dr. H. R. Johnson, of Fairmont; Fikker's Diagnosticum, by Dr. L. O. Rose, of Parkersburg; Drugs and the Diazo Reaction—A

Communication, by Dr. William W. Golden, of Elkins; and Notes on Tuberculosis, by Dr. Andrew Wilson, of Wheeling.

Webster Springs, W. Va., was chosen as the next place of meeting, and the following officers were elected: President, Dr. S. S. Wade, of Morgantown; first vice-president, Dr. G. W. Bruce, of Moundsville; second vice-president, Dr. F. L. Hopp, of Wheeling; third vice-president, Dr. A. S. Grimm, of St. Mary's; secretary, Dr. William W. Golden, of Elkins; treasurer, Dr. V. T. Churchman, of Charlestown; councillors, Dr. A. O. Flowers, of Clarksburg; Dr. A. R. Warden, of Grafton; Dr. W. W. Hunne, of Quinnimont; Dr. W. N. Burwell, of Parkersburg; Dr. T. W. Moore, of Huntington; delegates to the American Medical Association, Dr. J. L. Dickey and Dr. L. D. Wilson, of Wheeling.

Pith of Current Literature

REFORMA MEDICA.

April 29, 1905.

1. Two Cases of Endothelioma of the Stomach (*To be continued*), By ORESTE CIGNOZZI.
2. Contribution to the Treatment of Intestinal Occlusion, By FERDINANDO GANGITANO.
3. The Early Diagnosis of Tabes Dorsalis by Means of the Cytological Examination of the Cerebrospinal Fluid, By GIUSEPPE SEVERINO.

2. Treatment of Intestinal Obstruction.—Gangitano's conclusions, based on a series of several cases, were as follows: Of twelve cases reported, nine were treated surgically, while in two the evacuation of the bowels spontaneously was secured by means of atropine subcutaneously. Atropine injections were tried in seven cases, but failed in five. The dose of atropine varied from one to five milligrammes, and even with the larger quantity mentioned no unpleasant symptoms were noted. The author thinks that surgical methods should be employed only after all medical means have failed. Even in apparently desperate cases, patients recover, but when they are markedly debilitated, the operation is apt to be fatal. The method of choice is laparotomy in the median line, but in exceptional cases a lateral incision may be used. Atropine should be tried in all cases before operating, and in many cases it proves useful after the operation. An incision into a part of the gut close to the obstruction, and the evacuation of the contents, followed by lavage, are steps to be recommended in operating for intestinal occlusion.

3. Cytology in the Early Diagnosis of Tabes.—Severino advocates the use of a cytological examination of the cerebrospinal fluid in the early examination of locomotor ataxia. The sample of fluid is removed as usual by lumbar puncture, and the number of cells and their varieties are noted. If a marked majority of the cells found in the spinal fluid prove to be lymphocytes, then the diagnosis of locomotor ataxia is confirmed. Lymphocytosis in the spinal fluid ranks with

Westphal's sign and the Argyll Robertson pupil in the diagnosis of tabes. The technique used was as follows: With the now classical method of lumbar puncture, eight c.c. of cephalorhachidian fluid were removed. The sample was centrifuged in the electric centrifuge for ten minutes, and the supernatant fluid was decanted. The precipitate was taken up with a pipette, and was distributed over three slides, dried, and fixed with two parts of Nikiforoff's fluid (equal parts of absolute alcohol and ether) and three parts of a one per cent. solution of formalin. After drying once more in the air, the first preparation was stained with eosin and methylene blue; the second with eosin and hæmatoxylin, and the third with Czenzynsky's fluid. The preparations were then examined with a $\frac{1}{15}$ immersion objective. In all three slides the lymphocytosis was found to be very marked.

GAZZETTA DEGLI OSPEDALI E DELLE CLINICHE.

April 2, 1905.

1. Contribution to the Study of Right Pleuritic Effusions in Heart Disease and in Cirrhosis of the Liver, By VENANZIO GIAUNI.
2. A Case of Paralytic Rabies with Bulbar Syndrome, By PAOLO GALLI.
3. The Inconstant Action of Salicylates in Rheumatism, By ALEARDO CERIOLE.
4. Brief Notes on Quinine Poisoning, By ALFREDO PEREZ.

1. **Pleuritic Effusion on the Right Side.**—Giauni analyzes twenty-five cases of pleuritic effusion on the right side, due to heart disease and cirrhosis of the liver, which he was able to study at the autopsy table after having seen the patients in the hospital. He reviews the various theories that have been offered to account for the origin and frequency of pleuritic effusions on the right side, and draws the following conclusions from his own observations: Effusions in the pleura on the right side are frequently met with in heart disease, especially in the last stages, with cachexia and heart weakness. These effusions occur more often in heart affections due to arteriosclerosis than in valvular disease. The inflammatory nature of the exudate could be demonstrated in the majority of the cases analyzed, and this was in conformity with the views of the French school, as well as those of Villani, although other Italian clinicians, led by Bacelli, assert that these effusions are mechanical in origin. While due regard should be given to the rôle of the azygos vein in the development of the effusions of the right pleural sac occurring in heart disease, it is possible that the five cases in which the author found no signs of a pleurisy, but an effusion of serum in the right pleura, were cases of subacute serous pleurisy, according to Letulle's classification.

3. **Inconstancy of the Salicylates.**—Cerioli takes a rather pessimistic view of the action of the salicylates and cites cases in which their action proved very inconstant. He is inclined to think that the salicylates simply relieve the symptoms, but do not in reality cure the disease or prevent complications on the part of the heart.

They should be used with the same discrimination with which other drugs are employed in other diseases.

ROUSSKY VRATCH.

May 23, 1905

1. A Few Data on the Mechanism of Fractures of the Lower End of the Radius in the Typical Location, and on the Anatomy and Treatment of These Fractures, By N. M. VOLKOVITCH.
2. On the Ætiology of Idiopathic Retropharyngeal Abscesses, By V. K. MENSCHIKOFF.
3. Case of Echinococcus Infection of the Falloppian Tubes, By R. S. KLISITICH.

1. **Fractures of the Lower End of the Radius.**

—Volkovitch treats Colles's fracture by a very simple method in cases in which the fragments remain in place on proper reduction, and in which the patients are careful and intelligent or can be watched constantly. The treatment simply consists in keeping the wrist in the position best adapted for the correct union of the fragments, and, according to Volkovitch, the best position is a moderate flexion of the wrist, combined with abduction toward the ulnar side. Two wads of cotton are placed over the joint, one on the dorsal surface directly over the wrist, and the other at the angle formed by the ulna and the edge of the hand when the hand is bent toward that bone. Soft bandages keep these cotton wads in place. After the first few days, during which rest is enforced absolutely, the patient is allowed to move his fingers and also his wrist, provided only that the wrist be not moved in the direction opposite to that described in applying the bandage. Volkovitch also uses massage early in patients whom he can observe constantly. The massage is also applied in the position mentioned. The manipulations are performed by the surgeon after taking off the dressing, and due care is taken that the bones be not displaced during the process. In cases which require a splint, owing to the impossibility of keeping the parts reduced without it, the author uses a moulded plaster of Paris splint over the dorsal surface, shaped so that the hand is flexed and abducted toward the ulna, as has been indicated. This splint reaches from above the elbow to the roots of the fingers, and should be applied over the naked skin after lubricating the parts with vaseline. The object of omitting all padding is to allow the wrist to move to a certain degree, even in this splint, as the result of the elasticity of the moulded plaster. As an exercise for the fingers of the affected hand, while the splint is in place, he recommends the kneading of a rubber ball placed in the palm. A ball of considerable size is employed, so that both the extensors and the flexors shall have some work to do in grasping it. This exercise must be begun, if possible, a few days after applying the splint, and on taking off the latter, massage and the exercise with the ball are combined to complete the cure. Beck suggested the use of marbles, instead of a ball, and used this means of exercising the fingers two weeks after the fracture.

2. **Cause of Idiopathic Retropharyngeal Abscess.**—Menschikoff examined bacteriologically the pus from four cases of retropharyngeal abscess in children from three months to one year of age. He found that the pus contained a peculiar type of streptococcus, which grew in isolated colonies on plate cultures with hæmoglobin agar. The cocci grew abundantly in bouillon mixed with ascitic fluid, and on staining, their chains seemed composed of a series of diplococci. These chains were sometimes matted in clumps, and attained considerable length. The germ was not decolorized with Gram's stain, and was distinguished from other streptococci, such as those of suppurative conditions, scarlatina, erysipelas, etc., by the fact that its colonies on hæmoglobin agar had brown centres surrounded with lighter areole, instead of being grayish films, as are the colonies of the other varieties just mentioned. The new germ resembled the pneumococcus as regards its cultural behavior in hæmoglobin agar. It was feebly pathogenic in animals, but easily produced suppuration when injected subcutaneously. Its biology and morphology make it a close relation to the *Streptococcus mitior vel viridans* of Schottmüller.

3. **Echinococcus in the Falloppian Tubes.**—The affection described by Klissitch is extremely rare, and only one case of this kind appears in the most complete collection of the literature of echinococcus in the female pelvic organs, namely, that of Franta, an assistant of Pawlik's (*Paris Thesis*, 1901). The woman was thirty-five years of age, a Moldavian living in Bessarabia, the wife of a farmer. For fifteen years she had noticed a slow increase in size of the lower part of the abdomen, and during the last year she had suffered from pains in the pelvis and from a profuse yellow vaginal discharge. Her previous history was negative, and her last labor occurred normally nine years before admission. The abdomen appeared of the size of five months' pregnancy, with a hard, almost immobile tumor in its lower part, dull on percussion, which also could be felt on vaginal examination to lie above and to the left of the uterus. The diagnosis of dermoid cyst was made, but on laparotomy the tumor proved to be an echinococcus cyst connected with the left tube, which was distended to the size of a fist, while the chief tumor was of the size of a newly born child. The tumor was removed by separating its extensive adhesions without opening it, and after the operation its true nature was discovered, as it contained daughter cysts, etc. The patient made a good recovery. Microscopical examination proved that the tumor had developed in the tube and not in the peritonæum.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 1, 1905.

1. The Experience of Nine Years in the Treatment of Diphtheria with Antitoxine,

By JOHN H. MCCOLLOM.

2. A Description of "Pfeiffer's Disease" (Glandular Fever), with a Report of Two Cases,

By A. H. WENTWORTH.

3. Report on Early Diagnosis of Tuberculosis, By A. C. KLEBS, J. H. MUSSER, F. BILLINGS, J. C. WILSON, and H. R. M. LANDIS.

4. A Consideration of the Pelvic Articulations from an Anatomical, Pathological, and Clinical Standpoint, By JOEL E. GOLDTHWAIT and ROBERT B. OSGOOD.

1. **Diphtheria.**—McCollom's paper is practically a short history of diphtheria as it has manifested itself in Boston. The practical point to be deduced is that much larger doses of antitoxine should be used than is the custom. In the early stages of the disease the author advocates the use of from four to eight thousand units and the repetition of such doses every six or eight hours. He reports cases in which the patients in the course of a few days were given from fifty to ninety thousand units of antitoxine. The paper ends with the following conclusions: 1. Antitoxine is a remedial agent of immense value in the treatment of diphtheria, and should be classed among the great medical discoveries of the nineteenth century. 2. In order to obtain the best results, it is important that the serum should be given at the earliest possible moment in the course of the disease. 3. In attacks of diphtheria of a severe type antitoxine should be given in very large doses. 4. In laryngeal diphtheria, in the majority of instances, intubation is the operation of election.

2. **Pfeiffer's Disease.**—Wentworth reports two cases of glandular fever. The disease is characterized by an elevated temperature lasting for a short time and by a rapid enlargement of lymph nodes in the neck, especially those situated in the sides of the neck along the posterior border of the sternomastoid muscle in the region of the upper third. The disease is further characterized in most cases by the mildness of the symptoms and in all cases by the eventual subsidence of the swollen lymph nodes without the occurrence of suppuration. The etiology of the disease, which is not of very great clinical importance, is unknown.

3. **Early Diagnosis of Tuberculosis.**—Klebs, Musser, Billings, Wilson, and Landis review very briefly the various methods that have been suggested for reaching an early diagnosis in pulmonary tuberculosis. When all is said and done, careful and educated physical diagnosis by the old and well tried methods will give the most reliable results.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

June 3, 1905.

1. Chronic Poisoning by Acetanilide, By D. D. STEWART.
2. Neurasthenia Cured by Exercise and Forced Feeding. Report of Two Cases,

By EDWARD LIVINGSTON HUNT.

3. The Dangers of the Domestic Use of Illuminating Gas and the Means of Avoiding Them,

By HENRY LEFFMANN.

4. Medical Education. With Special Reference to the Subject of Physiology,

By MURRAY GALT MOTTER.

5. Conjunctival Irritation Excited by Proximity to a Horse,

By WILLIAM CAMPBELL POSEY.

6. The Ætiology of Chorioiditis, By C. DREW.

7. The Application of Ice in Lobar Pneumonia,
By P. A. AURNES.
8. The Expansion of Gynæcology. A Suggestion for the
Surgical Treatment of Incontinence of Urine in
Women, By E. C. DUDLEY.
9. Stenosis of the Pylorus in Infancy. An Analysis of
One Hundred and Fifteen Cases (*Concluded*),
By CHARLES L. SCUDDER and WILLIAM C. QUINBY.
10. Ankylosis. Arthroplasty—Clinical and Experimental
(*Concluded*), By JOHN B. MURPHY.
11. Absence of Articulate Speech. Classification of One
Hundred Cases Not Due to Mechanical Faults or
Deafness, By C. H. HENNINGER.

1. **Acetanilide Poisoning.**—Stewart reports a considerable number of cases of chronic acetanilide poisoning. Special attention is given to the condition of the blood and of the urine. The blood picture is quite characteristic. 1. The hæmoglobin cannot be estimated, on account of the presence of methæmoglobin, which gives the characteristic chocolate color to the blood. 2. The red cells are usually reduced in number and are more or less deformed. 3. There is usually leucocytosis. In cases of severe chronic poisoning by acetanilide and related coal tar products the symptoms are usually very similar as concerns progressive mental and physical debility, which later often reaches a high grade. There is cardiac weakness, with more or less pronounced cyanosis. Apart from the usual chocolate hue of the blood so noticeable on puncture, the blood picture, were it not for an almost invariably present leucocytosis, would suggest pernicious anæmia.

5. **Conjunctival Irritation.**—Posey reports three cases of conjunctival irritation produced by proximity to a horse. It has been known for some time that certain animal emanations, of unknown character, are capable of producing asthma or simple nasal irritation in susceptible individuals. It is probable that all these cases belong in one general class.

7. **Pneumonia.**—Aurness believes that the proper application of ice to the chest in pneumonia acts as a specific. At least he has so treated one hundred cases without a death. His method of treatment is given in detail.

8. **Incontinence of Urine.**—Dudley advocates the following operation for the treatment of incontinence of urine in women: An inverted U shaped area of tissue is denuded, the convex part of the U being just below the clitoris and the meatus being at the concave part. Two sutures are made to drag the meatus up to just below the clitoris. The shanks of the U are then obliterated by means of sutures. The article is illustrated.

9. **Pyloric Stenosis.**—Scudder and Quinby conclude in this article their rather elaborate consideration of pyloric stenosis. It is not possible to do more than to call attention to the paper as one well worth reading in its entirety.

10. **Ankylosis.**—Murphy gives the results of his experiments in arthroplasty. He has suc-

ceeded in correcting ankylosed joints by the interposition of fascia and muscle, covered with a layer of adipose tissue. The paper is most elaborate and cannot be condensed.

MEDICAL NEWS.

June 3, 1905.

1. The Prophylaxis of Lobar Pneumonia,
By J. M. ANDERS.
2. Causes Underlying Prolonged Loss of Function in Certain Injuries About the Shoulder Joint—Prognosis—Treatment,
By ALFRED S. TAYLOR.
3. A Plea for Medical Treatment of the Inflamed Appendix,
By A. L. BENEDICT.
4. Late Results of Surgical Treatment in Gastric Ulcer—Preliminary Report,
By JOHN C. MUNRO.
5. The Laryngeal Complications of Typhoid Fever,
By RICHARD H. JOHNSON.
6. Remarks on Rotary Lateral Curvature of the Spine,
By LEONARD W. ELY.
7. The Effect of Intestinal Antisepsis on the Excretion of Hippuric Acid in the Urine, By JACOB B. PRAGER.

1. **Pneumonia.**—Anders's conclusions, much condensed, are as follows: 1. The prevalence of influenza during the last fifteen years has brought about an increased receptivity for and incidence of the pneumococcus infection.

2. Certain degenerative lesions, especially of the cardiovascular system and the kidneys, have shown an increased incidence during the last two decades; and these are found to be associated or antecedent conditions in the majority of cases of pneumonia, hence are probably potent predisposing factors.

3. The indoor conditions during the cold season favor multiplication and propagation of the pneumococcus and at the same time tend to diminish resistance to infection by the specific organism.

4. The aged are peculiarly susceptible to pneumococcus infection, hence their bodies should be kept as strong and healthy as possible, especially during the pneumonia season.

5. To overcome the predominating factors in individual predisposition, special attention must be paid to the subject of ventilation, to appropriate clothing, and the avoidance of agencies that cause degeneration of the heart, blood vessel system, and kidneys, as alcohol, social excesses, an over strenuous business or professional life, and the like.

6. The sputum is the principal source of infection and should be thoroughly disinfected so soon as it is expectorated.

7. A large proportion of the general populace harbors the pneumococcus in the nasopharynx, hence thorough cleanliness and systematic disinfection of these chambers should be carried out during the pneumonia season.

8. Means to prevent dust from accumulating and its daily removal from home and the city streets, are imperatively demanded.

9. Public health authorities should be given full executive power to carry out rules and regulations relative to pneumonia looking to the prevention of its spread.

10. Measures of prophylaxis must accord with intelligent public opinion before they can be rendered wholly efficient either by municipal or private authority.

2. **Shoulder Joint Injuries.**—Taylor asserts that there is an analogy between the arm palsies which are at times noticed in the newly born child and losses of function consequent upon shoulder injuries in the adult. The paralysis in both cases results from the overstretching of the nerve roots of the brachial plexus. The author thus summarizes his views: 1. The paralyzed muscles are in groups corresponding to the exit of their motor nerve supply in the roots of the brachial plexus, from above downward. Spinati, teres minor, deltoid; biceps, brachialis anticus, supinators; entire musculature of the extremity in the severest lesions.

2. The lesion is situated in the roots of the brachial plexus, most commonly at the junction of the fifth and sixth cervical roots, but may involve any portion or all of roots from above downward.

3. The lesion is caused by too great diastasis of the head and neck from the shoulder which results in

4. Overstretching (rupture) of the nerves followed by paralysis, traumatic neuritis, and often cicatricial compression of the nerve with permanent impairment of function.

5. The prognosis is not very favorable.

6. Treatment.—(a) Immobilization of extremity with counterirritation over the nerve roots; (b) later, massage, electricity, etc.; (c) finally, surgical interference in selected cases.

3. **Appendicitis.**—Benedict asserts that a sharp distinction can be drawn between cases of appendicitis that should be treated surgically and those that should not. He further asserts that not one case of appendicitis in ten requires operation, and if we base the diagnosis, as has been seriously proposed by some surgical enthusiasts, on such slight grounds as a temporary pain and tenderness in the region of the appendix, then not one case in a hundred demands an operation.

4. **Gastric Ulcer.**—Munro bases his paper on the study of 146 operations for lesions of the stomach. He concludes that it can be conservatively stated that the surgical results in both malignant and benign cases are steadily improving and correspondingly encouraging; that in malignant or chronic benign ulcer and its sequelæ medical treatment must yield to surgery; that this is true of some forms of acute ulcers; that although the technics has improved to such an extent that the results are better than under medical treatment, nevertheless, the ideal method has not been definitely established. This is the next important problem for surgery to solve. Furthermore, only an approximate diagnosis in surgical cases can be made by medical tests, and until such tests have been proved infallible, it is the duty of the physician to seek surgical advice in every case in which there is a possibility of benefit to be derived from mechanical means.

7. **Hippuric Acid.**—Prager reports two experiments on dogs starved and then fed on gelatin, undertaken for the purpose of solving certain problems connected with the excretion of hippuric acid. He concludes: 1. Feeding with gelatin alone increases the excretion of hippuric acid.

2. When putrefactive changes are increased the excretion of hippuric acid is increased, and *vice versa*.

3. When the intestinal canal is made antiseptic with calomel there is practically no hippuric acid excreted.

4. Intestinal antiseptics have no effect whatever on the excretion of nitrogen.

5. No matter how much gelatin is given, it is completely burned and some of the body's proteid with it.

6. Therefore gelatin never builds up any tissue, although it may to a certain extent protect the body's proteid from decomposition.

MEDICAL RECORD.

June 3, 1905.

1. Inflammatory Disease of the Uterine Annexa and Its Treatment, By H. GRAD.
2. Some Ophthalmic Suggestions, By RICHARD KALISH.
3. The Heart and Circulation in the Prognosis and Management of Pulmonary Tuberculosis, By SILVIO VON RUCK.
4. The Relation of Ethmoidal Inflammation to Asthma, By HENRY COGGESHALL.
5. A Difficult Diagnosis in a Case of Abdominal Pregnancy, By W. S. LANGFITT.
6. A Case of Heroine Habit, By CHARLES E. ATWOOD.
7. Cactus Grandiflorus, By FINLEY ELLINGWOOD.

1. **The Uterine Annexa.**—Grad writes an eight page article on the diagnosis and treatment of inflammatory conditions of the uterine annexa. The paper does not lend itself to condensation, as it covers too large a field.

2. **Ophthalmic Suggestions.**—Kalish's ophthalmic suggestions may be reduced to this: Glasses should be prescribed by an oculist, and not by an optician.

3. **The Heart in Pulmonary Tuberculosis.**—Von Ruck asserts that the condition of the heart and of the circulation has an important bearing on the treatment and prognosis of pulmonary tuberculosis. Tachycardia, after exertion, demands rest more imperatively than a moderately elevated temperature. The proof of this assertion is the object of the paper.

4. **Asthma.**—Coggeshall asserts that asthma is paroxysmal difficult breathing. The disease is inflammation of the mucous membrane in the ethmoid cells. Irritation of branches of the trigeminus or olfactory nerves causes an altered activity in the medulla, that is to say, in the centre of respiration. The result in the bronchial tubes is a vasomotor disturbance or contraction of muscles, or both. Chronic bronchitis, or emphysema, and a dilated right side of the heart, are not asthma. They are sequels to asthma of severity and long standing. Therefore the whole treat-

ment reduces itself to curing the inflamed condition of the ethmoid cells.

6. **Heroine Habit.**—Atwood reports the case of a woman of twenty-nine years who got into the habit of taking from two to four grains of heroine a day by hypodermic injection. She became thin, neurasthenic, and debilitated, her digestion was disordered, and she said she could not sleep, eat, or do anything without a daily resort to the drug. After taking it, she always felt as if she "could do anything." She was cured of her craving for the drug in four days. There was no return of the habit.

7. **Cactus Grandiflorus.**—Ellingwood asserts that this plant is in every way superior to digitalis in affections of the heart. Two to five minims of the fluid extract act as well or better than larger doses. This drug must be given only in atonic conditions of the heart muscle. If there is violent heart action or persistent palpitation from increased tonicities, or if there is increased nervous or muscular tone, it is absolutely contra-indicated.

AMERICAN MEDICINE.

June 3, 1905.

1. Further Remarks on Ischochymia and Its Treatment,
By MAX EINHORN.
2. Bright's Disease in High Official Circles at the Nation's Capital,
By T. L. MACDONALD.
3. Observations upon Amœbas Infecting the Human Intestine, with a Description of Two Species, *Entamoeba Coli* and *Entamoeba Dysenteriae* (*To be continued*),
By CHARLES E. CRAIG.
4. The Office of the Spleen: An Essay in Comparative Physiology,
By EDWARD T. WILLIAMS.
5. Malarial Infection Presenting Symptoms of Multiple Neuritis,
By GEORGE E. PRICE.
6. The Lloyd Reaction for Morphine and Other Alkaloids (*To be concluded*),
By DANIEL W. FETTEROLF.
7. Yellow Fever: A Popular Lecture,
By JAMES CARROLL.
8. The Physician as a Citizen,
By EDWARD N. BRUSH.

1. **Ischochymia.**—Einhorn notes that in two previous papers he has considered the symptomatology of ischochymia or, as the older authors called it, "clinical dilatation of the stomach." In the present paper the author discusses the statistics of the condition, some new points in its clinical course, and its treatment. We give only the author's views regarding treatment. There are two ways of treating ischochymia: 1, Dietetic and medicinal measures (rectal alimentation, fluid diet, lavage of the stomach, bismuth, etc.). 2, Operative procedures (gastroenterostomy, pyloroplasty). These two methods of treatment do not antagonize but supplement each other. The indications for both are fairly well determined, where one ceases the other begins. The indications for medical and surgical treatment of ischochymia may be placed as follows: 1, Benign ischochymia requires, first, medical treatment; if this is unsuccessful, *i. e.*, if after a long period of treatment, the fasting stomach, on a fluid diet, is not empty, but contains food remnants, an operation is advisable. 2, Surgical intervention is also

indicated in benign ischochymia which has developed subsequent to a condition of continuous hypersecretion of gastric juice (preceded by hæmorrhage or not). 3, Malignant ischochymia or one of dubious nature in which, however, a thickening of the pylorus is found, should also be treated surgically (gastroenterostomy, and, if possible, resection of the pylorus).

2. **Bright's Disease.**—Macdonald calls attention to the great number of public men who have suffered and died of nephritis. He asserts that the prevalence of the disease at the national capital is due to the fact that the congregation of so many eminent men in one place leads to a concentration of worries, wealth, and official feasting.

4. **The Spleen.**—Williams concludes a column article as follows: In the young embryo prior to the formation of the spleen, the primitive mesoderm possesses the property of making blood cells. In late embryonic life this property is restricted to special organs and tissues. In adult life it is limited to the spleen in cold blooded animals (fishes and amphibians), while in the warm blooded animals the red marrow continues throughout life to officiate as a subsidiary spleen. In this way nature makes provision for the added number of red corpuscles required by the higher animals for their increased respiratory activity and the maintenance of their bodily heat.

LANCET.

May 20, 1905.

1. The Financial Relations Between the London Hospitals and Their Affiliated Medical Schools; and the Bearing of These Relations on Medical Education,
By H. MORRIS.
2. Nutrition and Malnutrition (*Lumleian Lectures, III*),
By W. H. ALLCHIN.
3. General Cystic Disease of the Kidneys in Brother and Sister; Nephrectomy,
By E. L. COLLIS and J. T. HEWETSON.
4. Two Cases of Gangrene with Spontaneous Amputation,
By E. O. THURSTON.
5. Epidemic Cerebrospinal Meningitis and Posterior Basic Meningitis,
By O. HILDESHEIM.
6. A Second Case of Pneumococcus Endocarditis Treated by Antipneumococcus Serum,
By T. J. HORDER and H. C. L. SCOFIELD.
7. Congenital Elevation of the Scapula, B. C. R. KEYSER.
8. Is Man Poltrophagic or Psomophagic, By H. HIGGINS.
9. The Influence of Smallpox on Vaccination,
By J. C. HIBBERT.
10. A Note Upon the Neilson System of Sewage Purification,
By H. L. GORDON.

5. **Meningitis.**—Hildesheim has studied the histories of over one hundred cases of posterior basic meningitis, and points out how this disorder stands apart from epidemic cerebrospinal meningitis as a disease *sui generis*. The bacteriology of the cerebrospinal fluid is at present in a very perplexing stage. A diplococcus identical with the meningococcus has been found in nine cases of posterior basic meningitis. Clinically the epidemic disease shares many features in common with the one under discussion. Our knowledge

of the sporadic form antedates the earliest descriptions of the epidemic disease by several years. There is a very definite difference in the age incidence. More than half the cases of epidemic cerebrospinal meningitis occur in persons under ten years of age, while more than half the cases of the posterior basic form occur in infants under one year of age. The protracted nature of many of the cases of the posterior basic disease has no parallel in the epidemic form. Most of the sequelæ of the former are associated with internal hydrocephalus. There is every reason to suppose that inflammation of the meninges not infrequently endures for several months. Amaurosis without optic neuritis is a remarkable feature of the basic disease, and occurs in one third of all the cases. On the other hand, optic neuritis seems fairly common in epidemics. Deafness occurs in the majority of cases of epidemic meningitis, and only rarely in the other form. Skin lesions, although they occur, are much less common in the basic form of the disease.

6. Pneumococcus Serum in Endocarditis.—

Horder and Scofield report a case of pneumococcus endocarditis unsuccessfully treated with anti-pneumococcus serum. The patient, a boy aged 10 years, suffered from a bilateral pneumonia, followed by double empyema, and was just convalescing from rheumatic fever when taken ill. The presence of pneumococci in the circulation was not demonstrated until late in the course of the disease. The serum was given on five days, late in the disease, but no good results seemed to follow its use, the patient dying on the sixty-sixth day of the disease. The leucocyte count was lowered to 11,600, showing that the resistance was much below normal. If we are dependent upon the patient's tissues for their reaction to the stimulus provided by a bactericidal serum, that is, the action is not a direct, but an indirect one, it is easily understood why failure took place in this case.

8. Poltophagy vs. Psomophagy.—

Higgins has studied the importance of thorough mastication of the food. By poltophagy is meant the swallowing of well masticated, finely divided food; by psomophagy, the taking of food by bites. The most simple illustration of poltophagic and psomophagic deglutitions in man is afforded by two ways in which water can be swallowed: (a) it can be swallowed at once by pushing it against the soft palate with the tongue (psomophagy); and (b) it can be swallowed more slowly by employing movements of mastication; as soon as the water is warmed it is swallowed by a series of short deglutitions. The author holds that man is primarily poltophagic, his faculty for psomophagic deglutition being due to the alteration of structure consequent on the assumption of the erect position, the shortening of the maxilla from before backwards, and the consequent vertical disposition of the soft palate. The essential difference between a poltophagic and a psomophagic deglutition is that in the first case an unconscious, automatic, and complicated series of events precedes the entry of the food into the

stomach, whereas in the latter case it is introduced more or less directly.

9. **Vaccination During Smallpox.**—Hibbert has investigated the question as to whether a successful vaccination or revaccination of a patient suffering from a suspicious rash, speaks strongly against that rash being one of smallpox. In twenty cases of undoubted smallpox which were vaccinated or revaccinated after the appearance of the eruption eleven vaccinations or revaccinations were successful. In the greater proportion of the successful cases well marked, typical vaccine vesicles appeared at the site of vaccination. These vesicles became evident from the fourth to the sixth day after the operation and ran the usual course. In some cases instead of the typical vesicle there was merely an indurated raised papule. Ten of the eleven successful cases were vaccinated during the first four days of the disease. It could not be detected that vaccination or revaccination when performed after the smallpox eruption had appeared, had definitely any modifying influence on the rash or on the course of the disease.

BRITISH MEDICAL JOURNAL.

May 20, 1905.

1. Remarks on the Causes and Treatment of Œdema,
By J. D. MANN.
2. On the Treatment of Purulent Cavities,
By R. H. WOODS.
3. Frontal Sinus Empyema Followed by Subdural Abscess,
By A. J. MARTINEAU.
4. Remarks on Complete Prostatectomy. Founded on Fifteen Cases,
By J. L. THOMAS.
5. A Recent Series of Sixty Cases of Total Enucleation of the Prostate, for Radical Cure of Enlargement of That Organ,
By P. J. FREYER.
6. Treatment of Tuberculosis and Tuberculin Inoculation,
By T. W. BROWN.
7. Treatment of Sea Sickness,
By J. M. SHARPE.

1. **Œdema.**—Mann considers the causes and treatment of œdema due to failure of cardiac or renal compensation. In simple cardiac œdema the causal factor is essentially hydrodynamic, its action being mediate; the œdema is not due to back pressure, but chiefly to changes in the vascular endothelium caused by the imperfect supply of oxygen and of nutrient material. The walls become unduly permeable, and the ensuing permeation is augmented by the low blood pressure supply to the kidneys and the coincident retention in the tissues of sodium chloride. Œdema, due to kidney disease, is less readily explained; vascular endothelial changes due to the toxic action of waste products, defective elimination of water by the kidneys, and the occurrence of hydræmic plethora, undoubtedly play a large part. Here, too, there appears to be a close relation between the retention of sodium chloride and the occurrence of œdema. It is a question whether the retention is a historetention or a seroretention. The author does not accept this theory implicitly, but is satisfied that the restriction of dietetic salt tends to promote the dispersion of the œdema of Bright's disease. In the treatment of œdema when the heart alone is at fault, physiological rest

is the most potent of all remedial agents; this comprises the absence of all avoidable acids, mental as well as physical, on the cardiac energy. In most cases of failure of cardiac compensation, rest alone is insufficient to restore it. Of medicinal remedies digitalis stands apart from other heart tonics in respect to efficacy. In some instances the judicious administration of alcohol is of great efficacy in tiding the heart over a critical period, but it must be closely watched. As regards the treatment of renal incompetence, our therapeutical resources have been materially added to by the introduction of the class of diuretics derived from purin. They are methyl substitution products of xanthin or dioxyapurin. They comprise caffeine, theobromine, and the isomer of the latter, theocine. Caffeine is the most powerful cardiac stimulant, theocine the most active diuretic. When the kidneys fail to respond to diuretics, the skin affords an alternative route for the elimination of water and also of the solid urinary constituents. Cathartics, often of service in the treatment of oedema, avail little in the dispersion of oedema. The dietary indications are to avoid excess of proteids, and of any dietetic substances which irritate the renal epithelium or increase the retention of water. Milk is universally held to occupy the first place in the dietary of nephritis, but its exclusive use is not without its objections—for one thing it is too dilute, and involves the taking into the system of too much fluid. A moderate amount of solid food, poor in proteids and sodium chloride, should be allowed. The quantity of fluid allowed should always receive the most careful consideration. The progress of the oedema is ascertained by periodically weighing the patient, whose weight diminishes as the oedema subsides.

2. **Purulent Cavities.**—Woods discusses the treatment of purulent cavities, and attempts to show that simple drainage, so successful in the treatment of soft tissue abscesses, must be largely supplemented in the treatment of chronic purulent collections inside fixed walls. As long as the tissues, whether near or remote, to whose tension the abscess pressure is due, are not distorted beyond their limit of elasticity, increase in the size of an abscess, is followed by a rise in its pressure, while if that limit is passed it results in a fall. If the cavity is large enough, the surrounding tissues lax enough, or the abscess sufficiently slow in its growth, the tendency to spontaneous evacuation after incision may be too feeble to overcome the influence of gravity if the opening is not at the most dependent point. It is clear that the abscess will never heal if the pressure on the pus between the drainage opening and the lowest point of the sac is insufficient. In most acute soft tissue abscesses, such as those of the tonsil, the influence of gravity may be disregarded. The negative pressure of the thorax plays a large part in the prevention of the healing of empyema. To make such a cavity heal at once, we should besides providing an exit for the pus, keep the lung continuously distended so that the pleural layers are in contact. The author suggests that this be done by means of a suction apparatus, the seat of the

wound being made air tight by means of a pneumatic pad through which the drainage tube runs. The apparatus is provided with a manometer by which the pressure can be regulated. The pad once in position, it should not be removed until cure has taken place. The earlier the treatment is begun the better the chances of recovery. The pressure should be sufficient to keep the lung expanded. In rigid cavities, such as the antrum, where the epithelium is destroyed, drainage alone is of no service. The diseased tissue must be curetted, and the raw surfaces allowed to epithelialize; in many cases skin grafting will also be necessary. The beautiful modern operation on the mastoid, consisting of throwing the tympanum, external meatus, mastoid cells, and attic, all into one large accessible cavity in which skin grafting is done, well illustrates this statement.

4 and 5. **Complete Prostatectomy.**—Thomas's article is based on a series of fifteen complete prostatectomies—13 suprapubic and 2 perineal, with 2 deaths. The ages of the patients varied from 56 to 77 years. Freyer's operation was the one performed; surgeons who do it must possess strong talon shaped nails on the forefingers. Weak antiseptic solutions for washing out the bladder are only a source of local irritation, plus the possibility of being absorbed and throwing unnecessary tax on the eliminating organs. Sterilized salt solutions are better because the beneficial effects are really due to the removal of surgical dirt. Antiseptics to be of any germicidal value must be strong; pure tincture of iodine poured into the bladder is excellent to correct septic conditions either at the time of operation or subsequently. It is much better than any powder. Freyer reports a further series of sixty cases of enlargement of the prostate, in which a radical cure was brought about by the total enucleation of the organ.

6. **Tuberculin.**—Brown reports a case of tuberculosis of the bladder occurring in a girl aged 16 years, in which the use of Koch's T. R. tuberculin brought about marked improvement, the disease being apparently arrested. The dose at first was one two hundred and fiftieth of a milligramme, which was slowly and carefully increased to one milligramme. This was given once a week and caused only slight reaction. After three months of the treatment cystoscopic examination showed the ulcers to be healed, but scattered nodules were still present. No tubercle bacilli were present in the urine.

7. **Sea Sickness.**—Sharpe assumes that sea sickness is a reflex action of the stomach, due to a central stimulus, that the reflex action is transmitted to the solar plexus by the vagi, and finally that the stimulus probably originates in disorders of visual accommodation. By paralyzing the accommodation of one eye by means of a mydriatic, it was found that the symptoms were greatly lessened in intensity. Chloral when used in sea sickness requires to be given in large doses—unfortunately such doses act as a gastric irritant, and increase the tendency to vomit; so that when used, it should be given by rectum.

Letters to the Editor.

THE LIBERATION OF FORMALDEHYDE.

NEW YORK, May 17, 1905.

To the Editor,

Sir: We notice in your issue of May 13th an abstract of a report by Henry V. Walker, of the Brooklyn Health Department, on A Simple Method of Generating Formaldehyde Gas, describing a process in which formalin is vaporized by chemical heat, i. e., by the admixture of aluminum sulphate and slaking lime. In this connection permit us to call your attention to the fact that this method is covered by United States Patent No. 665,794, dated January 8, 1901, taken out by the Schering Chemical Works, for which application was made as long ago as June 9, 1899. The following are the claims secured by this patent:

1. The herein described process of evolving disinfecting vapors, which consists in mixing formaldehyde, water, and a body evolving heat in contact with water, in such quantities as will produce sufficient heat to evolve vapors, substantially as specified.

2. The herein described process of evolving disinfecting vapors, which consists in adding burnt lime to a watery solution of formaldehyde, in such quantities as to evolve vapors, substantially as set forth.

SCHERING AND GLATZ.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, April 6, 1905.

The President, Dr. RICHARD C. NORRIS, in the chair.

Some Results in Abdominal Surgery.—Dr. GEORGE ERETY SHOEMAKER presented this paper. He said that in a series of one hundred abdominal cases as they had presented themselves at the Presbyterian Hospital in ward and private work, there had been five deaths, two of them inevitable. Of these patients, one was actually dying of general purulent peritonitis, and the abdomen was rapidly incised to liberate pus as a forlorn hope. In the other case of inevitable death, the patient had at the time of operation gangrene and supuration of several feet of small intestine. One of the others was in the sixth week of an acute attack of chronic recurrent appendicitis. One death followed a severe operation for large tubal and ovarian abscesses and a pelvic pus collection which had at various times previously drained into the bowel. One death occurred unexpectedly in a chronic pelvic inflammation case. Of the ninety-five patients who recovered, hysterectomy was done on twenty, only once by the vaginal route alone. The method preferred was supravaginal amputation without drainage. Nine of the hysterectomies were for malignant disease, and the combined vaginal and abdominal route

was here preferred. A primary operation was done for acute or chronic appendicitis in eleven per cent., but taken altogether the appendix was removed in thirty-three per cent. of all abdominal operations.

The method preferred was described. Suspension of the uterus was done but once as an independent operation. The six cases of ruptured uterine gestation sac were variously treated, and all the patients recovered. In the twelve cases of fibroma of the uterus, all were treated by hysterectomy except one, in which myomectomy was performed. There was no mortality. The questions of drainage and abdominal wound closure were referred to. Within a corresponding period 114 minor operations were done, some of them combined. In sixty-eight per cent. of the cases requiring a perineal operation, the anterior vaginal wall was also repaired by the flap excision method.

A Contribution to the Efficiency of Plastic Operations in the Vagina.—Dr. BARTON COOKE HIRST said that in 1,358 perineorrhaphies, 303 anterior colporrhaphies, 625 operations on the cervix, and 86 operations for total prolapse, among 1,582 patients, the following lessons had been learned:

A more frequent injury of the pelvic floor than laceration of the levator ani muscle was laceration and retraction of the transversus perinaei muscle, often associated with injury of the triangular ligament. Laceration of the urogenital diaphragm in the anterior vaginal sulcus was almost as common as laceration of the levator ani muscle and the pelvic diaphragm in the posterior sulcus. The levator ani muscle was frequently torn from its attachment to the pubic bone and the arcus tendineus instead of being lacerated in the middle line of the sulcus. All these injuries could be repaired as well during the puerperium as at any other time if the patient was put on an operating table and a formal plastic operation was performed with sufficient assistance. If the repair of the lacerations in the puerperium was neglected, proctoceles, cystoceles, and prolapsus uteri could be more perfectly and permanently corrected than was usually the case by modification of the ordinary operative technique suggested by a study of the original injury.

If a routine examination in all cases was made, by inserting a forefinger laterally under the skin of the labium majus, above the triangular ligament, within the vaginal introitus, the finger often sank into a deep pocket, frequently reaching to the ischium. If the region was palpated externally, it was found flabby and relaxed and remained so after the ordinary Emmet operation. By palpating with the forefinger inside and the thumb outside the stump of the retracted transversus perinaei muscle was often felt. If the retracted muscle was brought to the median line again and the triangular ligament was restored, a striking difference was observed. A strong musculoligamentous band almost as long as the breadth of two fingers spanned the space between the ischia, the posterior commissure of the vulva, and the anus. The tone and resistance of the diaphragm

of the pelvic outlet were those of a nulliparous woman.

A somewhat wider and deeper denudation was made at the posterior portion of the vulvar orifice than common, and a large curved needle was inserted in such a manner as to catch retracted muscular and ligamentous tissue. It was often necessary to carry its point almost to the ischium. Then by sweeping the handle of the needle holder through half a circle, bringing it below the needle instead of above, the suture of silkworm gut was carried as in the ordinary crown stitch of the Emmet operation.

In prolapse operations this perfect restoration of the pelvic floor was particularly important, but the commonest defect of such operations was an imperfect restoration of the anterior vaginal wall. It was mainly on this account that there had been such a discouraging proportion of failures in the statistics of many operators.

The following technique, in Dr. Hirst's judgment and experience, gave the greatest assurance against a recurrence: The vaginal sulci were denuded as in his operation for cystocele. The sutures were inserted, but not united; in the grip of hæmostats they were laid over the pubes. The cervix was pulled out of the vulva. An inverted shield-shaped denudation was made on the anterior vaginal wall, ending at the circular incision for amputating the cervix. The sutures were a tier stitch on the anterior wall and interrupted sutures for the cervix. The posterior vaginal wall and pelvic floor were usually restored by an extensive Hegar's operation, care being taken to repair the diaphragm of the pelvic outlet. In women of childbearing age, the uterus was suspended as an additional precaution.

Dr. CHARLES P. NOBLE agreed with the president that this paper brought up the whole subject of gynaecology, and the question was, which point to consider. The first point emphasized by Dr. Shoemaker was that of deaths. Dr. Noble's practice had been to give the patient the chances from an operation, unless he thought she was surely going to die. While it added somewhat to the mortality of an institution or private practice, he thought that what surgeons were in existence for was, not to report the least possible mortality by refusing operation in a certain class of cases, but to operate upon every patient who might have her chances improved by operation. This winter he had had the pleasure of saving a number of patients' lives who would have died promptly without operation. He thought this was true of all surgeons every year. He had seen one patient very ill from general peritonitis of several days' duration, due to a necrotic dermoid. The inflammation extended over the peritonæum as high up as could be seen through an incision which extended above the umbilicus. It was back in the kidney regions, and the omentum was so altered that it did not look like omental tissue. The recovery here showed how well some of these apparently desperate cases of general peritonitis would do. Dr. Noble felt strongly that it was the duty of the surgeon to offer up his reputation (if he chose to look at it in that way) for

obtaining uniformly good results as a sacrifice for the good of his patients.

In reference to sarcoma, the case reported reminded him of a case in which he had operated probably twelve years ago, in which there had been a previous operation. When the abdomen was opened the bowels were found adherent. When separating them he came upon a mass of brainlike tissue, quite a little of which tore off, giving plenty for microscopical examination. It was clearly an inoperable case, but the question was, how to control the bleeding, the blood just welling up from the soft tissue. This was stopped by packing the lower part of the abdomen with gauze and putting a bandage around the patient, causing pressure on the intraabdominal gauze. The patient got well. In view of the pathological report of sarcoma, he was still further surprised to have the patient five years afterward come into his office perfectly well. He thought that either the pathologist was wrong or the sarcoma made a spontaneous recovery.

Dr. Noble was interested in one point in which Dr. Shoemaker's practice differed from his, in that he had abandoned the use of douches in perineal operations. Dr. Noble continued the old fashioned method. He was interested to know that Dr. Shoemaker's cases ended in recovery just as well without irrigation as they had before with it, and should be glad to know whether they did any better.

The President thought obstruction of the bowel, early or remote, following coeliotomy, a most important subject. He happened to have a case under his care where he removed a necrotic ovarian cyst a year and a half ago, the patient making an uninterrupted convalescence and recovery. Some fifteen months after the operation he was asked to see her in consultation with her family physician, who thought she had appendicitis. She was sent to the hospital without his seeing her and prepared for operation. He found her in the operating room with a rapid, feeble pulse and stercoraceous vomiting. Upon opening the abdomen he found a similar condition to that described by Dr. Shoemaker. Sixteen or eighteen inches of gut, necrotic and gangrenous, were caught in a band of adhesion between two portions of the small bowel, the band having been converted into a tight ring by a turn of the bowel. The patient improved rapidly after resection of the bowel, and for four or five days appeared to be making an uncomplicated recovery, when she again had alarming symptoms and gave evidence of obstruction with fecal vomiting. He reopened her and found and relieved an obstruction of the small bowel high in the abdomen, near the splenic flexure of the large bowel. She died within twenty-four hours. This was the only case of the kind that he had met with, and it impressed him with the remote danger of this accident after the simplest abdominal section. The necrotic bowel had started a peritonitis which bade fair not to be fatal, when the second obstruction occurred and the reopening of the abdomen was, as usual, too great a tax on the patient. The resection was hurriedly made with the Murphy button rein-

forced with a continuous Lembert stitch. At the autopsy the resection area was found united and the button had released itself and was ready to pass on through the intestine. All experiences of this nature should be reported, and he asked the members to discuss this interesting topic included in Dr. Shoemaker's report.

(To be concluded.)

Book Notices.

Handbuch der Urologie. Herausgegeben von Dr. ANTON V. FRISCH, A. O., Professor der Chirurgie an der Wiener Universität, und Dr. OTTO ZUCKERKANDL, Privatdozent für Chirurgie an der Wiener Universität. Zweiter Band, Wien: Alfred Hölder, 1905. Pp. vi-871.

The second volume of von Frisch and Zuckerkandl's treatise comprises the medical and surgical affections of the kidneys, the ureters, and the bladder, including a section on the nervous affections of the bladder. The first volume of this work was reviewed in these columns about a year ago, when we dealt with the prolegomena and general problems of urology. The third volume, which is soon to appear, will contain a comprehensive treatise on the lower urinary and the genital tracts.

As was foretold in the review of the first volume, this treatise is undoubtedly one of the most exhaustive and complete of its kind ever published. Each section is practically a text book, written by a specialist, and the whole is arranged to reflect that branch of medicine which has gradually differentiated itself during the past decade as "urology," a branch including both the surgery and the medicine of the urinary organs, as well as the subjects which lie in the borderlands of the two.

Essentially the present treatise is an exponent of modern urology, according to the latest researches; yet the subject is presented from the viewpoint of the Vienna school, represented in the present second volume, by Paul Wagner, Julius Mannaberg, Otto Zuckerkandl, and L. von Frankl-Hochwart. Conservatism, tempered with judicious acceptance of the newer facts and theories wherever they apply, forms the keynote of this viewpoint, and the individual authors bring into this work a great thoroughness of clinical detail, an abundant command of technique, and a mastery of the literature of their subject.

The section on the surgical diseases of the kidney, by Paul Wagner, may be favorably compared with the monographs of Küster and of Albarran, but it is not quite so exhaustive as the classical work of Morris, in two volumes. It covers the subject amply and is written in lucid and concise style. Space forbids mention of more than a few points on which controversy has been going on of late. Thus, in speaking of the treatment of suppurative pyelitis and pyelonephritis by lavage through ureteral catheters, the author gives credit to Kelly, Casper, Albarran, and Stockmann, in the order named, for employing this method, and agrees with Israel, Rovsing, and others in pronouncing this treatment useless in pyelonephritis. Nothing is said of the use of lavage in so called simple catarrhal pyelitis and in chronic nephritis, as advocated by Ayres, but, in contradic-

tion to Ayres, Wagner found gonococci but very rarely in the pelvis, and says that it is questionable whether this germ ever produces pyelitis, except possibly by hematogenic infection.

The medical diseases of the kidneys are considered by Mannaberg in a concise but sufficiently complete manner. Special fullness of detail will be found in the clinical and therapeutic portions of the subject, but theory has not been neglected, as will be seen from a very complete account of the theories of uræmia and the experimental bases thereof. A very conservative view is offered on the surgical treatment of nephritis according to Edebohls (nephropexy) and Israel (nephrotomy), both methods being practically rejected on the ground of insufficient evidence. Mannaberg's criticism of Edebohls' fifty-one cases is that "his successes are unfortunately not sufficiently illustrated by clinical histories," and hints strongly that, "a glance at thoroughly kept histories would be desirable" in the nine cases which Edebohls reported as completely cured.

The section on the surgical diseases of the bladder, by Zuckerkandl comprises 230 pages, and includes 386 bibliographic references. It is thoroughly in keeping with the rest of the book. The last section, on neuroses of the bladder and urethra, by von Frankl-Hochwart, is one of the most interesting in the present volume. Beginning with a thorough treatment of the physiology of urination, the general symptomatology of nervous disturbances of the bladder is considered in detail. A chapter on the disturbances of urination of cerebral origin, with numerous illustrative case histories follows, and the section closes with a summary of the methods of treatment in this class of disorders.

It is gratifying to find throughout the book full credit given to the achievements of American observers. Thus, besides Edebohls, Wagner mentions under nephropexy the work of R. T. Morris, Sturmdorf, Guiteras, Senn, Deaver, and others, and Zuckerkandl gives full credit to the older school, including Bigelow, Otis, and others.

The appearance of the book is similar to that already familiar to us in the principal standard German works. The illustrations are not numerous, but well executed and thoroughly representative. The bibliographies are apparently very complete, so far as the literature of the past ten or twelve years is concerned, but the sources are also indicated where the titles of the older articles may be found, so that the book forms practically an index to the entire literature of urology.

New Inventions.

A GAUZE PACKER.

By FREDERIC GRIFFITH, M. D.

NEW YORK.

To overcome the danger of contamination of a sterile cavity from contact with the surgeon's hands when employing a gauze packer, I have devised an instrument which combines free action of tamponage with perfect protection of the gauze

strip from infection during its progress. The instrument is constructed as follows:



Dr. Griffith's Gauze Packer.

A brass tube three sixteenths of an inch in diameter and twelve inches long is bent and fitted by soldering with ring handles and a small funnel tip, as shown in the figure. A sliding metal bead for use as a guide, as when packing the uterine cavity, is a useful attachment. The projecting wire of steel, one sixteenth of an inch in diameter and ten inches long, is likewise fitted with a ring holder and has its projecting end split for a distance of about one quarter of an inch and the ends sharpened to engage the gauze meshes. In a line with the long axis of the instrument, and at a point at the bend of the tube just behind the grasping part, a hole is to be bored one eighth of an inch in diameter and slotted by filing (to allow the prongs of the projecting wire to be more readily passed). After polishing and nickeling the implement is completed by inserting the projecting wire through the hole in the bend. The mouth of the funnel leading away from the operator's hands, gauze packing or drainage strips need not be handled.

Official News.

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending May 31, 1905:

BAILEY, C. W., Acting Assistant Surgeon. Granted leave of absence for twenty-six days from June 5th.

BIERMAN, C. H., Pharmacist. Granted leave of absence for thirteen days from June 7th.

CARMICHAEL, D. A., Surgeon. Bureau letter of May 24, 1905, granting Surgeon Carmichael leave of absence for fourteen days from May 12, 1905, amended so that said leave shall be for eleven days only.

CORPUS, G. M., Passed Assistant Surgeon. Granted leave of absence for seven days from May 28, 1905, under paragraph 191 of the regulations. Granted extension of leave of absence for twenty-three days from June 4th.

EDWARDS, J. W., Acting Assistant Surgeon. Granted leave of absence for three days from May 20, 1905, under paragraph 210 of the regulations.

GAHN, HENRY, Pharmacist. Relieved from duty at Purveying Depot, New York, and directed to proceed to Washington, D. C., for duty in the Purveying Depot in that city.

HOLT, J. M., Passed Assistant Surgeon. Granted extension of leave of absence, on account of sickness, for one month from May 29th.

MILLER, CHARLES, Pharmacist.—Upon being relieved from duty at the Santa Rosa Quarantine Station, Pensacola, Fla., by Pharmacist W. L. Stearns, to proceed to San Francisco, Cal. and report to the Medical Officer in Command for duty and assignment to quarters.

SCHUG, F. J., Acting Assistant Surgeon. Granted leave of absence for fifteen days from June 15th.

STEARNS, W. L., Pharmacist. Relieved from duty at Purveying Depot, New York, and directed to proceed to Santa Rosa quarantine, Pensacola, Fla. and report to Acting Assistant Surgeon in Charge for duty and assignment to quarters, relieving Pharmacist Charles Miller.

STUART, A. F., Acting Assistant Surgeon. Granted leave of absence for thirty days from July 3rd.

VAUGHAN, G. T., Assistant Surgeon General. Granted leave of absence for one month and fifteen days from June 16th.

WILSON, R. L., Passed Assistant Surgeon. Granted leave of absence for ten days.

Appointment.

Dr. MONTAFIX W. HOUGHTON appointed acting assistant surgeon for duty at Providence, R. I.

Resignation.

Acting Assistant Surgeon J. W. HARGIS, resigned, to take effect May 31, 1905.

Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended June 3, 1905:

Smallpox—United States.			
Places.	Date.	Cases.	Deaths.
Arkansas—Fort Smith.	Mar. 11-Apr. 22.	8	
Florida—Jacksonville.	May 20-27.	1	
Illinois—Chicago.	May 20-27.	28	
Illinois—Galesburg.	May 20-27.	2	
Louisiana—New Orleans.	May 20-27.	11	
		Two imported.	
Massachusetts—Lowell.	May 20-27.	5	
Massachusetts—Quincy.	May 13-20.	2	
Michigan—Detroit.	May 21-28.	1	
Michigan—Grand Rapids.	May 13-27.	41	
Missouri—St. Joseph.	May 20-27.	12	
Missouri—St. Louis.	May 20-27.	3	
Montana—Butte.	May 14-21.	1	
Nebraska—Omaha.	May 20-27.	3	
Nebraska—South Omaha.	May 12-19.	3	
New Hampshire—Manchester.	May 20-27.	1	
New Hampshire—Nashua.	May 20-27.	2	
Pennsylvania—Lebanon.	May 20-27.	1	
Pennsylvania—York.	May 20-27.	16	
Tennessee—Memphis.	May 20-27.	5	
West Virginia—Morgan Co.	Oct. 31, 1904-May 25, 1905.	200	
Wisconsin—La Crosse.	May 20-27.	2	
Smallpox—Insular.			
Porto Rico—San Juan.	Apr. 1-30.	Present.	
Smallpox—Foreign.			
Africa—Cape Town.	Apr. 8-15.	4	
France—Lyon.	May 6-13.	1	
France—Paris.	May 6-13.	20	2
Great Britain—Bradford.	May 6-13.	9	
Great Britain—London.	May 6-13.	2	
Gt. Britain—Newcastle-on-Tyne.	May 6-13.	7	
Great Britain—Nottingham.	Apr. 29-May 6.	6	
Great Britain—South Shields.	Apr. 29-May 6.	2	
India—Bombay.	Apr. 25-May 2.	63	
India—Karachi.	Apr. 16-30.	27	11
Italy—Catania.	May 11-18.	2	4
Italy—Cosenza Province.	Apr. 20-May 4.	2	
Italy—Lecce Province.	Apr. 20-May 4.	7	
Italy—Milan Province.	Apr. 20-May 4.	2	
Italy—Messina Province.	Apr. 20-May 4.	4	
Italy—Messina.	Apr. 20-May 4.	1	
Italy—Palermo.	Apr. 29-May 13.	12	3
Italy—Potenza.	Apr. 20-May 4.	2	
Italy—Siena.	Apr. 20-May 4.	2	
Italy—Syracuse.	Apr. 20-May 4.	2	
Italy—Villenza.	Apr. 20-May 4.	2	
Russia—Moscow.	Apr. 29-May 6.	5	2
Spain—Barcelona.	May 1-10.	6	
Spain—Cadix.	Apr. 1-30.	1	2
Turkey—Constantinople.	May 1-14.	1	
West Indies—Bridgetown.	May 9.	1	
		Probably imported.	
Yellow Fever.			
British Honduras—Belize.	May 25-June 1.	4	4
Honduras—Puerto Cortez.	May 14-20.	5	3
Mexico—Tierra Blanca.	May 14-20.	2	
Panama—Panama.	Jan. 1-May 13.	63	22
Plague.			
Africa—East London.	Mar. 18-25.	3	
Egypt—Tukh District.	Apr. 15-22.	2	
Great Britain—Leith.	May 6-13.	3	1
India—Bombay.	Apr. 25-May 2.	822	
India—Karachi.	Apr. 16-30.	483	
India—Madras.	Apr. 22-28.	1	
Japan—Formosa.	Apr. 20-30.	238	210

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 3, 1905:

- ELMORE, B., Assistant Surgeon. Appointed an assistant surgeon in the United States Navy, with the rank of lieutenant, junior grade, from May 24, 1905.
- EYTINGE, E. O. G., Assistant Surgeon. Appointed an assistant surgeon in the United States Navy, with the rank of lieutenant, junior grade, from May 24, 1905.
- GUTHRIE, J. A., Surgeon. Detached from the *Dirie* and ordered to the Naval Hospital, New York, N. Y., for treatment.
- MEARS, J. B., Acting Assistant Surgeon. Ordered to additional duty at the Marine Recruiting Station, Buffalo, N. Y.
- MURPHY, J. F., Assistant Surgeon. Ordered to additional duty on the *Dubuque*.
- OLSON, G. M., Assistant Surgeon. Appointed an assistant surgeon in the United States Navy, with the rank of lieutenant, junior grade, from May 24, 1905.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending June 3, 1905:

- BANISTER, JOHN M., Major and Surgeon. Left Fort Riley, Kan., on leave of absence.
- COLE, CLARENCE L., First Lieutenant and Assistant Surgeon, recently appointed. Ordered to the Bacteriological Laboratory at the Army Medical Museum, Washington D. C., for temporary duty.
- GLENNAN, JAMES D., Major and Surgeon. Left Fort Myer, Va., on ten days' leave of absence.
- HARTNETT, EUGENE H., First Lieutenant and Assistant Surgeon. Relieved from duty at Key West Barracks, Fla., and ordered to Fort Hancock, N. J., for duty.
- JONES, PERCY L., First Lieutenant and Assistant Surgeon. Ordered to report on June 12, 1905, to William H. Arthur, Major and Surgeon, president of examining board, Washington, D. C., for examination to determine his fitness for advancement to rank of captain.
- KOERPER, C. E., First Lieutenant and Assistant Surgeon. Having relinquished leave of absence, ordered to the United States Army General Hospital, Washington Barracks, D. C., for duty.
- MASON, CHARLES F., Major and Surgeon. Appointed a member of a board to meet at West Point, N. Y., about June 5, 1905, for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion.
- MCCULLOCH, C. C., JR., Major and Surgeon. Appointed a member of a board to meet at West Point, N. Y., for examination to determine his fitness for advancement. Relieved from duty at Fort Hancock, N. J., and ordered to the Presidio of Monterey, Cal., for duty.
- MURTAGH, JOHN A., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence.
- PERLEY, H. O., Lieutenant Colonel and Deputy Surgeon General. Appointed a member of a board to meet at West Point, N. Y., about June 5, 1905, for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion.
- RAND, I. W., Captain and Assistant Surgeon. Ordered to accompany detachment Tenth Infantry from Presidio of San Francisco, Cal., to Portland, Ore.
- RENO, WILLIAM W., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Myer, Va., to Washington Barracks, D. C., for temporary duty.
- RHODES, THOMAS L., First Lieutenant and Assistant Surgeon. Under orders to report to the president of the examining board at West Point, N. Y., for examination to determine his fitness for advancement.

RICHARDS, R. L., First Lieutenant and Assistant Surgeon. Now at San Francisco, Cal., relieved from further duty in the Philippines Division and ordered to Vancouver Barracks, Washington, for duty.

RICHARDS, ROBERT L., First Lieutenant and Assistant Surgeon. Reported for temporary duty at Fort Mason, Cal.

STILES, HENRY R., Captain and Assistant Surgeon. Ordered to report to William H. Arthur, Major and Surgeon, president of the examining board, Army Medical Museum Building, Washington, D. C., June 15, 1905, for physical examination to determine his fitness for promotion.

STONE, JOHN H., Captain and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kan., and ordered to Key West Barracks, Fla., for duty.

Births, Marriages, and Deaths.*Married.*

FLETCHER—REDMAN.—In Philadelphia, on Thursday, June 1st, Dr. Benjamin K. Fletcher and Miss Sara Redman.

FORTNEY—FENSLE.—In Washington, D. C., on Tuesday, May 23rd, Dr. Charles Stevens Fortney and Dr. Mary Jeanette Fensler.

HIRST—BOYD.—In Philadelphia, on Thursday, June 1st, Dr. John Cooke Hirst and Miss Maude Wilson Boyd.

LOOK—DONALDSON.—In Kansas City, Missouri, on Wednesday, May 17th, Dr. Henry Harm Look and Miss Mabelle Donaldson.

MERRILL—STARR.—In Cleveland, Ohio, on Wednesday, May 3rd, Dr. Charles H. Merrill and Miss Zorat M. Starr, daughter of Dr. G. F. Starr.

WEIL—STRAUS.—In Long Branch, New Jersey, on Tuesday, May 30th, Dr. Richard Weil and Miss Minnie Straus.

Died.

BURNHAM.—In Chicago, on Sunday, May 28th, Dr. S. B. Burnham, in the eighty-fifth year of his age.

CRESSEY.—In Boston, Massachusetts, on Sunday, May 28th, Dr. Everett L. Cressey.

DROWN.—In Malden, Massachusetts, on Thursday, May 25th, Dr. Edward Payson Drown, in the fortieth year of his age.

MCCNEELY.—In Sidney, New South Wales, on Tuesday, May 16th, Dr. Hugh McNeely.

SMITH.—In Bath, N. Y., on Friday, May 26th, Dr. Ira P. Smith, in the seventieth year of his age.

SMITHWICK.—In Sharon, Massachusetts, on Sunday, May 21st, Dr. John Smithwick.

STEARNS.—In Hartford, Connecticut, on Saturday, May 27th, Dr. Henry P. Stearns, in the seventy-eighth year of his age.

STEELE.—In New York, on Saturday, May 27th, Dr. Thomas F. Steele, in the thirty-sixth year of his age.

SWIFT.—In Pittsfield, Massachusetts, on Thursday, June 1st, Dr. Lawrence C. Swift, in the fifty-fifth year of his age.

TIMS.—In Mt. Vernon, Ohio, on Tuesday, May 23rd, Dr. J. H. Tims, in the eighty-eighth year of his age.

WHITCOMB.—In Liberty, N. Y., on Sunday, May 21st, Dr. J. L. C. Whitcomb, in the forty-third year of his age.

Miscellany.

Chemical Examination of the Urine.—The *Lancet-Clinic*, for April 22, 1905, says: The late Dr. Frederick Kebler used to say that the more he studied diseases of the kidneys, the less he knew about them, and probably all clinicians will admit that their experience, as time goes on, co-

incides with the seeming paradox of this acute observer. Possibly this is because, in that examination of the urine has become almost a matter of routine procedure in a medical case, or at least should be, we have come to rely too closely upon its findings, often to the exclusion of more important clinical symptoms referable to other parts of the body. Indeed, we rather expect the urinary analyst to submit to us an exact diagnosis of the condition of the kidneys without any knowledge as to the history of the case or the symptoms derived by physical examination. On the contrary, however, the expert clinician often finds himself woefully at sea even with the complete report of the urine at hand, as shown by the variance between his clinical diagnosis and that of the autopsy room and pathological laboratory.

Cabot has recently called attention to this variation in a splendidly written article based on the ante and post mortem findings of more than two hundred cases at the Massachusetts General Hospital since 1893. He found that in the so called acute glomerular nephritis, a correct clinical diagnosis was the exception, 75 per cent. being wrong; in subacute glomerular nephritis, 50 per cent.; in chronic glomerular nephritis, 11 per cent.; in chronic interstitial nephritis, 32 per cent.; and in amyloid disease, 100 per cent.; this surprising discrepancy, let it be borne in mind, with full clinical and urinary reports in the diagnostician's hands. In quite a series of cases there was found in the urine at least one quarter of 1 per cent. of albumin, together with casts of all varieties in large numbers, without any discoverable lesions post mortem. When, in addition to this, there is a series without albumin and without casts, or with the latter in very small numbers, yet the gravest of pathological conditions found at the autopsy, we are very much inclined to doubt just how much of these microscopical and chemical changes, when nephritis is present, are due to the nephritis. As Cabot has well said, we may state with propriety that they may depend upon accompanying functional disturbances whose anatomical basis is still unknown and not to the known anatomical lesions which they happen to accompany. The fact of the matter is that a large proportion of physicians are apt to jump to the conclusion, and life insurance companies urge them on, that albuminuria means Bright's, while the absence of albuminuria is proof positive that the individual is not suffering from nephritis, both of which conclusions are erroneous. Albuminuria and nephritis can each appear without the other; for instance, in that chronic progressive disease of the kidney, in which destructive anatomical lesions are present beyond the possibility of improvement, how common it is to see the albumin appear and disappear without discoverable cause; or, on the other hand, after prolonged and severe exercise, as after a boat race, to find the urine of every member of the crew containing albumin in greater or less proportion. Yet in the former example the lesion is progressive and destructive, while in the latter, while the albumin may be in large amounts, the

tendency is toward prompt and complete recovery.

Another old time favorite method of examination which Cabot has the courage to condemn is the estimation of the amount of urea. It is impossible to compute the time lost daily by the thousands of devotees of this rather useless procedure. Its advocates appear to forget that the amount of urea appearing in the urine depends not only, or, indeed, even primarily, upon the functional activity of the kidney, but on the amount of nitrogen taken up by the individual and the catabolism of the entire economy as well. We must know the amount of nitrogen in the food supply of the individual, his power of digestion, and there must also be reckoned with the amount of exercise, sleep, amount of water ingested, presence or absence of fever, vomiting, diarrhoea, cachexia, or heart disease, and any great variation in these factors will completely invalidate the urea estimation. As regards casts, we now know that those of the hyaline and granular variety may be found in small numbers in the urine of healthy adults, while Shattuck has claimed that two thirds of all healthy individuals over fifty years of age show on uranalysis a slight amount of albumin and a few hyaline and granular casts.

It would seem from Cabot's studies that all the time honored methods of examining the urine must be relegated to the background as unworthy of credence, or at least unworthy of the reliance formerly accredited them, and in this all of us who have given the subject any attention must reluctantly coincide. It is simply a trend of the times, a swing of the pendulum for the over enthusiasm of yesterday. It is a warning, of which we have had many of late, that we must not develop and rely upon laboratory diagnoses to the exclusion of those formed by the cultivation of the more simple methods of physical examination. We do not decry any scientific laboratory methods, nor should the laboratory worker regard cynically the phenomena elicited by careful physical examination. The wise diagnostician will take account of both and give to neither no more than its just due.

Local Analgesia.—Captain J. W. Houghton, in the *Journal of the Royal Army Medical Corps*, for April, 1905, states that in view of the growing timidity in the use of general anæsthesia for operations, and the magnification of the functions of the anæsthetist, a few remarks on a method of local analgesia may be of interest. Although cocaine and the various freezing mixtures have been found useful to obviate pain in minor operations, yet their uses are restricted and utility limited. The local analgesia which has recently been brought to the notice of surgeons in England by Mr. A. E. Barker, of University College Hospital, is produced by B. eucaïne, a chemical compound, occurring as a white crystalline powder of low toxicity and readily soluble in water. The injection of this in dilute solution, beneath the epidermis, causes complete analgesia of the parts infiltrated, which effect lasts about twenty minutes. To lengthen the analgetic effect of the B. eucaïne and to obviate the local swelling caused

by the infiltration, a solution of adrenalin chloride can be added, which actively contracts the arterioles, limiting the blood supply, and retains the B. eucaïne in position, increasing the duration of its analgetic effects. The necessity for injecting a fluid isotonic with the blood should not be forgotten, or disaster will occur in otherwise promising cases.

A 1 to 500 solution of B. eucaïne gives a most satisfactory analgesia, and as one seldom or never requires more than 100 cubic centimetres for one operation (usually 10 to 30 c.c. suffice), powders containing B. eucaïne 0.2 gramme (or 3 grains), and pure sodium chloride 0.8 gramme (or 12 grains) can be kept made up. One hundred cubic centimetres of distilled water (about $3\frac{1}{2}$ ounces) are boiled; a stock powder added, and we get a sterile and isotonic solution of B. eucaïne, 1 in 500 normal solution. To this, when cool, should be added 1 cubic centimetre (about 18 drops) of adrenalin chloride (1 in 1,000), which has the desired effect of contracting the local vessels. A point worth mentioning about the adrenalin chloride is its spoiling by exposure to light and air, and its giving a salmon pink color to the solution on standing. But I have kept a solution without deterioration of its contents, for six months. There is no advantage in making up more of the solution than is immediately required, as it loses its properties and is almost inert after twenty-four hours, while its maximum effect is reached thirty minutes after infiltration. To facilitate injection a good hypodermic syringe is essential, and one that can be boiled is an advantage, as the B. eucaïne before the addition of the adrenalin chloride can be boiled without hurt.

I made a small beginning to master the technics of the process, circumcisions and ingrowing toe nails supplying material, and early found the necessity for isotonic solutions and the importance of infiltrating the nerves supplying the area of operation. If one can infiltrate the nerves (say at the sides of a finger), one gets complete analgesia below the point of infiltration, while there is no local swelling to obliterate anatomical landmarks. I have lately used B. eucaïne and adrenalin in the following cases: (1) Removal of a cystic tumor attached to the periosteum of the scalp. (2) Removal of a fibroma attached to the posterior aspect of left trochanter, involving dissection from the bone. (3) Opening a knee joint for removal of loose cartilage. (4) Excision of five varicose veins. (5) Excision and ligature of external piles in a case where chloroform was inadmissible. (6) Opening and draining abscess of liver. (7) Varicocele. (8) Laparotomy for perforating enteric ulcer. In all of these operations the patients expressed their freedom from all pain, except the one with the scalp tumor, which I think was insufficiently infiltrated, while a most peculiar feature of several cases was the fact that though analgesia was complete, total anaesthesia was not present, for on questioning the patients they replied that they felt no pain, but some knew when the knife was cutting them.

The knee joint case was most instructive in demonstrating the effect of the drug, as the pa-

tient had suffered for two years from his joint "locking" on awkward occasions, and was neurotic to a degree; yet I cut down, opened the capsule, removed a piece of detached cartilage, and tapped the surface of the tibia with the point of a knife, questioning him as I worked, and all he said he could feel was a "kind of dull sensation" while I was cutting, but "no pain of any kind." The wound was healed, and the superficial stitches removed on the eighth day.

The laparotomy for enteric perforating ulcer was doubly interesting, as the patient, who had recently come from South Africa, had a very severe septicæmia. Perforation occurred in the fifth week of the disease, with none of the classical signs of perforation, except that he vomited once. When placed on the operating table about six hours after the ulcer ruptured he was pale and collapsed. Temperature 104° F., pulse 144, with scarcely any abdominal distention; in fact, the perforation seemed hardly to aggravate his very toxic condition of the few preceding days. After injecting the B. eucaïne and adrenalin, Captain Humphry assisting, I opened the abdomen in the middle line below the umbilicus; the patient gave expression to slight pain when I pulled on the omentum, which was adherent to the parietal peritonæum in the right iliac region, and out of the infiltration area. The perforation was soon found and closed, his lower abdomen irrigated, the abdominal walls sutured, and a gauze drain left in.

The patient only lived for fifteen hours after the operation, but I think would have died from the intensity of the fever even if he had not perforated. The points of interest were, the absence of pain during operation, the absence of shock, and the marked stimulating effect of the adrenalin.

At the conclusion of the operation, his pulse, which previously was scarcely perceptible, steadied to 106, and his temperature dropped to 101.5° F., while his condition from one of collapse improved so that he spoke intelligently. Such marked changes could scarcely be altogether due to the opening of the abdomen, showing we have in adrenalin a powerful stimulant.

A lack of material has so far limited my experience, but I see no reason why amputations and operations on herniæ could not be performed with this analgetic, the main factor in its successful use being the infiltration of all nerve trunks supplying the site of the operation—not forgetting the probability of nerve anastomosis—while the adrenalin chloride prolonging the analgesia for several hours gives ample time to the operator, and causes an almost bloodless operation. The boiling of the solution ensures sterility, while some preparations are sterile.

As to the question of choice between local and general anaesthesia, the more one sees of local analgesia, in suitable cases, the easier is the choice effected, as the patient escapes the risk and after-effects of chloroform, while the operator is saved the anxiety of its administration, and economy of attendants is effected, as an anaesthetist is unnecessary.

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Lectures and Addresses.

THE MODERN DOCTOR.

By A. JACOBI, M. D., LL. D.,

NEW YORK.

(Continued from page 1147.)

Gentlemen, I have seen graduating classes passing before my eyes and out of view these forty-five years. Many of them whom I bade Godspeed have passed away, many have filled their places with success and renown, others have disappeared from sight without leaving their imprint. Still, there are opportunities for everybody. It is true enough that health, circumstances, and luck have a good deal to do with the happenings of whomsoever is mortal. But there is no one who is not to a great extent responsible for his own fate. Selfmade men endowed with principles and endurance are plentiful in every trade and profession. Some rules indigenous with every ethical man should be followed; and, perhaps, it is unnecessary to urge them here. Still, permit me to express in words part of what I should wish you to mind.

You have been undergraduate students until this commencement. Let it be the commencement of your postgraduate study. I take it that you have learned enough to be able to learn more. I once read of the happiness of him who does not know he is no doctor; that happiness should not be yours. Whoever would have stood still with his achievements of forty or fifty years ago would be a hopeless mental corpse. The good doctor of only twenty years ago would be a musty relic to-day if the progress of study and of science had passed him unnoticed. Only constant attention and work will keep you young and abreast of the times. Follow closely the literature of your science and art. Collect a library of your own according to your means. Be sure to take half a dozen medical magazines, one of the great weeklies, a few high grade monthlies and quarterlies, and one historical journal. For, as without the knowledge of the history of your country you cannot understand its structure, or without

that of the embryo the full development of the body, so without that of your science and art you will not be a citizen in your profession. It is a pitiful sight to learn that many efforts are wasted in rediscovering what should have been known. I remember the disappointment our patient and great O'Dwyer experienced when after years of hard work and close thinking he learned that a third of a century previously Bouchut came near to the accomplishment of the intubation of the larynx in membranous croup. It is true that, after all, the world is ringing with his praise, but years were spent by him in unfruitful preparations.

When your private library does not suffice, turn to public collections. Where there is none, create one. There should be no county society without either a circulating or a permanent library. You will always find friends in the Association of American Librarians, and in the large libraries of the country. That of the New York Academy of Medicine alone furnishes much valuable material to several dozen of medical libraries all over the Union.

Try to remain in or improve your contact with all the branches of medicine. There is, it is true, nobody who can know all the various specialties or practise them. Seneca said, 2,000 years ago: "The man who is everywhere is nowhere"—*nusquam est, qui ubique est*—but you should know enough of them to appreciate their relations to the entire organism. Those of you who mean to practise a specialty, I advise to go into general practice first, and build up a specialty in later years on the strength of your general knowledge and attainments. Those who expect to obtain reputation and riches out of premature limitation will not attain success. That such a one cannot reach distinction in his own profession goes without saying; for those specialists who enjoy the confidence and respect of the profession have worked hard and are known for their general and broad information. One cannot impose upon the hearts and purses even of the laymen for any length of time without being found out. The homely saying that you cannot fool all the people

all the time is correct. It may be true that there are many reasons why we should not have a high opinion of the discernment and discretion in matters medical of a large part of the public. For there is too much clairvoyance, Christian lack of science, medical sectarianism, and medicine chest quackery and too much dilettanteism amongst our well clad and well fed seminstructed but uncultured and mentally unbalanced classes. But, if there is any science or art in which the dilettanteism both of the narrow specialist and of the busybody lay adviser is detrimental, it is in medicine. We have been told that a little learning is a dangerous thing. That is a mistake. It is not learning that is dangerous, it is ignorance.

Do not stick to your books alone. They are masterful leaders only when they open your eyes to see the world with. You cannot learn medicine from books alone any better than you can chemistry or politics. Look for bedside experience. Unfortunately, however, there are very few teaching institutions in our country in which clinical instruction is what it should be. Few undergraduates study in schools with hospitals of their own. A mechanic is expected to learn his handicraft before practising; but the medical student is permitted to practise on his fellow men without having the required schooling. That is what gives so much probability to Ughett's story of a Scotch king who would not admit a doctor to his own land until after he had practised at least twenty years amongst his enemies. The lack of clinical experience amongst our young physicians should be more appreciated. Plain talk of this kind may be more wholesome than pleasant. To remedy the evil we want hospitals connected with the schools, not dispensaries only, and large endowments. If rich men and women will spend their wealth for such a purpose they will not so much benefit the medical world as they will benefit millions of fellow creatures. Forty-five years ago the New York Medical College, which is hardly remembered now that it has disappeared these forty years, was the first school to establish a hospital for clinical instruction under its own roof, and this was done out of the contributions of the poor professors and a few friends.

Those of you who follow up your clinical studies in other parts should not believe, however, that the very large clinical hospitals are the most instructive. I think every medical school should have a hospital with selected cases of all kinds containing from 150 to 200 beds. But for the young student or physician to be admitted to large wards, with no personal work and initiative, is almost useless. You learn no botany by star-

ing at a thousand trees and bushes, and no medicine by being driven alongside of hundreds of bedsides. Seeing is not understanding, just as little as the man in practice who, in the course of many years, sees a great many cases with the same indolence, and commits the same mistakes, may speak of from experience. The Siamese twins were carried over fifty thousand miles, but I am sure the only place they knew anything about was their South Carolina village.

Are there particular methods of succeeding in medicine? Books have been written to answer that question. When I read them I wished they did not exist. My advice is, do not rely on any artifice. You see doctors succeed, or not, temporarily or permanently, whether they are ugly, or beautiful, ill mannered or gracious, frowning or, what is worse, eternally smiling, alcoholics or sober, retiring gentlemen or dancing masters and ushers, married or otherwise. Indeed there are those who get married to have an interested attendant on the hall door by day or night; and I have, on the other hand, known unmarried physicians who assured me that they had obtained a large practice by remaining in the market. That sort of advertising which has become an art in modern life is about the most vulgar of all, worse than the newspaper advertising of the downright shameless quack, or the man in more or less of a position who is on good terms with some reporter who visits his clinics—always "without his knowledge"—and is made to extol the skill of the great man, his friend. Even worse are the articles, long or brief, written by metropolitan doctors for advertising sheets called journals, too worthless to serve as soap wrappers.

Then there are the optimists and the pessimists. The man who always gives a good prognosis may do so through good nature and the sympathy he has with the anxiety of the family. His motives are good, but his judgment is not correct. I have suffered from that weakness much more than perhaps my patients, and while I hope you will always try to spare the feelings of those who trust you, you may, by being too soft hearted, cause great disappointment. Do not assure anybody that there is nothing to fear. Any slight ailment may give you the lie; a small opening in a dyke may produce a deluge. That is why I advise you not to think lightly of a possible danger, and not to postpone measures of relief or salvation. An acute disease, particularly an infectious disease, may be like a fire or a tornado. The house may be down before you have called the engine. When you have to deal with a disease that necessarily must exhaust the power of the heart, do not wait

to employ your measures until it is too late. In a pneumonia, one of your daily enemies, you know that every day must and will add to the danger of heart strain and heart muscle deterioration. You have no right to wait for heart failure or exhaustion—any Micawber can do that—if you do, you will generally be too late with your digitalis, caffeine, ammonia, camphor, or musk. Employ them in time. To postpone the use of alcoholic treatment in large doses in septic diphtheria until the tongue is dry and the pulse flies up to 180, is no less than homicide. To rely on nature is indolence. Nature is kind, but nature is cruel as well. The old proverb that the doctor is the servant of nature, if it is to mean that he must fold his hands over his stomach, and look wise and write a certificate of death is a sophism bred by criminal superciliousness. Would you trust nature when a child is suffocating with croup or would you tracheotomize or intubate? When a hernia is strangulated will you permit gangrene to kill your patient? If not, why not open a vein when, on the third day of a pneumonia, there is cyanosis, pulmonary œdema, or dilatation of the right ventricle, and give digitalis and musk in 10 to 15 grain doses?

Then there is the pessimist who either sees or proclaims danger in every mild case. If he sees it he is incompetent. But the suffering public is so ignorant as not to distinguish between a competent and an incompetent practitioner. Still such a man does not *intend* to do harm. But, the clever politician who feeds on the fears of the patient or his friends and exaggerates the danger of the illness and the value of his services, who pretends to save lives by the score when there is no risk—well, just beware of him.

There is another class of politicians, either clever or clumsy, that makes game of what is sacred to many other people, and tries to make a living out of other people's feelings or convictions. I ask you the direct question. Are you to be members of churches? That depends on what the church is to be to you. I knew a medical man whose custom it was to be a regular attendant on all sorts of church funerals, and to have himself called out every time by an urgent message. The attendance being ever so different each time, his name was mentioned in many circles. I know he died poor, however, in spite of, or on account of his silly attempts to obtain notoriety. If you mean to be a member of a congregation, or a deacon, or a Sunday school preacher for similar reasons, I am afraid the shrewd instincts of your neighbors will soon find you out. Otherwise, do not forget that positive religions and creeds do

not necessarily interfere with science, and science does not necessarily interfere with either positive religions, creeds, or churches. The connection with a religious community or the selection of a church depends on accident or individual preference and has nothing to do with your science and art, any more than any other affair of your heart or your political faith. It is not difficult to say that Hippocrates, or Sydenham, or Bichat, or Virchow would not be greater in our estimation if they had belonged to the same religious faith.

Are you to be interested in the politics of the city, the State, the country, or mankind? Alcaïon said more than two thousand years ago: "Man, being a part of all nature, cannot be comprehended without her." I should say, man who is not interested in and feels bound up in his community is incomprehensible. Aristotle called man a political animal, that is, one that felt his intellectual gregariousness and coordination. Take part in honest politics, add your share to the attempts of those who strive to make modern politics honorable again and consistent with the laws of private morals.

Now let me turn to the exigencies of your daily work. In a given case, before everything else make a diagnosis. An architect does not lay a foundation or run up a wall before he has the structure in his mind's eye. So you should be sure of your footing before you go on. Even your most ignorant patient will ask you what it is that ails him, and some of them shake their heads when you talk Greek or Latin to them—and may go to your neighbor who talks in the vernacular. Try to make your diagnosis at your first visit, provided the condition of your patient permits it. This latter is a *conditio sine quâ non*. You have no right to add to the torture or dangers of a fellow creature. It is only nature that is justified and even praised for being cruel; but then, she is only cause and effect, or matter and force, and has no brains and no heart such as you are expected to possess. That is why there are exceptions to the rule of making your diagnosis *first* for, after all, your dealing is more with the organism than with an organ. You are expected to keep your patient alive and save him and not to overlook the man while you study his liver or the exact location of an embolus, and by not adding to his shock you may save his life. Feel his pulse before you use your stethoscope, lower his head when his pallor strikes you, do not insist upon his being bathed according to the rules of your hospital when he has been rattled over miles of pavement before he is put to bed, give him to eat and stimulate him when you have

reason to believe he has had nothing all day before he came to you, and then go to him only with your instruments of precision. The best instrument of precision after all—please remember—is that which you carry in your skulls. It is your brain that should direct your hearts, as it is your heart that should warm your brain.

These two instruments of ours, viz.: brain and heart, are our best guides after all. When you have made your diagnosis be satisfied for a while. The general condition of the patient will teach you your duty from day to day, from hour to hour, no matter whether the pneumonia has invaded another cubic inch of the lung or not. There is such a thing as to be too accurate. When you once have made the diagnosis of a pneumonia and have localized it, and have, perhaps, added the examination of the blood and know all about your patient's hæmoglobin and the number and character of his leucocytes you will find it easy enough to learn the condition of the heart and the kidneys, and build your prognosis on a fairly sound basis. You will impair it by examining too often. Give your patient rest. Do not allow the nurse to insert the thermometer every two hours except for the very best reasons. Know how to leave him alone and keep him alive while his heart, blood, and nerves are engaged in supplying him with oxygen and eliminating his toxins. Spend your wits on sustaining him and facilitating his circulation by hygienic and drug medication and *allow* him to get well. All the rest is experimentation, and man is not *animal vile* on which experiments, even proper and otherwise justifiable, should be made. Imagine yourself in his place and him in yours, and do not spoil his chances and yours by interfering with recovery. Otherwise it may happen what every one of you knew so well twenty years ago, viz., that:

"All the king's horses and all the king's men,
Could not put Humpty Dumpty together again."

Still, I say, make your diagnosis. You have so many more methods of getting at it than we had twenty and thirty and fifty years ago, that it has become, as it were, a natural inference on the part of a young man, just through his examinations for a hospital appointment, to believe that his superior officer might as well resign at once in his favor. The sobering influence of the failures of the approaching lean seven years has not been felt yet. When he will have been in practice fifty years, the young man will learn that there are others who know as much as he or a great deal more. But, after all, the *young men* do make better diagnoses than those made when your fathers were about to be born. That was a time when the

diagnoses of paralysis, of dropsy, of chest disease, of nervous and bilious fever was legitimate and full fledged, when there was no difference between typhus and typhoid, when there was a display of great satisfaction at being able to speak of the rheumatic, the uric acid, and other diatheses, of lithæmia—but I had better stop, for I am on dangerous ground. For the rheumatic and the uric acid diatheses still rule in the supercilious consciousness of those who are not so wise as we the six hundred were. You know that when there is uric acid in the renal secretion, as there ought to be and is, you have the malefactor and go for it; when there is none, and the specific gravity is down to 1,000, so much the worse; the malefactor hides itself in the interior and the poor mortal is drugged at the expense of his (mostly her) health and purse. Still, I say, make your diagnosis in the new ways, but also in the old ways; and do not sham. When stethoscopes were not in everybody's pocket, fifty years ago, I had a colleague in New York, who purchased one of the straight German style and outshone us all by having it ornamented with gold. I have been reminded of him when I see some of the modern "leeches"—you know that doctors in King Edward's time were called leeches—going about armed with the Thoma Zeiss's blood counter and Fleischl's hæmoglobinometer in their satchels. The eye, accustomed to the study of the features, the pupil, and the color and condition of the hair, the color, wrinkling, and veins of the face and hands, the sense of touch developed to the utmost to judge of the character of the pulse, of the condition and size of the viscera, the estimation of the expression of anxiety or terror, or indolence of the sufferer, of the position he assumes, of the dryness or fissures of his lips, of the temperature of his feet; all these also should be carried by the carrier of the satchel, but too often they are not ready for immediate use. I took the liberty many years ago, to assert that brains were a handy tool for a physician. I am wiser now; being so much older, I now say *practised* brains.

Practised brains will easily overcome a difficulty which is encountered in the latest overdevelopment of specialism in medicine. The last few years have evolved a new variety of medical diagnostician, the so called laboratory man. He sits at a certain window—northern exposure preferred—all day long and examines specimens; the bedside knows him not, nor he the bedside.

That I do not speak of the great men of the laboratories, of the Theobald Smiths, of the Ehrlichs, is understood. Medicine is built up of millions of stones, some of little account, some cor-

nerstones, and we exist on serious pathfinding research. You understand me at once when I say that the attempt to discriminate between the laboratory man and the clinician is wanton. The laboratory is in the service of the bedside, a handmaid, available or indispensable according to the circumstances of the clinician, is no less, and need be no more. The individual clinician may not himself be the omniscient or omnipotent expert, but clinical medicine requires the laboratory as one of its aids. That is why every student should take his course and his examination in bacteriology, physiological chemistry, and clinical microscopy. Every patient that ever applies to you has a right to expect from you all the exact aids and branches of knowledge that make the modern doctor.

Do not rely on tools alone. Before there were our instruments of precision, our sphygmographs and manometers, there were great doctors in many lands. Many of our modern medical discoveries and rediscoveries you may read of in the works of Hippocrates, and many modern instruments were found in Heister, two hundred years ago. Our own time reaches the same story, viz., that clinical observation alone arrives at many conclusions laboriously evolved later by the microscope and by experiment. For instance, before the bacillus of diphtheria was ever thought of, a mere clinician taught that almost every case of localized laryngeal croup was genuine diphtheria, and was contagious, and that many cases of so called amygdalitis belonged to the same class. He also taught that laryngitis with a high temperature was not dangerous, while the localized obstructive croup that ran its course without fever belonged to the dangerous membranous type. It was also known that genuine uncomplicated throat diphtheria ran its course without much glandular swelling and that the most septic cases were often those that did not give rise to any fever. All these things have been proved long since by the findings of bacteriology. Thus theories and explanations will often limp behind the knowledge of facts. They are welcome, however, three times welcome, for science means the comprehending of facts together with their causes and correlations.

(To be concluded.)

Philadelphia Polyclinic.—During May the following work was done at the Polyclinic Hospital: Patients admitted to house, 115; patients discharged, 122; new patients treated in dispensary, 1,981; total visits to dispensary, 9,290; accident ward, 754.

Original Communications.

THE ÆTIOLOGY AND DIAGNOSIS OF CHOLELITHIASIS.*

By WILLIAM RUOFF, M. D.,

PHILADELPHIA.

Of all studies none is more promising than that of cholelithiasis. Since Marion Sims suggested that gallstone disease was properly within the sphere of the surgeon, investigation and research have been stimulated to a marked degree, the ultimate results of which have gone far to revolutionize our ideas upon this subject.

It is generally conceded that, owing to its anatomical situation, the gall bladder is peculiarly susceptible to pathological changes. Like the appendix it is a dependent organ with a limited outlet, though connected less directly with the intestine and fortunately at a point where virulent microorganisms are neither so abundant nor so active; so that in considering the ætiology and diagnosis of cholelithiasis, it is essential in a sense to include cholecystitis, since both conditions are so dependent upon each other.

Any one familiar with the ætiology of gallstones can understand that no common ætiological factor can be assigned to all cases of cholelithiasis, but rather that a union of several causes is essential to the production of stone. We know that age plays an important rôle, the vast number of cases occurring between the ages of 40 and 60 years and less commonly between 20 and 40 years, and only in rare instances in children and infants. It is possible that some intractable cases of infantile colic may be due to the passage of gallstone. (1) That women should be more susceptible than men, in the proportion of three or four to one, can be attributed to their form of dress and to pregnancy, both factors inhibiting in their own peculiar manner the flow of bile from the gall bladder.

It is less easy to account for the important rôle that age plays in formation of gallstone. We are all perfectly aware of the diminishing powers of resistance, the degeneration of mucous membranes, the gradual atrophy of the body, besides the atheromatous influences that accompany old age, but it seems unlikely that these factors are of such vital importance in the formation of stone; save only that together with the general loss of body tone the bladder suffers equally, losing its contractile power, thereby favoring a retention of biliary matter.

Another factor may be the diminished resistance of the body fluids to infectious agents. This does not prove that biliary calculi are formed in old age.

* Read before the North Philadelphia County Medical Society, December 31, 1904.

It is just as likely that they are produced at all ages, but the intervening years have favored their actual formation. Rather too much importance has been attached to the influence of body temperament and personal habit, gluttony, excessive indulgence in meats and fats, heredity, and climate.

The influence of diet in the ætiology of gallstone suggests a very alluring hypothesis, which, however, lacks confirmation. Cholelithiasis is relatively as frequent in the obese, in the glutton, and those of well nourished organism as in the wasted and impoverished. Naturally sedentary occupations and constant lack of physical exercise favor the formation of stone. Cardiac changes, with atheroma of the blood vessels, carcinoma of the liver and ducts, nephritis, nephrotosis, enteroptosis, and possibly gatropotosis are all predisposing elements in the formation of gallstone. But these factors are not to be considered as the cause of cholelithiasis; they are but the circumstances and conditions that favor their formation in the gall bladder.

Cholelithiasis consists in the formation of crystalline friable masses, composed of cholesterol, lime, various bile salts, and resins precipitated from the bile and bound together by an albuminous matrix or cement. As a rule gallstones are multiple; sometimes but one large stone exists; then again the number found is incredibly large, as many as 7,802 completely filling the gall bladder, having been reported in one patient (2).

The size of the stone varies, being usually in inverse ratio to the number; that is, the smaller the stone the greater the number and vice versa. For systematic study the following classification of cholelithiasis has been accepted (3).

1. *Pure Cholesterol Stones*.—These are hard, oval or spherical concretions, smooth and pure white or yellowish; about the size of a cherry; crystalline throughout.

2. *Laminated Cholesterol Stones*.—These are generally hard but liable to fissure on exposure and variously colored. They are much like the first variety only laminated on section.

3. *Ordinary Gallstones*.—These stones are of various sizes, shapes, and colors, rarely larger than a cherry and often much smaller. They are faceted, brown, or yellow, and not crystalline in structure.

4. *Mixed Bilirubin-Calcium Stones*.—These are as large as or larger than a cherry, solitary or in groups of two, three, or more. On drying, the outer shell or cover peels off. The nucleus and shell is composed mainly of cholesterol, the remainder of bilirubin-calcium.

5. *The Rarer Forms*.—(a) Amorphous stones resembling pearls; (b) chalk stones; (c) concretions surrounding foreign bodies, such as bacilli, worms (*Distoma hepaticum*), needles, silk, or catgut sutures; (d) casts of bile ducts.

The actual formation of gallstones had been the

subject of controversy for decades, until Naunyn (4) in 1892 showed conclusively that gallstones were composed mainly of cholesterol, a monatomic alcohol, and bilirubin-calcium, the source of which was from the mucosa of the gall bladder, and that certain alterations, such as a subacute inflammation of this mucosa, resulted in a disintegration of its epithelium. These epithelial cells or flakes sooner or later showed decided myelin changes particularly in the region of their nuclei, which escaping from their cells were fused, forming a vitreous structureless mass. This mass was found to be pure cholesterol and a compound of bilirubin-calcium. This friable mass of detritus formed the groundwork of the future stone, and as cholesterol and bilirubin-calcium continued to form by crystallization, the stone grew larger and harder. Perhaps a second form of formation is commoner, i. e., an origin from the sedimentary masses met with in human bile, in which small clumps of pultaceous masses are formed, around which is deposited bilirubin-calcium. This sediment, due to biliary stasis, is caused by some obstruction to the flow of bile, either by loss of muscular tone of its walls, mechanical interference, or, which is more than probable, microbic infection.

Of late bacterial infection has proved to be a promising field, but it is after all secondary to obstruction; for, primarily, infection is impossible without obstruction, since the free flow of bile from the gall bladder washes away infective agents, preventing their accumulation in the hepatic ducts and gall bladder proper and, besides, human bile *per se* is sterile. Bile under normal conditions, too, is so poor in nutrition that colonies of bacteria cannot find food for growth or propagation. It is evident, therefore, that some agent capable of retarding the flow of bile or diminishing its motility, is essential to favor the growth of microorganisms.

There are two channels through which the bile may become infected.

1. Through the medium of the portal circulation.

2. By an ascending infection through the common duct from the duodenum.

It is well known that the bacteria of glanders, cholera, and splenic fever have escaped the destructive function of the liver in their migration through the hepatic circulation, and found lodgment in the gall bladder; how much importance they may have in the ætiology of cholelithiasis is not definitely known. But the frequent presence of *Bacterium coli commune* and the typhoid bacillus in the bile and as a nucleus for stone is strongly suggestive of an ascending infection from the duodenum.

It may be of interest, in passing, to note that during an attack of typhoid fever, the character of the bile changes very materially. It is increased in quantity, watery, dirty brown in color, and contains a large amount of epithelial detritus. The relation of an existing cholecystitis during an attack, with the presence of so much disorganized epithelium suggests a rich source of cholesterolin.

Over 20 per cent. of "operable" patients gave a previous history of typhoid fever. The microorganism was found in all, and in some as late as seven years following the initial attack.

Another striking feature of the bile during typhoid, is its agglutinating reaction to *Bacillus typhosus*. This activity is, however, much less marked than that possessed by blood (5). Strange as it may seem, the injection of virulent microorganisms into the gall bladder does not produce cholelithiasis; the violence of the reacting inflammation, producing a cholecystitis or cholangitis, as the case may be, effectively inhibiting the formation of cholesterolin and bile salts. Attenuated cultures, however, have given positive results. The presence of foreign bodies does not produce lithiasis, they being innocuous, until infected, when they rapidly produce stones.

The microorganisms capable of producing gallstones are the *Bacteria coli commune*, *typhosum*, *Staphylococcus pyogenes aureus*, and *Bacillus subtilis*. The influence of appendicitis, peritonitis, and salpingitis is suggestive. Any inflammation of infective character, no matter how remote from the gall bladder, predisposes to the formation of gallstone (6).

In reviewing the ætiology of cholelithiasis the following conclusions may be accepted (7):

1. The chief characteristics of gallstones, cholesterolin and bilirubin-calcium, are produced by subacute inflammatory changes in the membrana mucosa of the gall bladder, resulting in a disintegration of its epithelium and increased production of mucus.

2. That any agent capable of disturbing the motility of the bile through the ducts favors the introduction of microorganisms.

3. That the injection of virulent microorganisms into the gall bladder, produces only a violent cholecystitis or cholangitis, with negative results.

4. That the injection of attenuated cultures causes no change provided the drainage from the bladder is free.

5. Biliary stasis from the introduction of sterile foreign bodies does not occur; but will if the foreign body is infected.

6. The clumping or agglutinating of *Bacterium typhosum* in the gall bladder, may account for the

occurrence of cholelithiasis following typhoid.

In cholelithiasis we usually find such well defined and characteristic symptoms that the diagnosis is easy and comparatively certain. And yet embarrassing mistakes have been made by the internist as well as the surgeon. There is a certain class of patients afflicted with gallstones who never suffer any discomforts, the presence of the stones being discovered by chance upon autopsy. In such cases the concretions have very likely been slow in forming; never causing any interference or exciting any inflammation. In other cases, gallstones may cause vague symptoms of dyspepsia, or disagreeable sensations in the abdomen or liver; but these symptoms are so transitory and insignificant as to not warrant a definite diagnosis. In a third class of patients gallstones cause severe and at times almost fatal illness. It is this class we most commonly meet.

The attacks are characterized by the occurrence of certain peculiar and distinct paroxysms called biliary colic. This phenomenon is usually preceded by discomfort in the abdomen, slight jaundice with itching of the skin, or, as I have seen, with certain peculiar individual warnings, as lumbago, anorexia, and slight nausea. The attack begins suddenly, with acute cutting pains in the right hypochondrium, spreading over the abdomen to the thorax and often extending to the right shoulder; its point of maximum intensity being at the junction of the lower third and upper two thirds of a line drawn from the umbilicus to the tip of the ninth rib (8). There is usually marked rigidity of the abdominal muscles of the right side. Hepatic and cystic infection contribute to the discomfort of the patient. Vomiting is often persistent and distressing, and is accompanied by fever of low degree, from 101° to 103° . The fever is partly a matter of personal equation and partly dependent on the extent of cystic and hepatic infection. The liver is usually enlarged and tender; the gall bladder is swollen and sensitive and palpable, and the spleen likewise shares in the general disturbance. Jaundice appears in twelve to twenty-four hours after the initial symptoms of pain; it is of variable intensity, commensurate with the size and motility of the stone. The duration of the attack is likewise variable, dependent upon the size and quality of the stone and its freedom of motion through the ducts.

Immediately upon the passage of the stone into the duodenum and intestines there is marked relief from pain, though some local tenderness persists for some time. Jaundice gradually disappears and the fever declines, vomiting ceases, and the normal equilibrium of the patient is again established. Recurring attacks are common. The time intervening

depends upon the ætiological factors governing the individual case.

Nor all cases of cholelithiasis terminate so happily, nor does the above comprise all of the pathology of gallstone disease. Death has occurred from perforation and peritonitis, also from reflex spasm, and from collapse, due to prolonged pain.

In some cases severe purulent cholecystitis or cholangitis are formidable complications, either purulent from the beginning or as a sequel. The danger varies with the nature of the infecting agent and the vulnerability of the infected area. Again in others the stone may become impacted in the cystic duct, the ultimate results of which are dropsy of the gall bladder (which can easily be mistaken for a floating kidney), acute cholecystitis, either catarrhal, suppurative, or phlegmonous, with or without perforation and subsequent peritonitis. Usually the stone becomes lodged in the common duct, or in the ampulla of Vater near the end of the common duct, eventually causing a pressure necrosis with serious disturbance of the surrounding tissues, from ulceration, hæmorrhage, perforation, stricture of the duct, or peritonitis to intestinal obstruction and pancreatic involvement.

It is evident from the symptoms just described that often the diagnosis of cholelithiasis is easy and certain in classical cases, but, where the symptoms are obscure and ambiguous a reasonable doubt must exist. It is therefore a pretty safe rule in cases of severe paroxysmal pain in the hepatic region, attended with jaundice, in a middle aged patient, particularly a woman, to think of gallstones. If there is no jaundice, and sometimes there is none, the character of the pain, localized tenderness, vomiting, and finally the enlarged and palpable gall bladder make the diagnosis reasonably certain.

In a certain proportion of cases the diagnosis of gallstones can only rest upon a suspicion. The symptoms of acute non-calculous cholecystitis are so similar to those of hepatic colic that often an operation only can prove the absence of stone. Compared with gallstone colic the pain of right renal colic is in the lower abdomen, beginning in the lateral posterior lumbar region, radiating to the groin and testicle; there are likewise blood and pus in the urine. In gastralgia the pain begins in the epigastrium, near the middle line. Rarely do we have chill or fever, but frequently a neurotic history. If the pain in the middle abdomen is relieved by pressure or by the expulsion of flatus, enteralgia is a logical conclusion.

In nervous women there may arise a pseudo-biliary colic, precipitated or aggravated by fatigue or anxiety. The liver may be enlarged and even tender, pain may be paroxysmal, but the gall bladder is not swollen. There is no jaundice nor is there

fever, and calculi are absent from the stools. Often the diagnosis is very difficult in cases of severe purulent inflammations originating from gallstones. Where there are localized hepatic tenderness, fever, and rigors, conditions suggesting circumscribed suppuration, the possibility of gallstones being a primarily inciting agent should not be overlooked. An abnormally situated inflamed appendix may cause confusion.

There remains but one pathological sequence of note in cholelithiasis, and that is the development of carcinoma of the gall bladder and ducts. It is an important clinical fact, fully established by experience, that the constant pressure of gallstones produces mechanical and local irritation of the mucosa of the gall bladder and ducts with the subsequent development of carcinoma.

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1. Wendel, *Med. Rec.*, August 9, 1898.
2. Otto, quoting Harley, *Dis. of Liver*, 1883, p. 583.
3. Naunyn, *Klinik der Cholelithiasis*, 1892.
4. *Ibid.*
5. *Boston Soc. Med. Science*, Vol. I, 1-79
6. Musser, *Boston Med. and Surg. Jour.*, Vol. CXXI
7. Moynihan, *Treatise on Gallstones*, 1904, p. 45.
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Fifty-second Annual Session of the Medical Society of the State of North Carolina.—The fifty-second annual meeting of the Medical Society of the State of North Carolina convened in Benbow Hall in Greensboro, N. C., on May 23rd. A most delightful and instructive session of three full working days was held, during which time more than fifty papers were read. Four hundred of the eleven hundred and fifty members were present. The entire time of the general meetings of the society was given to the reading and discussion of scientific papers. The following officers were elected for the ensuing year: President, Dr. Edward C. Register, of Charlotte; first vice-president, Dr. L. B. McBrayer, of Asheville; second vice-president, Dr. W. H. H. Cobb, Jr., of Goldsboro; third vice-president, Dr. W. O. Spencer, of Winston; secretary, Dr. J. Howell Way, of Waynesville; treasurer, Dr. G. T. Sikes, of Grissom; orator, Dr. James M. Parrott, of Kinston; essayist, Dr. Thomas S. McMullan, of Hertford; leader of debate, Dr. Samuel D. Booth, of Oxford; members of the house of delegates to the American Medical Association for two years, Dr. J. Howell Way, of Waynesville; Dr. James A. Burroughs, of Asheville. Charlotte, N. C., was selected as the place for holding the 1906 session. Dr. Robert L. Gibbon was elected chairman of the committee of arrangements for 1906.

The Medical Club of Middletown, N. Y., was organized at a supper held on June 9th, and the following officers were elected: President, Dr. W. I. Purdy; vice-president, Dr. T. D. Mills; secretary, Dr. J. L. Hanmer; treasurer, Dr. J. B. Hulett.

CLINICAL EXPERIENCE WITH ANTI-TOXINE, AND THE ADVANTAGES OF LARGE DOSES.*

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It may seem presumptuous on my part to speak concerning the therapeutic indication or dosage of antitoxine in diphtheria, as the specific effect is too well known to need emphasis. The dose required must still be considered empirical inasmuch as we cannot to-day accurately determine the quantity of toxine in the system.

My object in bringing up this subject is to invite opinions concerning the relative merits of large and small doses on the strength of clinical illustrations and accurate statistics kept by the resident staff of the Willard Parker Hospital.

I am indebted to Dr. Henry L. Lynch, acting resident physician of the hospital, for the preparation of the following statistics and for other valuable information:

The antitoxine used at the Willard Parker Hospital is made under the supervision of Dr. William H. Park, and is known as New York Board of Health serum. The strength is about such that 1 c.c. equals 400 to 500 units; 10 to 20 c.c. being the usual dose.

ANTITOXINE AND INTUBATION STATISTICS OF THE WILLARD PARKER HOSPITAL.

July, 1903.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	135	..	..	..
Tonsillar and pharyngeal....	101	83	82 7-25	18
Tube cases.....	34	17	50	17
..	..	100 discharged.	..	35

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
18 Bronchopneumonia	13	5	..	..
4 Cardiac	0	4	..	..
5 Sepsis	1	4	..	..
2 Extension of membrane.....	2	0	..	..
2 Meningitis	0	2	..	..
1 Œdema of the lungs.....	1	0	..	..
3 Rhachitis and bronchopneumonia.....	0	3	..	..
35	17	18	..	..

Gross amount of antitoxine administered, 165,000 units; average dose, 1,500 to 3,000 units, rarely 5,000 units.

August, 1903.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	122	..	..	..
Tonsillar and pharyngeal....	103	97	94½	6
Tube cases.....	19	8	42	11
..	..	105 discharged.	..	17

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
11 Bronchopneumonia	7	4	..	..
2 Cardiac	1	1	..	..
4 Sepsis	3	1	..	..
17	11	6	..	..

* Read before the Section in Pædiatrics, New York Academy of Medicine, 1904.

Gross amount of antitoxine administered, 218,000 units; average dose, 1,700 units.

September, 1903.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	104	..	..	..
Tonsillar and pharyngeal....	88	78	88 7-11	10
Tube cases.....	16	2	12½	14
..	..	80 discharged.	..	24

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
12 Bronchopneumonia	12	0	..	..
9 Sepsis	2	7	..	..
1 Cardiac	0	1	..	..
2 Rhachitis and bronchopneumonia.....	0	2	..	..
24	14	10	..	..

Gross amount of antitoxine administered, 213,000 units; average dose, 2,500 units.

July, 1904.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	134	..	..	..
Tonsillar and pharyngeal....	100	89	89	11
Tube cases.....	34	25	73½	9
..	..	114 discharged.	..	20

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
8 Bronchopneumonia	5	3	..	..
1 Lobar pneumonia.....	0	1	..	..
7 Sepsis on admission.....	2	5	..	..
1 Extension of membrane.....	1	0	..	..
1 Œdema	1	0	..	..
2 Rhachitis and bronchopneumonia.....	0	2	..	..
20	9	11	..	..

Gross amount of antitoxine administered, 324,000 units; average dose, 2,500 to 5,000 units, frequently 20,000 units.

August, 1904.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	121	..	..	..
Tonsillar and pharyngeal....	97	91	93½	6
Tube cases.....	24	14	58	10
..	..	105 discharged.	..	16

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
8 Bronchopneumonia	7	1	..	..
2 Myocarditis	0	2	..	..
4 Sepsis	2	2	..	..
1 Nephritis	1	0	..	..
1 Rhachitis and sepsis.....	0	1	..	..
16	10	6	..	..

Gross amount of antitoxine administered, 115,500 units; average dose, 5,000 units.

September, 1904.

	Recovery.			
	Number.	Number.	Per cent.	Deaths.
Cases treated.....	137	..	..	..
Tonsillar and pharyngeal....	105	98	93 1-3	7
Tube cases.....	32	21	65 2-3	11
..	..	119 discharged.	..	18

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

	Intubated.		Pharyngeal.	
	Deaths.	Deaths.	Deaths.	Deaths.
7 Bronchopneumonia	6	1	..	..
5 Sepsis	2	3	..	..
1 Extension of membrane.....	1	0	..	..
3 Enteritis	1	2	..	..
2 Pulmonary Œdema.....	1	1	..	..
18	11	7	..	..

Gross amount of antitoxine administered, 574,400 units; average dose, 5,000 to 10,000 units.

NOTE.—During the summer of 1903 there were transferred from the Willard Parker Hospital to the Riverside Hospital for change of air the following: During July, 2 cases; during August, 5 cases; during September, 1 case; during October, 4 cases.

October, 1904.

	Recovery.		Deaths.	
	No.	Per ct.	No.	Per ct.
Cases treated.....	77			
Tonsillar and pharyngeal.....	51	98.06	1	1.94
Tube cases.....	25		11	44
	65 discharged.		12	

ANALYSIS OF THE CAUSE AND COMPLICATIONS OF FATAL CASES.

Complications.	Tube cases.	
	Died.	Discharged.
Bronchopneumonia.....	6	1
Tracheotomy, paralysis.....	1	0
Extension of membrane.....	1	0
Bronchopneumonia, enteritis, and sepsis.....	1	0
Bronchopneumonia and nephritis.....	1	0
No complication.....	1	12
Stomatitis.....	0	1
	11	14

Gross amount of antitoxine administered, 584,000 units;
average dose, 7,500 to 20,000 units.

For three months in 1903, out of a total of 361 cases, pharyngeal and intubated, there were 76 deaths, or about 21 per cent., under small doses of antitoxine.

For four months in 1904 there were 469 cases, 66 deaths, or about 14 per cent., large doses used.

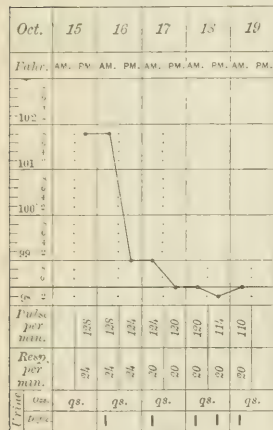
RESUMÉ OF CASES REPORTED FROM THE WILLARD PARKER HOSPITAL.

July, August, and September, 1903.

	Number.	Mortality.		Recovery.
		Died.	Per cent.	
Tonsillar and pharyngeal.....	292	34	11.64	88.36
Tube cases.....	69	42	60.87	39.13
July, August, September, and October, 1904.				
Tonsillar and pharyngeal.....	254	25	9.84	90.16
Tube cases.....	115	41	35.65	64.35

CASE REPORTS. HOSPITAL SERIES.

KIND ASSISTANCE OF DR. CHARLES J. LARKEY.



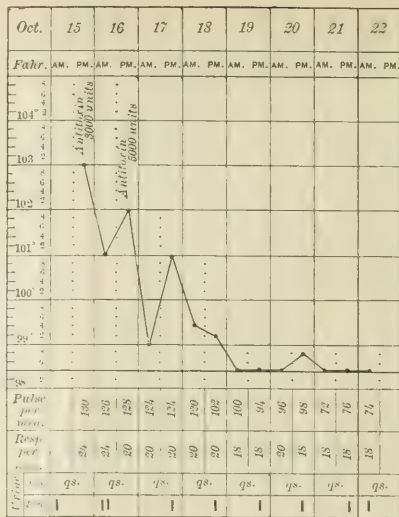
CASE 1.—Samuel L., 8,000 units of antitoxine injected upon admission.

fair; local, no exudate visible in throat; nasal exudate; complications, none; bacteriological, nose, throat. There was a serosanguineous discharge from both nostrils. Patient was allowed out of bed October 22nd.

CASE I.—Samuel L., aged 3 years; admitted October 15th; ill three days. General condition, fair; local, exudate on both tonsils; nasal exudate; complications, none; bacteriological, nose, throat. October 18th, given soft diet; throat entirely clear of membrane; October 19th, allowed out of bed.

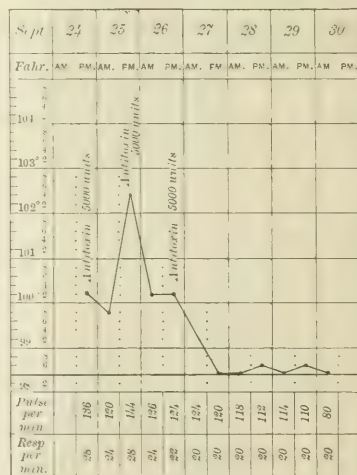
CASE II.—George P., aged 7½ years; admitted October 15th; ill two days.

General condition, fair; local, no exudate visible in throat; nasal exudate; complications, none; bacteriological, nose, throat. There was a serosanguineous discharge from both nostrils. Patient was allowed out of bed October 22nd.



CASE 2.—George P., nasal diphtheria. Injected 3,000 units of antitoxine on the 15th and 5,000 on the 17th.

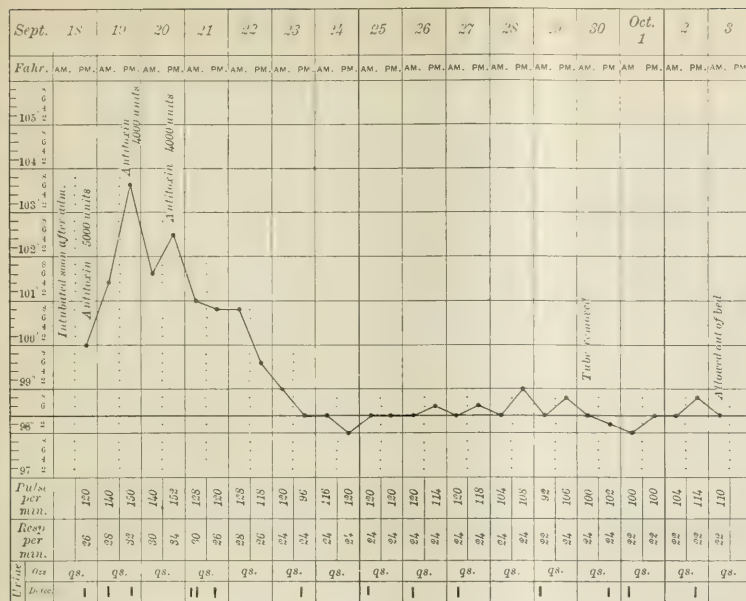
CASE III.—John L., age 6 years; admitted September 24th. General condition, poor; local, no exudate in throat; nasal exudate; complication,



CASE 3.—John L., 5,000 units of antitoxine on the 24th, 5,000 on the 25th, and 5,000 on the 27th. Nasal diphtheria.

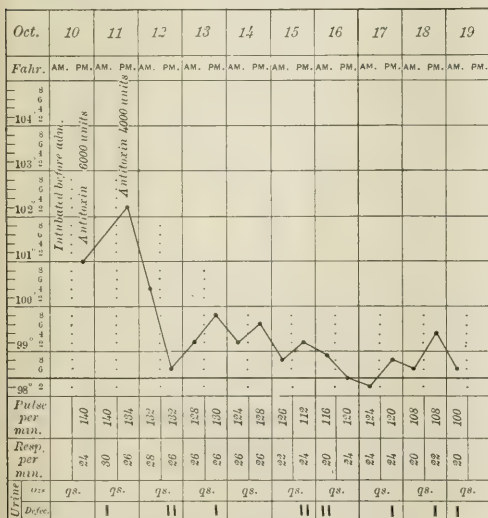
none; nose, there was a profuse serosanguineous discharge. Discharged October 5th.

CASE IV.—Raphael D., aged 4 years; admitted September 18th; ill three days. General condition, poor; local, no exudate visible; complica-



CASE 4.—Raphael D., laryngeal diphtheria. Intubated soon after admission; 5,000 on September 18th; on the 19th, 4,000 units; on the 21st, 4,000 units; on the 22d, tube removed. Reintubated twenty minutes later. On the 25th tube removed, reintubated one hour later. On the 30th, tube finally removed. On October 3d, allowed out of bed. Note the effect of antitoxine on pulse, temperature, and respiration.

tion, croup; bacteriological, none. Patient discharged October 7th. Number of intubations, three.



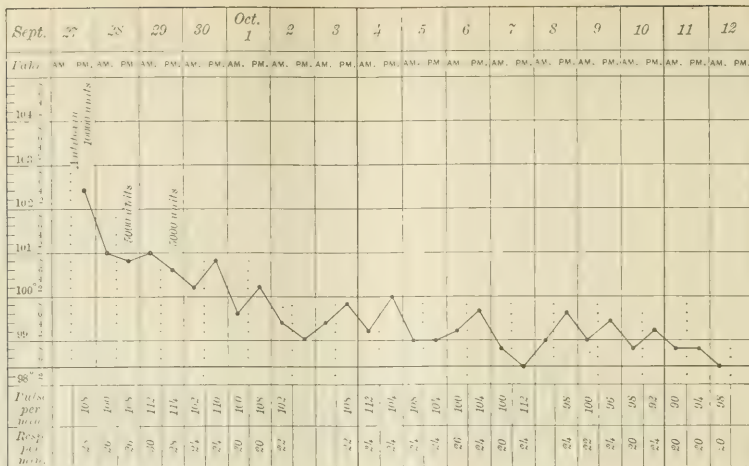
CASE 5.—Nathan M. laryngeal diphtheria. Intubated upon admission, October 10th; antitoxine, 6,000 units; 11th, 4,000 units. On the 12th, tube removed. Reintubated twenty minutes later. On the 14th, tube removed. On the 16th, constipation.

CASE V.—Nathan M., 6 years old; admitted October 10th; ill two days. General condition, poor; local, no exudate visible: complication. croup. Discharged October 22nd.

CASE VI.—August 5, 11 years old; admitted to the Willard Parker Hospital September 27, 1904. The glands of the neck were swollen. The throat presented a large yellowish gray pseudomembrane which completely covered the pharynx and tonsils and extended upwards, involving the hard palate. The temperature was 102.6° on admission, pulse 108. This child received 10-

000 units of antitoxine on admission. The temperature on the following day was 101°, pulse 100. The condition of the throat was about the same. She then received 5,000 units, and on the third day another injection of 5,000 units. The membrane commenced to exfoliate on the second day after the injection. On the fourth day the throat showed a general clearing up. The disease was arrested by this dose of antitoxine. No complication ensued. The child made an uninterrupted convalescence and left the hospital about two weeks after admission.

CASE VII.—Nichola V., aged 16 months; admitted October 20, 1904. Diphtheria. Exudate on both tonsils. Croup. Intubated shortly after admission (1 year size rubber tube), October 20th. Admitted 11.50 a. m. Temperature, 101° F.; pulse, 148; respiration, 40. The pulse was good, though of rather low tension. The second sound of the heart was sharply accentuated, especially at the pulmonic orifice. Owing to the croup examination of the lungs was negative. October 21st. Temperature, 103.2°; pulse, 140; respiration, 40. Large, coarse râles were found over both lungs posteriorly, and few fine râles over left apex, where the breathing was high pitched, it being harsh over rest of both lungs. There was no dullness. From this point the temperature, taken every two hours, ran a high course, reaching 105°. It was kept down at about 102.5° by keeping the patient almost continuously in a cold pack.



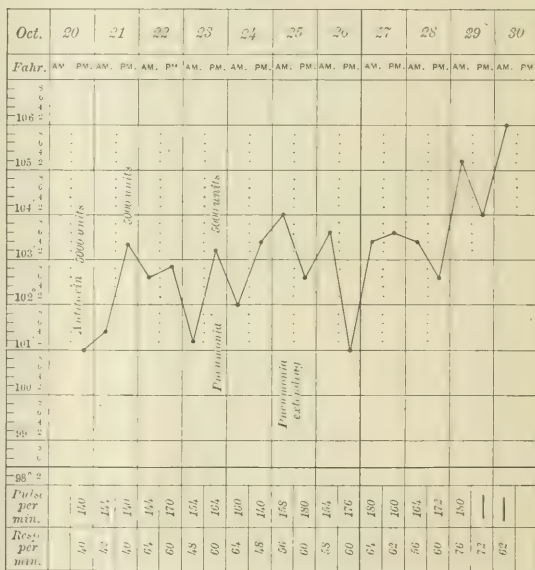
CASE 6.—Augusta S., pharyngeal and tonsillar exudate. On September 27th, 10,000 units of antitoxine injected; on the 28th, 5,000 units; on the 29th, 5,000. Also received 20 c.c. antistreptococcus serum.

DIPHTHERIA CASES, WILLARD PARKER HOSPITAL.

Year.	Number treated.	Died.	Mortality. Per cent.	Recoveries. Per cent.
1889...	391	79	20.20	79.80
1890...	311	67	21.54	78.46
1891...	303	85	28.05	71.95
1892...	311	79	25.40	74.60
1893...	357	108	30.25	69.75
Total	1,673	418	24.99	75.01
1894...	732	205	28.01	71.99
1895...	825	190	23.03	76.97
1896...	860	205	23.84	76.16
1897...	881	214	24.29	75.71
1898...	612	109	17.81	82.19
1899...	781	192	24.58	75.42
1900...	823	238	28.92	71.08
1901...	919	275	29.92	70.08
1902...	1,112	271	24.37	75.63
1903...	1,281	356	27.79	72.21
Totals	8,826	2,255	25.52	74.48

An important point in studying the statistics of the Willard Parker Hospital is to note the fact that this is a city hospital and hence when septic cases, unsuccessful tube cases with diphtheria, or cases complicated by pneumonia are sent in the mortality is visibly increased thereby. If we could deduct those patients who are sent into the hospital, frequently in a moribund condition, and those that die within twenty-four hours after admission, then the statistics would prove the specific value of antitoxine more forcibly. We shall have deaths in diphtheria just as long as we hesitate and postpone the use of antitoxine, or until the required dose has been given.

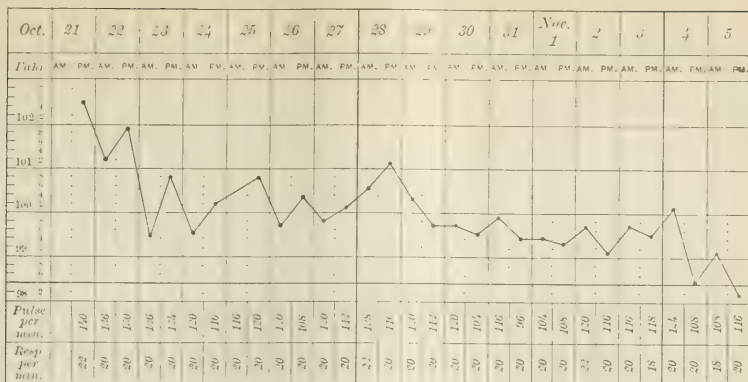
Intubation statistics from the Municipal Hos-



CASE 7.—Nichola V. On October 20th, antitoxine, 5,000 units; 21st, 5,000; 23d, 5,000 units, and pneumonia developing; 25th, pneumonia extending.

pital. Kindness of Dr. William M. Welch.

The following table shows the results in intubation cases of laryngeal diphtheria treated at the Municipal Hospital, Philadelphia, from 1894 to 1903, inclusive:



CASE 8.—Martha F., age nine years. Laryngeal diphtheria. Croup. Intubation. Recovery.

Year.	Intubation. cases.	Mortality. Deaths.	Per cent.
1894 Without antitoxine.....	100	75	75.00
1895 About 50 per cent. received antitoxine.....	122	67	54.91
1896 With antitoxine.....	156	94	60.25
1897 With antitoxine.....	182	127	69.78
1898 With antitoxine.....	149	104	69.99
1899 With antitoxine.....	165	97	58.78
1900 With antitoxine.....	202	111	54.95
1901 With antitoxine.....	139	66	47.47
1902 With antitoxine.....	110	54	49.09
1903 With antitoxine.....	110	55	50.00
	1,435	850	59.23

Antitoxine statistics from the Municipal Hospital. Kindness of Dr. William M. Welch.

The following table shows the cases and mortality from diphtheria (including membranous croup) in the Municipal Hospital, Philadelphia, from 1890 to 1903, inclusive:

—PRE-ANTITOXINE PERIOD.—				—ANTITOXINE PERIOD.—			
Year.	Cases.	Deaths.	Per ct.	Year.	Cases.	Deaths.	Per ct.
1890.....	12	3	25.00	1895.....	706	190	26.91
1891.....	29	1	3.44	1896.....	869	193	22.2
1892.....	183	48	26.22	1897.....	1,295	300	23.16
1893.....	217	62	28.57	1898.....	1,229	297	24.16
1894.....	465	154	33.12	1899.....	1,373	275	20.02
				1900.....	1,299	264	20.31
Totals.....	906	268	29.58	1901.....	889	174	19.57
				1902.....	601	137	22.79
				1903.....	746	170	22.78
				Totals.....	9,007	2,000	22.2

According to Dr. J. McCollom the treatment in the Boston City Hospital is begun with an initial dose of 4,000 units of antitoxine, repeated in from four to six hours, depending upon the severity of the attack. If the patient has been ill some time before coming to the hospital and has a large amount of membrane, Dr. McCollom gives an initial dose of 8,000 units, and in some instances 12,000 units. His rule is to give antitoxine until there is a marked improvement in the condition of the patient, commencing disintegration of the diphtheritic membrane, and a diminution of the nasal discharge.

¹ Of those which received antitoxine the death rate was 52.94 per cent.

² 24 per cent. of this number did not receive antitoxine.

CASES OF DIPHTHERIA TREATED AT THE BOSTON CITY HOSPITAL.

CASES TREATED WITHOUT ANTITOXINE.									
Calendar years:									
Year.	Number treated.	Died.	Per cent.	Recoveries.	Per cent.	Intubations.	Per cent.	Recoveries.	Per cent.
1889.....	529	239	45.17	54.82	128	18.75			
1890.....	415	151	36.38	63.61	93	15.05			
Financial years:									
1891.....	237	105	44.30	55.69	50	16.00			
1892.....	387	185	47.80	52.19	65	13.84			
1893.....	419	203	48.44	51.55	109	17.43			
1894.....	698	266	38.10	61.89	89	16.85			
Feb. 1 to Sept. 1, 1905.....	611	111	18.16	81.83	39	28.20			
Totals.....	3,296	1,260	38.22	61.77	573	17.45			

CASES TREATED WITH ANTITOXINE.									
Financial years:									
Sept. 1 to Jan. 31.									
1895.....	844	96	11.37	88.62	79	54.43			
1896.....	1,889	276	14.61	85.38	224	35.26			
1897.....	1,387	181	13.04	86.95	146	54.11			
Calendar years:									
1898.....	817	97	11.87	88.12	71	40.84			
1899.....	1,621	162	9.99	90.00	192	67.18			
1900.....	2,547	293	11.50	88.49	259	66.40			
1901.....	1,576	185	11.73	88.26	184	68.47			
1902.....	1,008	111	10.20	89.79	145	66.20			
1903.....	1,179	138	11.70	88.29	139	73.38			
Totals.....	12,868	1,539	11.95	88.04	1,439	59.41			

I am indebted to Dr. J. H. McCollom, of the Boston City Hospital, for these statistics:

DIPHTHERIA CASES TREATED AT WASHINGTON, D. C. TREATED WITHOUT ANTITOXINE.

The following statistics were kindly furnished by Dr. William C. Woodward, Health Officer of Washington.

Year.	Number treated.	Died.	Per cent.	Recoveries.	Per cent.
1892.....	361	123	34.08	65.92	
1893.....	412	152	36.89	63.11	
1894.....	499	174	34.86	65.14	
Totals.....	1,272	449	35.29	64.70	

¹ Thirteen months included in year 1891-2.

² Some of these patients received antitoxine, but how many it is impossible to say. This explains the comparatively low death rate from February 1, 1895, to September 1, 1895.

³ From September 1, 1895, at which time the South Department was opened, to December 31, 1903, every patient with diphtheria received antitoxine.

TREATED WITH ANTITOXINE.

July 1, 1895, to June 30,				
1896.....	174	23	13.2	86.8
July 1, 1896, to June 30,				
1897.....	285	21	7.3	92.7
Seven months 1897-98..	211	8	3.8	96.2
1898..	No separate record of these years.			
1899..				
1900..				
1901..				
1902..				
1903..				
Totals.....	670	52	7.76	....

LARYNGEAL CROUP; TYPES OF CONSULTATION CASES
SEEN IN NEW YORK.

CASE VIII.—A girl, about 9 years old, had been sick with diphtheria about four days. She was



FIG. 1.

FIGS. 1, 2, and 3.—The case of Nichola Vaccara, aged 16 months; illustrating the development of pneumonia from day to day in a case of fatal diphtheria. October 22d, temperature, 102.8°; pulse, 170; respirations, 60. Auscultation revealed numerous fine rales over both apices, with well marked tubular breathing. There was still no dulness. The tube was removed from the larynx.

under the treatment of Dr. Chapman. An injection of 3,000 antitoxine units was given, and as the symptoms progressed a second injection of 3,000

units, and later a third injection of 2,000 units. The disease made still further progress, and laryngeal stenosis was very marked. Dr. H. Jarecky was called in to intubate. I saw this case at the request of Dr. Jarecky on October 21, 1904. As I believed that insufficient antitoxine had been given I advised another injection of 5,000 units. This case received in all 13,000 units. The condition improved from day to day, the tube was removed, and no complication followed.

CASE IX.—On July 24, 1904, I saw a child in consultation with Dr. A. Hymanson. It had a severe type of diphtheria, with visible exudate on the pharynx and marked laryngeal stenosis. When seen by me the pulse was intermittent and the child was gasping for breath. The prognosis was extremely grave; 3,000 antitoxine units had been injected. The case was intubated by me, stenosis relieved, and I sent the child to the Willard Parker Hospital. Another injection of 5,000 antitoxine units was given on admission. The case progressed favorably, the tube was removed, and the child discharged in healthy condition in about three weeks.

Effect of Antitoxine on the Exudate.—After twenty-four to forty-eight hours there is a distinct exfoliation or disintegration of the membrane. It shrivels up, shrinks, and is thrown off after three to seven days, so that the throat or larynx is quite clean of exudate. Extubation should be guided by this symptom.

Case I had an exudate on both tonsils and also nasal diphtheria. The culture showed the presence of K. L. B. The child was admitted to the hospital on October 15th, and the throat was clear of membrane on October 18th. The same effect on the pseudomembrane which can be observed from day to day in the pharynx or tonsils, takes place in the nose and also in the larynx, and it is for this reason that the intubation period is shorter in many cases.

Effect on the Swollen Glands.—Enlarged cervical glands will perceptibly decrease from day to day, and the same effect which has been described on the membrane is also noted on the glands. As

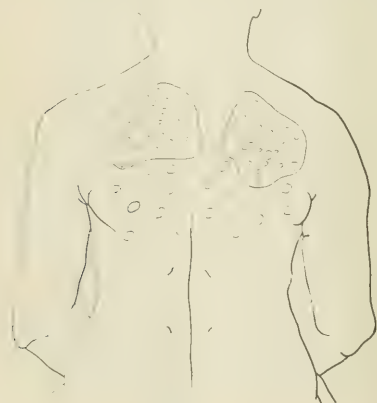


FIG. 2.

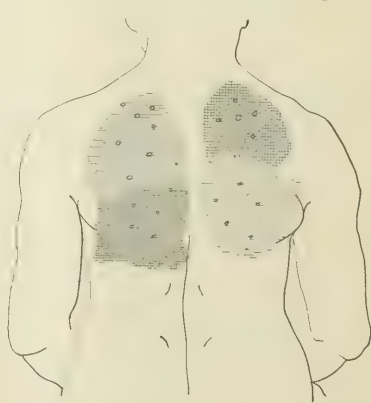


FIG. 3.

a rule the glands are reduced to their normal size in about one week.

Systemic Effect.—A decidedly brighter effect can be seen after the toxæmia has been neutralized. One of the earliest symptoms is a return of the appetite, and the functions of the bowels and kidneys improve. Children are more cheerful and want to play.

Avoidance of Complications.—When the disease is arrested in its incipency we naturally prevent complications. The streptococcus and staphylococcus in many cases permeate the Eustachian tube of the pharynx or the nose and cause otitis media. It is advisable in every case of diphtheria to have an aurist examine the middle ear if the slightest irritation or tenderness of the ear is found. I do not look upon the fever curve as a positive symptom of ear trouble, as we frequently have septic and suppurating processes present without any febrile indication of their presence. The ear should be examined in every case.

Danger of Rhinitis.—When rhinitis exists in a family where diphtheria is found, a culture should be taken and the patient injected with at least 5,000 units before the result of the culture is found. If K. L. B. is reported, another injection of 5,000 units should immediately be given.

(To be concluded.)

OBSERVATIONS ON THE DIAGNOSIS AND TREATMENT OF HERPES ZOSTER.

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(Concluded from page 1158.)

TREATMENT.

As already mentioned in this paper the treatment as recommended in text books and in special articles in journals refers almost exclusively to measures for the relief of pain and local applications for the cutaneous lesions; in other words, to a symptomatic treatment without any reference to the prevention of the pain or to a controlling influence on the course of the lesions or disease.

It seems to me that a consideration of the ætiology and nature of the disease and of its normal course and action on the organism are of much importance and value in forming a basis for the intelligent treatment of this disease. Although the older writers were quite familiar with the external appearances of the disease, it may be said that until the time of Bärensprung not much attention was paid to the ætiology or nature of the affection. This author from clinical observation and anatomical studies concluded that the disease was one of inflammation of the intervertebral spinal ganglia or corresponding structures,

without further researches as to the cause of the inflammation of this special structure.

We know now, although these ganglia are almost invariably affected, that a zoster may occur without changes in the ganglia, the changes occurring either in the nerve external to the ganglia or between the ganglia and spinal cord, or in the spinal cord itself. Some writers place it in the same category with spinal paralysis of children—that is, as an acute infectious disease—others have regarded it as a special affection of the nervous system, a pure neuritis, but this latter view has, I think, very few followers at the present time.

A zoster associated with carbonic acid poisoning has been observed. Hutchinson was the first to draw attention to the occurrence of herpes zoster in persons who were taking arsenic for certain skin diseases. The number of these cases in persons taking arsenic reported since that period to the present time is considerable. Nielsen, of Copenhagen, reports that in 777 patients with psoriasis, 557 were treated by arsenic and of these 39 had zoster; of the other 220 not treated by arsenic, there was no zoster. Arsenic was not always given up to the time of the outbreak. In 7 the interval was one month; in one case of these 7 the interval was three and one half months. The eruption in these cases was always that of a classical case of herpes zoster, was most frequent in the usual location, was of the usual course, was unilateral in distribution, and in no case was there a recurrence of the disease as far as is known. Nielsen considered that the eruption should be classed under the head of a drug eruption, but this view can hardly be considered to be correct when we note that the eruption ran its regular course in cases where there was no cessation in the administration of the drug. The absence of a recurrence under the continued use of arsenic is also against such a view. It seems to me fair to suppose in consideration of these facts that the arsenic did not produce the eruption, but that persons taking arsenic are unusually liable to zoster.

A number of cases have been reported in connection with traumatism of the nervous system; and with the disease of the spinal cord in connection with tumors in the neighborhood of the spinal ganglia, etc. Some of these cases at least were not true cases of herpes zoster, but rather to be classed as zosteriform eruptions, or, as I prefer to call them, herpetiform eruptions, although no doubt some of them were cases of pure zoster. A direct relationship, however, between the traumatism and the zoster remains to be shown.

The vast majority of the cases, apart from all of these reported which, after all, are comparatively few in number, that come under observation are, in my opinion, unquestionably examples of a general infectious disease with local manifestations. The fact that the disease occurs in a more or less epidemic form at certain periods of the year, for instance, usually in the fall and spring in New York; that it starts with prodromal symptoms; that it has a period of incubation; that it is accompanied with febrile disturbances to a variable extent in different cases; that the severity of the disease varies in different epidemics; that there is an apparent wave of varying intensity in single epidemics like that occurring in scarlatina, measles, etc.; that the eruption has a definite anatomical distribution; that the lesions follow a definite pathological course and with a more or less definite duration of existence; and that, finally, an apparent condition of immunity is produced, seems to me sufficient evidence that the disease in these cases—the vast majority of all cases observed—is to be considered as the result of microbic infection. That only a portion of the nervous system is the seat of the inflammatory changes—that is, that the local manifestations are limited to a single ganglion and the peripheral nerves in connection with that ganglion, or that two or more ganglia or parts of the nerve ganglia are affected at the same part or in distant parts of the body, need cause no wonder any more than it does in cases of anteriopoliomyelitis. This cannot be used as an argument against the infectious nature of the disease.

The law of difference of vulnerability as regards infection in general in tissues of similar anatomical structure in different parts of the body suffice to explain the different seats of the local manifestations in different cases of zoster—why in one case we have a dorsopectoralis and in another a zoster ophthalmicus, etc.

Some cases of apparent indirect contagion have been reported; for instance, two cases occurring within a short period in persons who had occupied in succession the same room. There were under my care this year husband and wife, both of whom had zoster pectoralis; the wife was the first to have the disease and two weeks after her recovery the eruption appeared upon the husband. While the history does not *prove* a contagious origin in the case of the husband, yet it is favorable circumstantial evidence and as such I have given it.

Admitting then that in a zoster with the prodromal and other symptoms which I have described we have to deal with an acute infectious

disease giving immunity, we have to consider from a therapeutical standpoint, first, the organisms producing the disease; second, the toxins, the result of the life activity of the organisms; third, the local manifestations of the disease, and fourth, the nature of the ground—that is, the physical condition of the individual affected.

One might ask the question, admitting zoster to be an infectious disease, Does a given case demand more than symptomatic treatment? If all cases of general infectious diseases were similar in character as regards the severity of the disease, a fixed rule in treatment could be followed for all cases, but as that is not so, each case must be a law unto itself in addition to the general law or principles of treatment for every case. Many cases of chickenpox, for instance, are so mild that no medication is required in the form of drugs, while other cases are quite severe, especially in adults, and demand particular attention.

It is not for me on this occasion to enter into a consideration of the possible injuries to secretory or other organs of the body, or to tissues from toxins present throughout the system in cases of general infectious disease. It seems to me, however, that this subject has not been sufficiently studied up to the present time; but the broad statement may be laid down that during the active stage of any general infectious disease associated with elevation of temperature, catabolic processes, and injury to tissues, the patient should be treated as if he had a serious disease, at least until it is shown that as a result of the particular disease no permanent injury is ever produced in mild cases to the tissues of the body whether they be the epithelial cells of such organs as the kidneys, etc., or of the nervous system, heart, etc. Whatever influence the peculiar condition of the tissues as the result of processes occurring in them in acquiring the condition of immunity may have as a predisposing factor in the causation of pathological conditions later in life, such as in nephritis or in disease of the heart muscle, etc., is as yet unknown, but it is a subject worthy of thought and study.

Of all the infectious diseases syphilis seems to be the only one up to the present time that has been studied along these lines, and we recognize from the studies and observations in this disease and a recognition of its influence as a predisposing factor in many later pathological conditions, the value of early, continuous, and active treatment in all cases. Certainly what holds true of syphilis must hold true of all general infectious diseases until the contrary is shown. I feel that too much weight cannot be attached to this view

of the remote influence of general infectious diseases upon the subsequent life of the tissue cells of the body.

We have seen in zoster that the disease has the prodromal symptoms already mentioned, that fever conditions exist, that a lymphadenitis, the result of a toxæmia is present, and that occasionally a muscular paralysis occurs. There is also the pain connected with the eruption and the occasional long continued subsequent pains—conditions sufficient for us to consider zoster a serious affection and to be treated on the same principles as we would treat any other general infectious disease.

Admitting that the fever, the lymphangeitis, and the prodromal symptoms depend upon toxins, and that the injury to the nervous system as represented by the pains, the muscular paralysis, and the cutaneous eruption, depend also upon organisms or their toxins, our first object should be the use of agents, if we possess such, to destroy the organisms or inhibit their life action, and thus prevent a toxæmia or restrict the amount of intoxication.

It is probable from the character of the cutaneous eruption that the toxine is a soluble one, and that if the organism was known, possibly an antitoxic agent could be procured on the same lines that the antitoxine has been produced for diphtheria. As we know nothing about the organism, our treatment is necessarily on the broad lines governing any infectious disease, and the use of such drugs as we know to be of value in this particular affection. When I refer to the broad lines of treatment I mean rest of body, proper nourishment, and particular attention to those organs of the body which aid in the removal of toxins from the system, as the skin, kidneys, and intestinal canal, or that destroy them within the system, as the liver.

Arguing from what I think is a general pathological law, that in acute infectious diseases giving the condition of immunity, the fewer toxins formed or the less the intoxication of the system, the less is the injury to the tissues and the earlier does the immunity condition occur. Accepting that statement, it follows that by a lessening of the amount of intoxication, the less will be the injury to the nervous and other systems and the shorter the duration of the disease; also that there will be less pain and fewer muscular paralyses and a milder and shorter inflammatory process in the skin.

How can we reduce the amount of intoxication in cases of zoster? We do not know of any agent given internally that influences the life activity of the organism in the general system; but it is

fair to suppose that the application of cold to the region of the affected ganglion would have such an action on organisms located in that structure. If such an action follows the use of cold, it means that there are fewer toxins formed at that part and hence less injurious inflammatory action in the ganglion tissue. If the inflammation of the ganglion is caused by toxins generated elsewhere, the action of the cold would be limited to its action as a local antiphlogistic agent. We must then consider the effect of such an action on the cutaneous eruption and on the nerves affected. If the cutaneous eruption depends for its extent and severity on the injury to the nerves, it follows that the eruption would be correspondingly influenced. It would be less acute and of shorter duration if the inflammatory action in the ganglion was lessened by any agent, and cold has such an action in local inflammatory processes. A part of this argument is of course merely theory—but I think good theory, as one cannot prove the actual value of cold in a given case. For the reasons mentioned, I believe cold by means of an icebag, for instance, should be applied, for a few days at least, over the ganglia affected.

I have observed that in cases seen early, the administration of a coal tar preparation, such as antipyrin or phenacetin, is of the greatest benefit in the majority of cases—both as regards a lessening of the severity of the symptoms and in diminishing the duration of the disease. How the drug acts, I do not know, perhaps through its own anodyne action on the affected nerves, making them less vulnerable to the poison and hence less injuriously affected and, therefore, influencing the intensity of the cutaneous inflammatory process; or as a pure antitoxic agent, rendering the toxins innocuous to an extent. I am inclined to the latter belief, as the life duration of the cutaneous lesions is usually much lessened. There is such an interference in the normal lesion formation that they may be said to be aborted, many of the papules never reaching the vesicular stage and the vesicles drying up early, with less tendency to the formation of bullæ than usually occurs. This does not occur in all cases, but perhaps it has been the fault of the dosage. In elderly subjects and in those of a neurotic temperament, the failures have been most frequent.

The abortive action is not so reliable if the case is not seen until the eruption is in an advanced stage, hence the importance of early observation and treatment. In this respect it resembles the use of antitoxine in diphtheria. The dose of antipyrin given has been ten grains twice a day for three or four days in cases of adults and in children and in old people the proper corre-

sponding amount. The treatment here recommended is based upon observations made in many cases of the disease.

It is possible that the dose of the coal tar preparation should be increased in the more severe cases or in those cases that do not appear to be quickly influenced by the treatment, especially at the beginning. Future observations may enable me to lay down more definite rules for individual cases.

Although not a believer in the malarial origin of zoster, as in the cases so far in which I have examined the blood, the *Plasmodium malariae* was not found, I have given quinine also, but I am satisfied that the benefit was derived from the coal tar preparation.

When we consider the pain and suffering during an attack of zoster and the serious after results in some cases, the persistent neuralgic pains lasting years and months, we must recognize the value of a treatment that will usually abort the disease, lessen the injury to the tissues, and probably prevent subsequent neuralgia. For the pain, codeine can also be given if necessary, and in neurotic subjects bromide of potassium is often of benefit.

To sum up, the plan of treatment I recommend for herpes zoster is: Rest, attention to the general nutrition of the body, the combating of the microbes, the application of cold over the affected ganglia, a coal tar preparation for the toxæmia, and codeine and bromide of potassium for pain not controlled by the antipyrin. Local treatment consists in aseptic and antiseptic measures. If the case is seen at a very early stage, the affected area can be disinfected in the usual manner by soap and alcohol and then painted with flexible collodion—and when convenient an antiseptic gauze applied. If seen later, when vesicles are changing in color, an ointment of boric acid and bismuth subnitrate, and avoidance of soap and water meet the indications. Later ichthylol can be added to the ointment, or an antiparasitic preparation, as the ammoniated chloride of mercury ointment with rose ointment to which bismuth may be added and also ichthylol.

For the persistent neuralgias following zoster, anodynes and the faradaic current or x ray may be of some curative value, but on account of probable structural changes in the nerves and connective tissue of the ganglia, the condition is very rebellious to usual methods of treatment for neuralgia. Tonics, such as phosphide of zinc, and alteratives, such as arsenic, are also recommended.

I will not mention other methods of treatment

that have been proposed; I have desired to present original observation or experience on the subject and conclude with expressing the hope that you are satisfied that the subject is sufficiently interesting to be worthy of your attention.

159 WEST FORTY-NINTH STREET.

LOCAL VERSUS GENERAL ANÆSTHESIA IN RECTAL SURGERY.*

By JAMES P. TUTTLE, M. D.,

NEW YORK.

The two features which chiefly distinguish modern surgery from that of former periods are anæsthesia and asepsis; upon these depend the comfort and the lives of our patients. There are many methods and means employed to accomplish each of them, and it is the object of such meetings as this to sift the evidence and determine as far as possible which are the best.

The question which we have before us to-night is the comparative merits of local and general anæsthesia as applied to rectal surgery.

The anus and lower rectum are highly endowed with sensory and sympathetic nerves. The reflexes of these organs are more widely distributed and more persistent than those of any other organ in the body. Their sensitiveness is so acute that pain here is more unbearable than at any other part of the body. A small fissure or ulcer which in other places would cause only annoyance, excites a real agony in the rectum. When inflamed or injured the manipulation of these parts is almost unbearable and one of these accounts analgesia and anæsthesia come among the most important problems in rectal surgery.

Analgesia is indicated in painful diseases and postoperative conditions; anæsthesia in examinations and operative procedures. The *analgetics* are topical and constitutional, the *anæsthetics* are local and general.

The chief topical analgetics are anæsthesin, orthoform, cocaine, eucaïne, carbolic acid, sodium bicarbonate, etc. They are applicable in sensitive lesions of the ulcerative or traumatic types. Anæsthesin, orthoform, and carbolic acid are effectual in the relief of pain from pathological lesions such as chronic, tuberculous, syphilitic, and cancerous ulcers. Cocaine and eucaïne while sometimes effectual in these are usually more so in acute lesions. Sodium bicarbonate is analgetic only in burns and is therefore chiefly used for dressing cases operated in with the actual cautery. For this purpose it is incomparable. In examinations of the

* Read before the New York County Medical Society, December 27, 1904.

rectum when there are painful ulcerations or fissures at the margin of the anus, anæsthesin or orthoform well applied to the part will usually relieve the pain to such an extent that general anæsthesia is rarely necessary. In one of the favorite non-operative treatments for fissure, that by small tampons soaked in ichthyol, the pain of the application is greatly reduced by coating the tampon with anæsthesin. Detail is impossible here, but numerous such applications of these topical analgetics render the treatment of painful conditions of the rectum much less distressing than they would be without them.

The effect of these remedies is evanescent, however, and as they cannot be applied by the patient we must often resort to constitutional analgetics. Of these morphine, opium, codeine, antipyrine, phenacetine, acetanilide, chloral, the bromides, and chloretone are the most useful. First of all the pain relievers is opium in its various forms, but aside from its dangers and the possibility of inducing "the habit," it is often undesirable in rectal diseases on account of its constipating effect. And, again, as much of the pain in the rectum is due to spasm of the sphincter it often requires unsafe doses of opiates to relieve this. In such cases chloral and the bromides are more effective and safer remedies.

In chronic aching or neuralgic pains of the rectum a combination of antipyrine and acetanilide, with a small quantity of codeine (one eighth of a grain), is often more effective than opium and should be used in preference. Personally I am very chary of the use of cocaine and opiates as analgetics in rectal disease, for I have seen many habitués from this class of patients. The other remedies mentioned seem to be without any such danger and they are quite satisfactory in the relief of pain.

The chief local anæsthetics are carbolic acid, ice, ethyl chloride (locally applied), cocaine, eucaine, stovaine, and sterile water injected hypodermically into the parts.

The first three are satisfactory only in very minor operations, such as superficial thrombotic hæmorrhoids, herpetic cysts, and abscesses very near the surface; of them, carbolic acid is the best. A small streak of pure acid over a superficial thrombotic hæmorrhoid or abscess often enables us to incise it almost painlessly. It always enables us to introduce the hypodermic needle for the introduction of anæsthetic solutions without pain, at the same time disinfects the skin through which the needle must pass, thus lessening the danger of infection. I have had little satisfaction from the freezing processes either by ice or ethyl chloride in rectal operations.

Where incisions of any depth or magnitude are

to be made and local anæsthesia is to be employed, the hypodermic method should be selected. Experience teaches us that the chief pain in inducing anæsthesia by hypodermics in tender parts is produced by the distention of the parts by the injected fluid; especially is this true if the carbolic acid is used to prevent the pain from the prick of the needle. It may be stated as an axiom therefore that, *other things being equal the substance which produces the greatest anæsthesia per minim injected into the parts will be the most satisfactory.* If this is true, then cocaine, eucaine, or stovaine should be the remedy of choice. Almost complete anæsthesia for minor operations can be produced by the injection of a few drops of a one per cent. solution of any one of these drugs in the majority of cases, and as there is very little distention the pain of introduction is consequently slight. By the proper use of these injections hæmorrhoids may be ligated or excised, small fistulas laid open, and fissures incised with comparatively little pain; so little that timid patients stand it rather than take ether or even gas—but always there is enough sensation to cause more or less restlessness, anxiety, and shrinking from the operator and consequent interference with the very best work in difficult cases. I have occasionally stretched the sphincter under local anæsthesia, but it has always been attended by considerable pain. On account of this one distinguished operator cuts the muscle instead of stretching it—a procedure which conservative surgeons will not endorse.

An objection commonly made to the use of these drugs is the danger of their constitutional effects. Hundreds of experiences in the use of cocaine and eucaine make me believe that this objection is chimerical. Occasionally I have seen the temporary exciting or depressing effect of cocaine follow its hypodermic use in operations, but I have never seen any dangerous manifestations and I do not believe they occur unless large quantities or strong solutions are used—one per cent. is as strong as is ever necessary and one quarter of this strength is usually sufficient.

But local anæsthesia can be produced by distending the tissues until they are blanched by the hypodermic injection of simple water, and by this means one can avoid the constitutional effects altogether. In properly selected patients it is possible by this means to do almost all minor operations in rectal surgery. There are some serious objections to this method.

1st. The distention itself is quite painful.

2d. The frequent punctures through tissues which can hardly be sterilized invites infection.

3d. These punctures and the distention may rupture deep blood vessels, cause extravasation, and

so interfere with the circulation as to cause subsequent sloughing of the perirectal tissues.

4th. The distention so disturbs the parts that one is unable to tell just how much tissue ought to be removed.

5th. It is not absolutely reliable. At least half of the patients in whom I have tried it twisted and squirmed about until it was impossible to complete the work satisfactorily.

There are two objections applicable to this and to all forms of local anæsthesia—viz., if one gets outside of the anæsthetized area there is great pain and one must stop to do more injecting, thus interrupting the work; and again, however little actual pain the patient may suffer he is always restless and alert to appreciate any accident or complication that may arise during the operation and thus interfere with its thorough completion. Another serious objection to local anæsthesia is that it inclines both the surgeon and patient to underestimate the operation and to neglect proper preparation, the aseptic technique, and the advantages of rest in bed after all operations on the rectum.

In spite of these objections local anæsthesia has its field of usefulness in rectal diseases. Its chief advantages are that it enables us to do work in the office that would otherwise have to be done in the hospital or at home; it occasionally allows us to operate in cases where ether or chloroform is contraindicated, and lastly, though first in the minds of those to whom a large and lucrative practice are the first objects of a professional career, it brings to us many patients who are afraid of general anæsthesia and refuse to be operated upon if it is to be used. Of this latter class of patients it may be said, these "cowards die a thousand deaths from fear." The pain of operation with local anæsthesia under the most favorable circumstances is manyfold greater than that with general anæsthesia and the after pains are no less, but many prefer to suffer thus, and when the operation is over congratulate themselves on not having taken ether. Much may be said in the excuse of such sentiments in those who have seen the old barbarous methods of giving ether—where three or four strong men held the patient down while the anæsthetic was forced on him. But these methods are obsolete and, thanks to ethyl chloride and nitrous oxide gas, such distressing scenes are no longer witnessed. By the preliminary use of these drugs the patients go into ether anæsthesia as into quiet sleep and suffer very little from succeeding nausea. There is absolutely no pain during the operation and the surgeon is not hampered in his work by the twitching and squirming of restless, anxious patients. In the majority of cases rectal operations can be completed under the ethyl chloride or gas

without ether, as the procedures require but little time.

For hæmorrhoids, small fistulas, and fissures it is my practice to cleanse the parts, place the patient in the lithotomy position, and then administer the ethyl chloride or gas, and usually the operation can be completed without resorting to the ether. Especially is this true if the patient is given a hypodermic of morphine five or ten minutes before the anæsthesia is begun.

I prefer the ethyl chloride because it does not produce cyanosis like gas, and the apparatus for administration is much less complicated. We employ the drop method introduced by Dr. Lynch and use an ordinary chloroform mask. For minor operations such as one is justified in doing in the office, we employ it almost daily and allow the patient to walk home half an hour afterward. In children it is the ideal anæsthetic in rectal diseases and we have seen no ill effects from it in child or adult. With it one can do absolutely without pain any operation justifiable in office practice, and do it thoroughly unhampered by the restlessness of conscious patients. The one objection to it is it does not relax the muscles completely as does ether, and for this reason the patient must be put in the lithotomy position before the ethyl chloride is begun. I do not mean by this to endorse indiscriminate operations for rectal disorders in one's office. In the large majority of cases this is unjustifiable, but when not so, ethyl chloride seems to me to be the most satisfactory and reliable anæsthetic. After all is said ether is the most satisfactory anæsthetic in extensive or prolonged operations about the rectum. The complete relief of pain, the perfect muscular relaxation, the regular breathing, the absolute quiet of the patient, all contribute to the execution of perfect surgical work and the subsequent comfort of the patient.

Chloroform also has its advantages and disadvantages, but as these are the same in rectal as in general surgery they need not be mentioned here. But one thing needs to be said: In all operations upon the rectum with whatever anæsthesia, we should always bear in mind the intimate reflex connections of this organ with the pneumogastric nerve. Sir William McEwen has laid great stress upon this, saying:

"The reflexes arising from impressions on the peripheral distribution of the pudic and associated nerves persist while the patient is under the influence of the anæsthetic.

"In many patients deep general anæsthesia greatly modifies, though it does not altogether inhibit this pudic reflex, but in others the placing of the patient as deeply under the influence of the anæsthetic as is consistent with safety has no ap-

parent inhibitory effect. It has been observed that when any prior obstruction to respiration existed, such as to induce venosity of the blood, the respiratory centre becomes more easily affected by the pudic afferent impulses; while under the anæsthetic the pudic afferent impulse produces no response in the lumbar reflex centre, the anæsthetic seeming to have inhibited its action. On the other hand, the pudic peripheral impression produces an instantaneous response from the respiratory centre, inducing generally a prolonged tetanic inspiratory gasp, and sometimes a deep stridulous inspiratory effort each time the peripheral impression is repeated. Though the heart participates in this reflex through the vagus, the effect upon it is seldom the prominent feature, and in the majority is so slight as to be either imperceptible or to pass unnoticed by the finger of the assistant on the pulse. . . . In the neurotic the cardiac effect is more pronounced. . . . All these reflex phenomena occasioned by stimulation of the pudic nerve may be prevented or greatly lessened by local anæsthesia, induced shortly before the administration of the general anæsthetic. For small operations local anæsthesia alone might suffice, but in the majority of instances the combination of local with general anæsthesia is safer, as the reflex is more completely controlled."

It is for these reasons that we have found a hypodermic of morphine preliminary to the administration of general anæsthetics so satisfactory in rectal surgery.

To summarize: Simple fissures, small straight uncomplicated fistulas, ordinary skin tabs, isolated, prolapsing internal hæmorrhoids in patients with stable nervous organisms may all be satisfactorily operated on with local anæsthetics, of which cocaine and eucaine are the best. In all other conditions, including extensive hæmorrhoids, complicated fissures and fistulas, and always in neurotic hyperæsthetic individuals we should resort to general anæsthesia.

The Wisconsin Medical Union of Physicians and Surgeons has elected the following officers for the ensuing year: President, Dr. James L. Barber, of Collins; first vice-president, Dr. T. E. Williams, of Eau Claire; second vice-president, Dr. Nils Hanson, of Superior; recording secretary, Dr. F. X. Schaeffer, of Milwaukee; corresponding secretary, Dr. F. L. Mehrtens, of Milwaukee; treasurer, Dr. R. B. Hansen, of Oshkosh.

Medico-Chirurgical Society of Central New York.—Officers of this society have been elected as follows: President, Dr. A. R. Grant, of Utica; vice-president, Dr. A. M. Willer, of Lafayette; second vice-president, Dr. E. A. Simmons, of Carthage; secretary and treasurer, Dr. Ellis M. Santee, of Cortland.

FIBROID TUMORS OF THE UTERUS; THEIR SURGICAL TREATMENT.

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I base the conclusions arrived at in this paper (1) on the analysis of the last two hundred consecutive cases of fibroids of the uterus operated upon by me by hysterectomy or myomectomy up to December 1, 1904; (2) on the analysis of 1,188 cases reported by Dr. Charles P. Noble before the American Gynæcological Society, May 26, 1904, and, (3) on knowledge gained by the different forms of less radical operative procedures and on the non-operative methods of treatment employed by myself during a period of over eighteen years in caring for more than four hundred cases not submitted to radical operation.

1. The complications of which I have records in the 200 cases recently operated in, may be divided into (a) those arising in the tumor itself, and (b) those arising as accessory complications to the growth.

a. (1). Among the inherent conditions giving rise to dangerous symptoms among the 200 cases may be enumerated (1) enormous development of growth rendering operative interference imperative, which occurred in 11 cases, or 5.5 per cent.; (2) dangerous uncontrollable hæmorrhage in 41 of the cases, or 20.5 per cent.; (3) pregnancy complicating the tumor, making operation necessary, in 6 cases, or 3 per cent.; (4) carcinoma of the cervix in 2 cases, or 1 per cent.

(2) The following inherent conditions of importance were discovered when the tumors were removed: (1) Serious broad ligament extension in 19 cases, or 9.5 per cent.; (2) serious adhesions to soft parts in 8 cases, or 4 per cent.; (3) cystic degeneration of the tumor in 8 cases, or 4 per cent.; (4) myxomatous degeneration in 30 cases, or 14 per cent.; (5) calcareous infiltration of the tumor in 6 cases, or 3 per cent.; (6) deep suppuration of the tumor in 2 cases, or 1 per cent.; (7) carcinoma of the body of the uterus complicating the tumor in 3 cases, or 1.5 per cent.; (8) sarcoma complicating the tumor in 2 cases, or 1 per cent.; (9) senile endometritis giving rise to severe symptoms after the menopause occurred in 3 cases, or 1.5 per cent.; (10) suppurative endometritis was a complication in 5 cases, or 2.5 per cent.; (11) submucous projection of fibroid centres which produced serious symptoms occurred in 11 cases, or 5.5 per cent.; (12) necrosis of the centre of the tumor occurred in 3 cases, or in 1.5 per cent.

b. Accessory conditions depending on or complicating the fibroids were the following: (1) Pyo-

salpinx (double) in 20 cases, or 10 per cent.; (2) pyosalpinx (single) in 5 cases, or 2.5 per cent.; (3) hydrosalpinx in 6 cases, or 3 per cent.; (4) cystic ovaries (double) in 7 cases, or 3.5 per cent.; (5) malignant adenocystoma of the ovaries in 1 case, or 0.5 per cent.; (6) parovarian cysts in 5 cases, or 2.5 per cent.; (7) dermoid cysts of the ovary in 5 cases, or 2.5 per cent.; (8) large adenocystomas in 7 cases, or 3.5 per cent.; (9) hæmatoma in the left broad ligament in 4 cases, and in the right broad ligament in 3 cases, making a total of 7 cases, or 3.5 per cent.; (10) varicose veins in the broad ligaments in 5 cases, or 2.5 per cent.; (11) extensive intestinal adhesions in 8 cases, or 4 per cent.; serious and chronic intestinal obstruction from tumor pressure in 7 cases, or 3.5 per cent.; (13) acute intestinal obstruction from pressure in 2 cases, or 1 per cent.; (14) serious pressure symptoms in 13 cases, or 7.5 per cent.; (15) appendicitis in 6 cases, or 3 per cent.; (16) extrauterine pregnancy in 2 cases, or 1 per cent.; (17) pregnancy complicating large sub-peritoneal fibroids, in which tumors were removed and pregnancies allowed to go to term, 3 cases, or 1.5 per cent.; (18) tuberculous peritonitis complicating the tumor in 3 cases, or 1.5 per cent.; (19) dilated ureters from obstruction caused by tumor pressure in 2 cases, or 1 per cent.; (20) hydronephrosis (large size) from tumor pressure, in 2 cases, or 1 per cent.

2. The 1,188 cases collected by Noble, including cases operated in by A. Martin, Noble, Cullingworth, Frederick Scharlieb, and a series reported by Hunner and by McDonald, to which I add my own 200 cases, give a grand total of 1,388 analyzed cases, in which the complications were as follows:

	Per cent.
Carcinoma of the corpus uteri.....	32
Epithelioma of the cervix uteri.....	13
Epitheliomatous infiltration of the fibroid tumor arising from adenocarcinoma of the corpus uteri by metaplasia.....	1
Sarcoma.....	24
Chorioepithelioma.....	2
Myxomatous degeneration.....	74
Cystic degeneration.....	48
Edema of tumor.....	11
Calcareous infiltration of tumor.....	32
Necrosis of tumor.....	70
Twisted pedicle, pedunculated tumor.....	3
Interglomerular development of fibroid.....	53
Subserval development of fibroid.....	2
Hyaline degeneration of tumor.....	69
Hyaline degeneration and calcareous infiltration.....	8
Adenomyoma.....	8
Hæmorrhagic degeneration of tumor.....	10
Fatty degeneration of tumor.....	7
Proclitidia uteri.....	5
Retroversio uteri.....	4
Pregnancy.....	3
Pregnancy terminated because of tumor.....	6
Pregnancy in which the tumor was removed and the pregnancy allowed to go on to term.....	3
Ectopic pregnancy.....	3
Ectopic pregnancy, salpingitis, hydrosalpinx.....	1
Dermoid cyst, bilateral, umbilical hernia.....	1
Dermoid cyst, suppurating, sinus through abdominal wall.....	1

	Per cent.
Dermoid cyst, with twisted pedicle.....	1
Dermoid cyst.....	7
Ovarian cyst.....	54
Ovarian cyst, large.....	7
Ovarian cyst, with twisted pedicle.....	2
Ovarian cyst, suppurating.....	1
Ovarian cyst, bilateral.....	9
Ovarian cyst, unilateral.....	22
Cystic degeneration of ovaries.....	78
Calcification of ovary.....	1
Ovarian fibroma.....	3
Ovarian carcinoma.....	2
Papillary carcinoma of both ovaries.....	1
Malignant adenocystoma.....	1
Hæmatoma of ovary.....	8
Parovarian cyst.....	12
Broad ligament cyst.....	2
Abscess of ovary, single.....	5
Abscess of ovary, double.....	2
Abscess of ovary.....	1
Tuboovarian abscess.....	2
Pyosalpinx.....	26
Pyosalpinx, bilateral.....	20
Pyosalpinx, unilateral.....	14
Pyosalpinx with tuboovarian abscess.....	2
Hydrosalpinx.....	21
Hydrosalpinx, bilateral.....	15
Hydrosalpinx, unilateral.....	18
Hydrosalpinx and tuboovarian abscess.....	1
Salpingitis.....	46
Salpingitis, bilateral.....	2
Salpingitis, unilateral.....	10
Salpingitis and hydrosalpinx.....	3
Salpingitis and tuboovarian abscess.....	3
Fibroma of Fallopian tube.....	1
Papilloma of appendages.....	1
Appendicitis.....	20
Ventral hernia.....	1
Umbilical hernia.....	3
Carcinoma of umbilicus.....	1
Tuberculous peritonitis.....	4
Universal adhesions.....	4
Adhesions to viscera.....	14
Adhesions to soft parts other than intestines.....	8
Intestinal obstruction, chronic.....	7
Intestinal obstruction, acute.....	2
Adhesions to tumor.....	5
Varicose veins of pelvis.....	9
Thrombosis of veins of lower extremities.....	2
Deep suppuration of tumor.....	2
Senile endometritis.....	3
Suppurating endometritis.....	5
Submucous projection of fibroid centres.....	11
Pressure symptoms.....	15
Dilated ureters from tumor pressure.....	2
Hydronephrosis, large, from tumor pressure.....	2

3. In my observation with the non-operative treatment of fibroids of the uterus, based on more than 400 cases, I can speak with less definiteness because of my inability to tabulate results, and because of the difficulty in following many of the cases.

These cases naturally include those the symptoms of which were not so severe, probably 75 per cent. of all; those in which because of fear or prejudice the sufferers would not submit to radical procedures, approximately 20 per cent.; and finally, those cases which were so badly complicated or possessed such inherent conditions that radical procedures seemed unjustifiable, probably not more than 5 per cent.

I will speak first of those represented in the last 5 per cent. The percentage of non-operable cases in the future, will, of necessity, and for obvious reasons, be constantly diminished. Among them are cases complicated with vascular cardiac changes

of a grave degree; of grave kidney involvements; of widely disseminated septic conditions; of grave anemia with hæmoglobin below 25 per cent.; of complicating brain lesions; and, finally, grave complicating diseases of other organs, as pulmonary tuberculosis or visceral cancer.

However, we must be careful in relegating these cases to the list of incurable. In the last two years I have operated in two cases where the recoveries were gratifyingly prompt, although, from repeated and uncontrollable hæmorrhages the hæmoglobin had been reduced to 25 per cent. or less. I have successfully operated in a large number of cases in which serious chronic nephritis existed, such as seemed to preclude the justifiability of operation, in which the kidney symptoms were not only not increased, but decidedly abated. Several times I have operated and removed tumors and uteri where septicæmia and pyæmia existed to such a degree because of absorption and dissemination from the parts that operative interference seemed unjustifiable, in which cures were accomplished. Every surgeon who operates much grows to fear less these apparently hopeless cases, and should be in a position constantly to restrict the number to which he would refuse to lend aid with the knife.

In the 20 per cent. representing those patients who should be operated upon but refuse, we have an opportunity of watching the average case under general hygienic and the less radical forms of treatment, because the patients will accept no other. Such cases offer us an opportunity to watch the effects of ergot, general tonics, electricity, and the minor operative procedures, such as curettage and the ligation of the uterine arteries.

The 75 per cent. of cases in which the symptoms were not troublesome and in which the complications were not serious, include the small symmetrical growths which develop late in life, whose symptoms are a slight increase in the menstrual flow and some pressure symptoms, at those times especially, when the patient overexerts or at the beginning of menstruation, and which are symptomatically relieved by the menopause; those subperitoneal growths of single development which pedunculate and give rise to no symptoms and are frequently discovered only by accident; those of rather large size which rise above the pelvis and which do not increase the monthly flow, annoying only by their conspicuousness.

Many of these cases, especially if occurring in younger women, are liable to graduate from the symptomatically harmless class to the class giving rise to serious symptoms, and thus imperatively call for treatment. These apparently simple cases, too, should be looked upon with suspicion, because of unsuspected pathological complications, which, as

we have seen, are liable to exist either inherent to the tumor, or as an outside condition complicating it.

Those cases offer the field in which all kinds of conservative forms of treatment have from time to time each held momentarily the centre of the stage and the attention of the profession. Many of them give rise to few symptoms and if serious changes do occur, due warning is usually given of their approach. Unfortunately, however, even this rule has its exceptions.

A case of this description came under my observation in a young woman who was apparently in perfect health, but died suddenly of suppurative peritonitis. The post mortem showed a perforated intestine, which had become adherent and was then submitted to pressure of the tumor. A second case in a woman, 35 years of age, presented a rather large, apparently harmless tumor, without symptoms, in which an old adherent pyosalpinx was ruptured by a sudden forcible change of position of the tumor, and death resulted from diffuse peritonitis in twenty-four hours. Another, in perfect health, with a small tumor which had not been suspected, had an acute obstruction of the large intestine from impaction of the tumor and was saved only by a timely but serious emergency operation.

One more worthy of mention was that of a woman, 52 years of age, in whom the tumor had been pronounced harmless, as the menopause had apparently supervened, but who suddenly began to flow, and this continued for several weeks, until she was nearly exsanguinated. I saw the case in consultation, advised a dilatation of the uterus and curettement for diagnostic purposes, and discovered a smooth deep uterus with a senile endometritis which had apparently exposed a uterine venous sinus. A thorough curettement, cauterization, and the amputation of an enormously elongated cervix with ligation of the uterine arteries fortunately promptly relieved the patient.

There are many other cases less startling, which I could enumerate which at one time seemed to rest securely in this class.

METHODS OF TREATMENT.

I shall not dwell at all on the long list of drugs which have from time to time been employed in the routine treatment of fibroids of the uterus.

Galvanism.—I shall refer only briefly to the treatment by electricity, and by the ligation of the uterine arteries. I reserve a right to speak on these two subjects, because I was the first in America to make scientific use of electricity for the treatment of fibroids, and the first in any country to describe the treatment of vaginal ligation of the base of the broad ligaments, including the uterine arteries. Electricity (galvanism) will accomplish the following effects: (a) It acts as a powerful general tonic; (b) relieves hæmorrhage in symmetrically developed fibroids with no submucous projections; (c) promptly relieves neuralgic pains and frequently

pressure symptoms; (d) many fibroids will grow smaller under treatment, others will remain stationary in their development, while a few, usually the unsymmetrical, will not be affected.

These effects may be relied upon if the physician has the tact and perseverance to push the treatment, and the patient is willing to pursue a slow and at best an uncertain method of relief. I wish to say that with galvanism I have successfully tided many patients over the menopause who would have succumbed or become invalided without it, and have left them in perfect health symptomatically.

Vaginal Ligation of the Base of the Broad Ligament, Including the Uterine Arteries.—I have deliberately operated in forty cases of bleeding fibroids of the uterus by vaginal ligation of the uterine arteries through the base of the broad ligaments. I have operated in at least twenty in which one side has been ligated in connection with curettements or the vaginal enucleation of submucous fibroids.

The results of this simple and safe operative treatment have been almost uniformly gratifying in my experience. Its effect on exhaustive hæmorrhage has been uniformly prompt in relief of the flow. In at least three cases, however, it has not been permanent. In these exceptional cases the flow has gradually returned after a few months. In the meantime, however, in every case, the patient has had a substantial respite and, as the majority of these cases were those in which the hæmorrhage had been desperate and the patients reduced to the last extreme, the value of this respite can be appreciated. If this rational operative procedure had been described before hysterectomy became safe, it would have been one of the popular operative treatments, ranking with hysterotrachelorrhaphy as a conventional operation, and rivalling because of its greater safeness, the Battey-Tait castration as a treatment for fibroids. Now, however, while it will become finally established as one of several efficient means of dealing with fibroids and their many vagaries, it is destined to fill one of the small but, I trust, definite positions in the armamentarium of the surgeon instead of the ambitious place fondly hoped for it by its parent.

Myomectomies, the Battey-Tait Operation, and Hysterectomies.—My experience has led me to prefer abdominal hysterectomy with supravaginal amputation to myomectomy except when one or, at best, two centres of development, superficially located and so situated that they do not materially increase the area of the endometrium, are presented. Such tumors can be enucleated safely and when one can be positive that no other centres exist, a cure may be accomplished. I do not favor removing several centres, especially when one or more of them

are deeply seated; because, when there are several such centres of development, small ones which will later develop are sure to be overlooked and, besides, the operation is a more dangerous and mutilating one and one in which sepsis may be introduced from the uterine canal and in which hæmostasis may be defective.

The Battey-Tait operation of castration need only be mentioned in order to acknowledge our obligations to it in the days when we were learning, before we had discovered that hysterectomy was easier to do and more satisfactory in its results.

Hysterectomy, abdominal and vaginal, are the two operations which may be said to offer positive cures for fibroids of the uterus. Either will remove completely the tumor or tumors from the body and, at the same time, the tissue in which such tumors grow. Therefore, no matter how favorably we may look upon other forms of treatment, hysterectomy is the only sure remedy.

In the choice of a route for hysterectomy for fibroids of the uterus, I prefer the abdominal route, with supravaginal amputation of the cervix. The cervix is seldom the seat of fibroid development and when it is involved it is only by invasion from above. Hence the cervix should be spared unless it is the seat of a carcinoma, in order to preserve the proper contour and integrity of the vaginal vault. This is often of great importance in order to retain inviolate the most important function of the sexual organs. A vaginal hysterectomy or a panhysterectomy of necessity shortens the vaginal canal and leaves at its vault a painful cicatrix.

While hysterectomy is the only absolutely sure cure for fibroids of the uterus, we must remember that it has a legitimate mortality even in the hands of the most experienced surgeon. This mortality which will constantly grow smaller, I believe may be now stated as varying from a minimum of five per cent. in the hands of well trained surgeons constantly doing abdominal surgery, to 15 per cent. or higher in the hands of one only occasionally opening the abdomen. There is no operation in surgery in which the right kind of experience counts for more than in hysterectomies.

In the 200 consecutive cases recorded in this paper representing the last cases done by me, many of which were desperate, there were nine deaths, or a mortality of four and one half per cent.

In the future, this mortality will be greatly reduced because cases will be operated in early, before vascular and cardiac changes have taken place, before kidneys have been impaired by pressure, before tumors become large and unwieldy, before women have been reduced by exhaustive hæmorrhages, before tumors have become necrosed and infected,

before they have taken on the other degenerative changes so well illustrated by our statistics, and before they have become complicated with changes in the appendages.

In finally deciding upon a course to advise as a routine practice in the treatment of fibroids we must take all these things into consideration. No one can say that any particular patient is sure to recover from the immediate effects of operation, no matter how favorable it may appear. One of my nine cases of death in this series occurred from embolism in an apparently healthy woman, whose convalescence had been ideal and who was preparing to go home on the twenty-first day.

On the other hand, in the 1,388 analyzed cases presented in this paper, the operations revealed 32 cases of carcinoma of the body of the uterus, 24 cases of unsuspected sarcomas of the uterus, 70 cases of necrosed tumors, which were very liable to become infected and cause death, 53 cases of intraligamentous development of the tumor, which are so liable to produce kidney complications by ureteral pressure, and many other serious symptoms, 8 adenomyomas, 2 pregnancies menacing the life of the patient, 5 ectopic pregnancies; 8 dermoid cysts, 97 suspected or unsuspected true ovarian cysts, 12 parovarian cysts, 72 of pyosalpinx, 20 cases of appendicitis, 7 cases of intestinal obstruction, 2 cases of acute intestinal obstruction, 2 cases of obstructed ureters, 2 cases of hydronephrosis from pressure.

These serious conditions, incurable without operation, and unsuspected in the majority of instances, represented 31.6 per cent. of all cases operated in. This is the most instructive and startling thing about this analysis. Nearly one third of all the cases operated in were complicated with conditions very liable to prove fatal. And this does not take into consideration serious symptoms, the size of the tumors, and the various degenerations which are not necessarily fatal, and which are set forth in the same table.

When we take into consideration symptoms, too, as shown in my 200 cases, we have interesting food for contemplation. Dangerous hæmorrhage occurred in 41 cases, or 20.5 per cent.

CONCLUSIONS.

I. The routine treatment for fibroids of the uterus, presenting symptoms, in women under 45 years of age, should be supravaginal hysterectomy, except as hereinafter stated.

The exception to this rule should be (a) in subperitoneal tumors either pedunculated or not, in which only one or more distinct developments exist which do not materially increase the size of the uterus proper and the area of its endometrium, when myomectomies may be resorted to; (b) in

fibroids which present excessive hæmorrhagic tendencies, in which the hæmoglobin is reduced below 25 per cent., or in which serious vascular cardiac or kidney complications exist which greatly increase the risk of the operation, when a preliminary operation of vaginal ligation of the uterine arteries should be resorted to; (c) in cases where a radical operation will not be accepted, a curettement and vaginal ligation of the uterine arteries may be resorted to, or, if no operation at all will be accepted, general tonics, ergotine in tonic doses, and galvanism scientifically applied may be depended upon to relieve the patient materially, and occasionally tide them over the menopause to a complete symptomatic cure.

(2) The treatment for large, complicated tumors without regard to age, or large apparently uncomplicated tumors in which symptoms of hæmorrhage or pressure exist, should be supravaginal hysterectomy.

(3) Tumors of medium size apparently uncomplicated in women over 45 years of age may be managed by one of the less radical forms of treatment as: (a) when the tumors are of the symmetrical development type, enlarging uniformly the uterus, and the principal symptom is an exaggerated menstrual flow, the cases may almost invariably be relieved by galvanism and tidied over the menopause; or (b) if the growth is of the irregular type which has distorted more or less the uterine cavity, the case should be submitted to dilatation, finger exploration, curettement, and, if considerable flowing is a symptom, vaginal ligation of the uterine arteries, with the idea of obtaining a symptomatic cure over the menopause.

(4) The extremely small class of tumors coming under the head of "inoperable" cases must be managed on general principles—rest in bed, general tonics, treatment of the cardiovascular and kidney complications when they exist, curetting and irrigating for septic endometritis, electricity for pain and hæmorrhage, ligation of the uterine blood supply if practicable for intractable hæmorrhage, and vaginal incision of impacted cysts or pus accumulations.

103 STATE STREET.

Physicians' League of Buffalo.—At the annual meeting of the Physicians' League of Buffalo, held on May 31st, officers for the coming year were elected as follows: President, Dr. Jane W. Carroll; vice-president, Dr. Janet Himmelsbach; secretary and treasurer, Dr. Katherine Munhall.

The Fulton County, N. Y., Medical Society has elected officers as follows: President, Dr. McColloch, of Gloversville; vice-president, Dr. Mosher, of Johnstown; secretary, Dr. Lenz, of Gloversville; treasurer, Dr. Still, of Johnstown.

A SHOT AT CHRISTIAN SCIENCE FROM A TOY PISTOL.

By A. C. McCLANAHAN, M. D.,
CHICAGO.

There comes a time in childhood when, having outgrown the acoustic resources of your red rattle and your green whistle, you seek to give expression to your artistic moods through the medium of a toy pistol. This, beginning with the white color of new silver, fades in time to the leaden hue of ancient zinc. Although their noises may be the only attributes which endure these playthings to you, the colors are as real to you as are the noises; the noises are as real as the toys themselves. One day your playmate takes the pistol to a distance, and when he pulls the trigger you see a flash and a moment afterward hear a report. You wonder why the flash and the report did not occur together in this instance as they have always done before. Your playmate tells you that they did. He saw the one and heard the other at the same instant.

Why, then, did you not hear the report at the moment of its occurrence? You ask some older person, and he tells you that sound is something which must travel to the ear before it can be heard, and that to traverse a considerable distance it requires an appreciable time.

At this you wonder. If sound is something which can travel from the pistol to the ear, it cannot be a part of the toy as you thought it was. What is it like while it is on its way to the ear? You decide that it is precisely like what you hear. But what you hear is a sensation of sound. A sensation can exist only in a conscious mind. Does the air have a conscious mind? It seems hardly probable.

As you grow older you learn that the sound which you hear is merely the effect produced in consciousness by a cause that is wholly different from that effect. The cause is a motion of the air. The effect is the consciousness of sound. The cause is all that exists in the external world. The effect—the sensation of sound in consciousness—does not exist in any external object. It could not possibly exist outside of consciousness, and if all consciousness was to be destroyed, all sound, as the ear perceives it, would cease. The noise which seemed so real has been resolved into a mere effect produced on the mind by something wholly different.

"But the pistol still exists and is still white," you think, for childhood clings tenaciously to its illusions.

Poor boy, there are more real as well as more durable things than the whiteness of your toy pistol. Its whiteness is quite as illusory as its noise. It is an effect produced upon your eye by waves of an invisible, impalpable substance called ether. These

first strike the pistol, and are reflected by it to your eye, and there produce an effect which appears in your consciousness as color. The cause, which alone exists in the external world, is as different from the effect which it produces in your consciousness as the cause of sound is different from the sensation of sound. Undulating ether can no more be color, as you know color, than undulating air can be sound, as you know sound. If all consciousness was to be destroyed, undulations of air would still result from the percussion of material objects; waves of ether would still fall upon objects and be reflected by them to other objects; but sound and light, as you know sound and light, would vanish from the universe.

These illusions of color and sound were pleasant while they lasted. There was something satisfying in the belief that all the stirring sounds in the world, and all the gay colors, were real. It is hard to admit that they were mere pictures painted on the mind by an unknown artist in the outer world. It is hard to give them up, but you can let them go, you think, if they are unreal, and pin your faith to things that are less illusory. At least, the causes of these phenomena remain. The air and its waves, the ether and its undulations, and the pistol itself remain.

Let us see, my dear boy, to what you are pinning your faith. Ether, air, and the iron of your pistol are various forms of matter. If you observe a distinct portion of matter of any kind, you will perceive that its most conspicuous and apparently necessary property is its extension—its property of completely filling a certain portion of space. It is extended only so far as it is continuous. It occupies space only so far as it completely fills space. If there are interspaces between its parts, it does not extend through these interspaces and fill them, hence there is no matter there.

If you subject your piece of matter to sufficient pressure, you will reduce it to half its original volume. If you will now weigh it, you will perceive that nothing has been destroyed. The weight will not have been diminished in the slightest degree. Therefore, there were interspaces between the parts of the object, and you have simply reduced the volume of these interspaces by driving the parts of the object nearer to one another. Double the pressure and you double the diminution in the size of the object. Treble the pressure and you treble the diminution. This is the law of Mariotte, and if it has any limit, none has ever been discovered.

But if there is no limit to this law, what would be the effect of infinite pressure? The mind is staggered by the conclusion which it is forced to accept. Your poor toy would be crushed quite out

of existence, yet nothing would have been destroyed. Pressure cannot destroy matter. The unextended pistol would weigh as much as it ever weighed. Everything of which it ever consisted, except the interspaces, would still be present; the only effect of infinite pressure would have been to cause the disappearance of these interspaces. In reality the parts of your pistol are unextended points in space, more or less separated from one another, if we may accept the theory of Boscovitch, and I fear we must accept this part of it. Infinite pressure would merely cause the disappearance of matter as you knew matter. Everything that ever existed would still exist.

Then, in reality, the pistol never had any extension. In reality, it never completely filled the smallest portion of space. In reality, its most conspicuous and apparently necessary property is the effect produced upon your consciousness by a cause which is wholly different from that effect.

Is this effect caused by the undulation of something, as the noise of the paper cap is caused by the undulation of the air, and the metallic whiteness of the barrel by the undulation of the ether? "Must I resolve everything into undulations," you think. "What is it that silently undulates beyond the pale of consciousness in that strange, dark world of reality, where there is no color nor brightness—where the undulating thing itself has neither extension nor any other property which matter appears to have, and which yet causes, in the bright world of consciousness, the effects which I know as sound and color and extended matter? Is it an undulation that undulates?" This is unthinkable, but even if you could accept this unthinkable conclusion, you would have gained nothing, for as it has been shown that sound, light, and extension are mere effects produced on the mind by a cause that is different from any of them, so it could be shown that motion itself is another mental effect of an unknown cause. Your little toy pistol with its brave noise and metallic luster is gone. With it have gone the world of matter that you knew, the movements and colors of everything in it, the sounds and the odors, the tastes and the forms, and everything else perceived by the senses. A toy pistol in the hands of a boy has frequently done much damage. In your hands it has apparently destroyed a universe.

But do not imagine that you have reached the end of things. You stand, on the contrary, at the beginning. Your thinking, if it begins at all, begins here; and whether you think sense or nonsense depends upon the first step that you take from this point.

You have seen that nothing in the external world is what it appears to be—that the images in consciousness are wholly different from the reality in

the outer world that causes them. Only one step separates you from the insane idealism which asserts that there is no reality in the outer world—that there is nothing in the universe but mind, and that the phenomena of matter are nothing but the unreal phantasms of a mendacious mind. If you take this step you may become the worthy champion of any absurdity and the fit companion of any driveler. It would then be impossible to reach you by reason; but, if you were still accessible to reason, I would point out to you that you have no right to stop with the denial of the existence of an external world. You have precisely the same reason for denying the existence of mind that you have for denying the existence of matter; for as we have no other evidence of the existence of matter than the phenomena which it exhibits to consciousness, so we have no other evidence of the existence of mind than the phenomena which it exhibits to consciousness. If there is no reality behind the phenomena of the external world, there is none behind the phenomena of the world of mind. We know precisely as little of the one as we know of the other, and if we deny the existence of either, we must, in order to be consistent, deny the existence of both.

You have stood bravely by while one cherished illusion after another has been ruthlessly shattered and, kicking aside the wreckage of one dear belief, have gone resolutely forward to witness the equally ruthless destruction of the next; but at last you have reached a point beyond which the demolition of the universe cannot go, and from the ruin wrought by your toy pistol there emerges a reality so secure in its realness that it cannot possibly be destroyed, and can be escaped only at the price of the total abdication of common sense. This reality is the *cause* of phenomena.

That a thing exists is not valid evidence of its having been caused—it may have existed always. But if it exists as a phenomenon—as a change in consciousness—as something which begins to be—it is perfectly certain that it has been caused. You are conscious of the actual occurrence of mental impressions—changes in consciousness—which you do not cause; it is perfectly certain that they are caused by something; and since the cause is not within you, it is equally certain that it is in the external world.

An impression may, like that of a pencil moving over a piece of paper in the act of writing, or that of a flame impressing a piece of sealing wax, only remotely resemble the thing that makes it, for it is nothing but the necessary relation between that which causes the impression and that which receives it, and will necessarily vary with the nature of either, but its occurrence undeniably implies the

existence of both. The impression which the world makes on the mind of a frog is doubtless as different from that which you perceive as the structure of the frog's brain and organs of sense is different from the structure of your own. In neither case is the impression like the thing that makes it. In each the impression is a true picture of the relation between the mind impressed and the world impressing it.

There are phenomena, such as those of recollection and imagination, which you are conscious of causing yourself; but even back of these there is an external cause, for you are conscious that the material with which your recollection and imagination work—the very stuff of which your dreams are made—was furnished to the mind by an outside cause. It is of no consequence that you are as ignorant of the nature of the external cause as you are ignorant of the nature of the internal cause. There is absolutely no doubt as to the existence of either, even if both are merely two aspects of the same thing.

One mode of the external cause produces the phenomenon of a toy pistol. Another mode produces the phenomenon of a falling hammer. Another mode produces the phenomenon of a flash of light; and still another produces the phenomenon of sound. If the first mode is accompanied by the second, you know that they will be followed by the third and the fourth, and that each mode will cause its characteristic phenomenon in a perceiving mind. If there was no perceiving mind there would, of course, be no such phenomenon as a pistol, a moving hammer, a flash of light, or a sound; but the existence of the unknown reality and the coincidence and succession of its various modes would be as certain as ever.

While this incomprehensible reality is known only by the phenomena which its various modes present to consciousness, we know that it does not pursue an erratic course; that it does not act at random; that its modes eternally conform to the same immutable law that governs the phenomena themselves. To suppose otherwise would be to suppose that the same cause under different circumstances does not produce different effects, which, to a philosophical mind, is self evidently impossible.

From this it follows that if we adjust ourselves to the phenomena or appearances presented to consciousness by the external world, we shall have adjusted ourselves to the inscrutable reality which is the external world and which lies behind appearances as their cause. It follows, further, that if we ignore phenomena, if we suppress our consciousness of appearances, we shall not have annihilated the reality behind these appearances, and

shall be unable to adjust ourselves to its modes.

But this is the same as saying that we must regard the picture which the external world paints on our minds precisely as if that picture of a world was the world of reality itself, and that is exactly what I mean. It is a world of relative reality. Each part of the picture stands in unvarying relation to some mode of the absolute reality which alone exists. The phenomena of sound, color, matter, motion, and force are to us real sound, color, matter, motion, and force, and if in the practical affairs of life we regard them otherwise, we do so at our peril.

So you have your noisy little pistol back again, and with it come the solid world and all the things that made it like a world, the color and the movement, the energy and life, and back of all stands the inscrutable reality that was and is and ever shall be. Why, then, have I taken the trouble to destroy the world? If I meant to give it back why might I not have let you play on undisturbed, and spared myself the trouble, and you the terror of being left without a clod to stand upon?

For several reasons, and the chief was this: I feared that some one else might some day knock your world to pieces and might not know so well how to put it together afterward. It has often enough been knocked to pieces, and by some it has been put together afterward with wonderful skill; but to me it seemed needful to perform the trick on a scale so small that every man might feel that he could presently learn to reconstruct his own demolished world. For there is a cult of mystics who go about demolishing the world and teaching the credulous that this evil universe not only should not be put together again, but can by no possibility be put together; that it is nothing but the figment of unenlightened minds and cannot possibly be shown to have a basis of reality.

There is something apparently philosophical in the sophistry by which this conclusion is reached. It can certainly be shown that the world perceived by the senses is a world of mere appearances, and when you learn this, you naturally consider yourself superior to the untutored rustic to whom this world of appearances is absolutely real and independent of mind. You then come to feel that your superiority to the rustic would be greatly enhanced by denying that there is any reality behind these appearances; by asserting that the appearances of the poor world are actually the appearances of nothing; that there has been an appearance without anything whatever having appeared. In this moment of vanity you are persuaded to take the fatal step which would land you in complete intellectual nihilism if you continued to think, but, having taken it, you cease thinking. Your intellectual travels abruptly end. You listen to language so softly soporific that your

common sense falls gently to sleep, and what is left of your mind concludes that the highly sounding phrases to which it listens must mean something exceedingly fine, although you have not the slightest notion of what it is, and quite overlook the fact that they actually mean absolutely nothing at all. Some of the phrases in the text book of this cult, having no sense or meaning in whatever direction they may be read, have naturally the same meaning when read in either direction, and this is regarded an exceptionally excellent proof of their truth.

Having been reduced to the state of mental haze which enables your mind to float on the haze in the book, you are instructed not to apply physical measures to the relief of your illusory inconveniences and misfortunes. If there is anything you do not like, whether it be a protracted drought or a broken leg, you are told to call it a delusion, an error, a sin, or some other equally obnoxious and inappropriate name, endeavor to suppress your consciousness of it, and allow it to skulk back into that troublesome nothingness whence it originated and to which it belongs. If you burn your hand in hot lard there was no hot lard there, and therefore you did not burn your hand at all; the pain you feel is a sin, and therefore you do not feel it; if your hand nevertheless sloughs off, you never had a hand, and therefore you have not lost it; and as it was only an error, you are better off without it in any event.

Now, in order to save you from the deplorable consequences of believing this wholly senseless twaddle, I have knocked your little world to pieces myself for the purpose of showing you the sinister reality that lies unseen behind it, indifferent alike to abuse or prayers, inexorably consistent, resistlessly active, and wholly indestructible.

Believing you to be an intelligent youth, I have considered it unnecessary to dwell upon the obvious fact that the most insane conduct may incidentally be accompanied by some beneficial results. A doctrine which teaches men that every ill is purely imaginary and will surely be recovered from undoubtedly stimulates cheerfulness, courage, and hope; and these emotions, with as little doubt, exert an actually beneficial influence on the bodily tissues and sometimes enables them to throw off ailments to which they might otherwise succumb; but things have not yet come to so bad a pass that one must first become a raving maniac in order to have courage or look with hope into the future.

Again believing you to be a bright youth, I have not pointed out to you that the testimony of an idealist is altogether incompetent to establish the utility of idealism. You will not be likely to attach much weight to the testimony of a witness who proclaims the improvement which he has perceived

in his own person, after he has admitted to you that the whole content of his perception is a tissue of groundless illusions. If his senses are always wholly false, they have apprised him no more falsely of his illness than of his recovery. If their testimony is to be rejected in determining the existence of illness, it is to be rejected likewise in establishing the occurrence of a cure.

Since you have been clever enough to see these things without having them pointed out to you, it can hardly be needful to admonish you not to be too much impressed by the education and position of some of the exponents and advocates of therapeutical idealism. Of the few hundreds of thousands of these misguided ones who seriously subscribe to this faith, there are, it is true, many who occupy high places in the world and are apparently well educated with such education as a college can provide; but a college is not a brain factory, and high places have never been infallible preservatives or restoratives of sanity.

This form of madness is to be prevented, for it cannot be cured; and now in sorrow we may leave these dreaming world destroyers, together with the colleges which bred them and the high places which have advertised them, to the working out of their own salvation. It has been doubly profitable to notice them, for not only have we seen how we may escape the madness which has befallen them, but their creed has served with distinguished fitness to illustrate the fruits of that leaven of lunacy that is silently working in all classes of mankind throughout the world. Those of us who do not subscribe seriously to this particular form of foolishness usually subscribe seriously enough to some other form. It is hardly probable that there is another world whose inhabitants are more prone than those of this poor planet to band themselves together for the perpetuation of one or another variety of nonsense; for it is always hard to learn that the common sense that enables us to reconstruct a demolished world compels us to demolish many a pretty world of our own that we have constructed falsely.

160 EVANSTON AVENUE.

German Hospital, Buffalo.—On June 10th the incorporators met at this hospital and organized with these officers: President, Dr. William Simon; first vice-president, Dr. Edwin G. S. Miller; second vice-president, Dr. George Bleistein; third vice-president, Dr. William F. Wendt; fourth vice-president, Dr. Henry C. Zeller; secretary, Dr. Victor R. Blehdon; treasurer, Dr. Joseph Block; treasurer, Dr. Edward A. Weppner; director general, Dr. Jacob Stern.

THE PROBLEM OF THE TROPICS; THE INTERRELATION OF CERTAIN SOCIAL AND BUSINESS QUESTIONS.

By GEORGE ALLAN ENGLAND, M. A.,

MILTON PLANTATION, ME.

No less eminent a philosopher and sociologist than Benjamin Kidd has preached in his *Social Evolution* the absorption of the tropics of septentrional races, more specifically the so called Anglo-Saxon, and the exploitation of the indigenous population for their conquerors' benefit. The conquest, whether *vi et armis* or by the subtle but no less destructive methods of peaceful assimilation, is but the fulfilment of Seward's prophecy that the "Pacific Ocean, its shores, its islands, and the vast regions beyond will become the chief theatre of events in the world's great hereafter." Apparent even in the days when Kidd's epoch marking book appeared, it has of late assumed a large, one might almost say, a universal phase which has but substantiated the prophetic note of the past decade. To the British aggressions of that day and the rather tentative tropical outreachings of Italy, France, Germany, and Portugal must be at present added the scantily veiled desires of Russia toward Chinese and Indian control and the almost incalculable factor of American conquest and expansion in low latitudes.

Long before Kidd's day, even, this expansion of the great republic was prophetically shadowed forth by at least one clear sighted student of history and *Welttendenzen*, no other than the edifying Creasy, who, as far back as half a century, in his *Decisive Battles of the World* (1851), predicted the absorption of the Philippine Islands in no uncertain terms as follows:

"The importance of the power of the United States being then firmly planted along the Pacific applies not only to the New World but to the Old. Opposite to San Francisco lie the wealthy empires of China and Japan. Numerous groups of islands stud the larger part of the intervening sea, and form convenient stepping stones for the progress of commerce or ambition. The intercourse of traffic between these Asiatic monarchies and the young Anglo-American Republic must be rapid and extensive. The American will either buy or force his way, and, compared with the magnitude of such changes in the dominion of the Old World, the certain ascendancy of the Anglo-American over Central and Southern America seems a matter of secondary importance. Well may we repeat De Tocqueville's words that the growing power of this commonwealth is 'un fait entièrement nouveau dans le monde et dont l'imagination elle-même ne saurait saisir la portée.'"

Had Creasy lived until the present day he would have seen his prophecy fulfilled not only in the Pacific, but in the Atlantic as well, where the "bold,

intrusive, and unscrupulous" Americans, as he loved to call them, have already firmly established themselves. What the next half century may bring forth in the way of colonial expansion is still a problem for dreamers, politicians, and promoters to wrestle with; but we may feel confident that its greatest surprises will hardly be deemed as improbable as the present actuality would have been considered when the words just quoted were written.

The United States of America, so long the great conservative power, the stay at home and anti-expansionist republic, holds at the present day, through stress of circumstances both unforeseen and unavoidable, an aggregation of 175,000 square miles of picturesque and *opéra bouffe* islands in foreign parts. Nearly every foot of all this territory is in the tropics, where life is warm and primitively complex, where birth, growth, and death are all too rapid and where the indigenous loaf is scarcely as yet leavened by our soldiers and sailors, who form at present the only large class of resident Americans.

It is not difficult to perceive that racial, sociological, and climatic conditions all conspire against the establishment, in such a *milieu*, of anything like normal, average American life and that the American race, if it succeeds in establishing itself at all in the West Indies, in Hawaii, and in the Philippines, must more than ever manifest those qualities of adaptability which have thus far distinguished it. Physically, intellectually, and commercially the race must mould itself to meet the new conditions, its measure of success in this respect becoming also its measure of political and business supremacy.

In no other commercial undertakings are there such numerous and intimate relations with life under all its conditions as in the business of life insurance, which must seek out the physical, financial, and moral responsibility of its prospective clients and discriminate closely against unfavorable surroundings and habits and methods of life. Thus it happens in this new settlement of tropical countries, where considerable bodies of non-immune and unacclimated Americans have been and still are exposed to the unfamiliar and excessively trying conditions and necessities of life, that our recent military occupation has given rise to a number of problems, inquiries, and difficulties in the business of life insurance with which the preceding generation had nothing to do and for which there are to be found but unsatisfactory and partial solutions in the actuarial experience of the past.

"The colonial risk is at present distinctively a war risk," has been well remarked by E. B. Phelps, in his *Tropical Hazards*—a comprehensive book by an able writer. Soldiers and sailors, he points out,

are at present the only noteworthy class of Americans in the tropics, a class which he thinks will continue to be considerable and to constitute a variety of risks, distinct indeed, yet nearly enough allied to the conditions of civilian life to form a practical criterion therefor in the actuarial determination of premium charges. There are, even at the present moment, thousands of insurable persons in Cuba, Puerto Rico, and the Philippines, and the future will bring in other and indefinite thousands.

"The army," he says, "is blazing a road over which a much larger army of civilians will sooner or later press forward. When this migration actually sets in, various branches of American trade and commerce will materially develop on new lines, and conspicuous among the industries and vocations which will thus expand will be the insurance business with a hitherto undreamed of field for work before it."

No less surely is the army "blazing a road" for the actuaries in their calculations of risks incurred by travelers and residents in the same region. This branch of their science is so new that it is as yet hardly born—it is still in process of evolution and its development can still be watched. The past has little to teach regarding war and tropical risks. At the time of the Mexican war, in 1846, the entire amount of life insurance in the United States aggregated but \$6,000,000 and no war permits at all were issued by the two companies then in existence, the Presbyterian Ministers' Fund and the Mutual Life Insurance Company of New York. At the outbreak of the civil war an extra annual war premium of five per cent. was adopted, but even this was operative only north of the thirty-fourth parallel (about the northern boundary of Alabama), while for places farther south a still additional premium of like amount was charged. The population of the country in 1860 was but thirty-one millions, with 60,000 insured, a ratio of one to every 500. In 1898, at the beginning of the Spanish war, the population had risen to 75,000,000, one sixth of which number was insured for an average per capita amount of \$190.00, as contrasted with less than six dollars in 1860. During this conflict with Spain "the losses directly traceable to the war risks were comparatively slight, and none of the companies suffered, although the subsequent mortality due to impaired constitutions in consequence of service in Cuba, Puerto Rico, and the Philippines cannot yet be even approximately calculated." (Phelps.)

A new problem has, therefore, arisen with the crossing of the tropical Rubicon, where the climatic conditions (far worse than in even the least favored of the Southern States), have caused grave complications and induced many new diseases, despite

all the advance in antiseptic and surgical knowledge since 1860. "The impression that the tropical location of our new possessions constitutes a much greater hazard in the case of officers and men in the army than does the actual war risk now seems well nigh universal in life insurance circles." In these Southern lands it is the pestilence that walketh in darkness and the destruction that wasteth at noon-day which kills its thousands for every hundred slain by hostile lead.

How great the dangers are to men of Northern blood in tropical countries may be strikingly evidenced by the one fact that during 1898 and 1899, the two years of active warfare in the Spanish war, out of 747,080 admissions to sick reports, there died 6,080 men, only 1,150 from injuries, while 4,930 succumbed to disease. That is, the ratio of deaths by disease to the regular death that the layman always fancies attendant on the career of a "hero," was 4.28 to 1, an almost incredible proportion, were not the figures set down in black and white in government reports. Most unhealthy of all the tropical stations was Cuba, with a sick admission in 1898 of 3,413.54 per 1,000; least unhealthy were the United States camps, with an admission of 1,677.50 per 1,000. This figure, though far lower than that for any other station, was much higher than in the time of peace and speaks volumes against the care and sanitation of the camps. The greatest number of deaths from all causes took place in Cuba in 1898, being 91.55 per 1,000, or almost ten per cent., a frightful mortality, which fortunately sank, in 1899, to 18.30 per 1,000. Of the 91.55 deaths per 1,000 in 1898, 67.94 were from disease and only 23.61 from injuries, a low figure, comparatively speaking, which none the less attaches a most unpleasant stigma to the climatic and sanitary, or rather the unsanitary, conditions on the island. The mean monthly sick rate in 1899 was 211.41 per 1,000, a most extraordinary figure, often exceeded in the wet season despite the most vigorous work of sanitation. Fever, of course, caused most of the disability, of which Major Havard says in his *Report of July 10, 1900*: "It continues to strike when and where it listeth, regardless of the most reasonable expectations and best hygienic measures. Why the germ remains quiescent and inactive one or two seasons in the presence of susceptible material and then suddenly becomes active and violent is a question still unanswered."

In Puerto Rico, as elsewhere in the tropics, malarial infections, diarrhoeal diseases, yellow and typhoid fevers slew their thousands for every hundred men actually killed in battle, the rate in 1898 being 46.02 deaths per 1,000 from disease and only 2.46 from injuries. Smallpox, at first a serious menace, was promptly checked by a systematic

vaccination of the entire population, there having been effected 742,062 vaccinations and 116,955 revaccinations.

In the Philippines, deaths rose highest in 1899, when they reached 30.58 per 1,000, of which over half (15.30) were from disease. What the conditions were, in addition to those attendant on a destructive climate, may be inferred from the following brief remarks by Mr. Phelps:

"When the American troops first took possession of the Philippines the sanitary conditions of the various garrison towns and villages were execrable. Filth was everywhere and the hogs were the only scavengers. There has been a decided improvement in the conditions of the garrison towns, and under the direction of the board of health the city of Manila has known for the first time in its history the meaning of comparatively clean streets, a systematic removal of filth, and the serious attempt to enforce purity in its food supply. There can be no doubt that these sanitary measures will in time bring about a surprising change in the hygienic conditions of the cities and towns of the Philippine Islands, and their systematic execution, the gradual education of the natives to a realization of their self interest in compliance with the health regulations, and the segregation of the lepers, the sufferers from bubonic plague, and the smallpox patients, are certain materially to reduce the death rate in the Archipelago."

The greatest mortality was caused by forced marches, changes of location, and the fatigues, exposures, and excitements of campaigning in an unfavorable climate. The mean monthly admission to the sick rate in 1899 was 183.86 per 1,000, with a death rate at times as high as 9.36 per 1,000, mostly due to malarial and diarrheal diseases and fevers. Diseases of the respiratory organs were and are less prevalent than in the United States. The board of health did excellent and effective work, otherwise the death rate would probably have been far greater. Vaccination was vigorously carried on to such an extent that from October, 1899, to July, 1900, there were but seven deaths from smallpox in Manila as compared with 75 in March alone of 1899. While resting the troops fared vastly better, of course, than when in the field. As General Sternberg remarks in his latest *Report*, the opinion is prevalent among our medical officers that in time of peace and doing only garrison duty, the sick rate of the army in the Philippines would be no higher than it ordinarily is in the Southern States, yet even under the most favorable conditions, one can hardly doubt the deleterious effect of tropical life. Its dangers are recognized by British observers as well as by our own, India having proved a constant drain on the vital resources of its Northern conquerors. As Spencer Thompson, of the Standard Life Assurance Company of London,

says in his *Notes on Mortality in India and Some Other Tropical Countries* (recently presented at the fourth actuarial congress in New York City):

"Doubtless a sound and healthy constitution free from taint of disease will in many cases tell favorably; but a number of diseases which prevail in India, and which on the most sanguine computation it will take many years to stamp out—such as cholera, malarial, and other fevers—may attack the strongest, while fatal accidents are also probably more common than in the United Kingdom."

Again, Col. Charles R. Greenleaf in his *Report* of July 13, 1900, remarks:

"Nearly all the diseases of the tropics produce an effect on the general economy that does not follow similar diseases in the temperate regions—that is, a lowering of the vital force to such a degree that full recovery of health becomes impossible so long as the patient is in the tropical climate, and doubtful after his return to a residence in a temperate climate. Apparently the only disease from which complete recovery may be expected by residents at any one of the sanitary points of the island is malaria, but after such recovery reinfection frequently follows exposure. Tuberculosis is rapidly fatal, rheumatism becomes chronic, and I think that even the hot springs of the country, which have a great repute among natives for their cures, will not be effective with Americans. Homesickness is a potent factor in producing the conditions of melancholia into which many of the diseases have passed. The isolation of the troops, their lack of knowledge of the native language, their enforced confinement to the towns they garrison, and the constant strain incidental to continued preparation against attack by the army combine to produce the mental condition which, for want of a better name, is called 'insanity.' That this condition is a serious one is evidenced by the fact that the majority of suicides occur in this class of cases."

And still further says G. A. Harmon in his *Report on the U. S. S. Baltimore*:

"There is an unmistakable falling off in the physical stamina, a perceptible narrowing of the margin of reserve vitality. This is exhibited in the graver character of ordinary trifling injuries and ailments. Slight abrasions are hard to heal, and, without the most careful attention, degenerate into sluggish ulcers. Mild bronchial catarrhs are persistent and show a tendency to produce loss of tone, weak heart action, and general debility; skin eruptions become chronic, and, finally, within the last month or two a number of cases of the local *febris tropica*, the calentura of the Philippines, have made their appearance. The health of the ship is naturally better than that of the army or the marines stationed on shore, thanks to the less degree of exposure to paludal and climatic causes of disease, but there is no doubt that the long stay in these waters is beginning to exercise a deleterious effect upon the crew."

The navy, however, in the long run, fared vastly better in almost every respect than the army, prov-

ing conclusively that conditions incident to life ashore, rather than the heat and oppression of the tropics, were responsible for the high sick rate and large number of deaths. Both naval officers and men were exposed to materially less danger from disease and injury than those on land; they had better food, purer water, and more sanitary surroundings. There was in fact but a very slight increase in serious sickness over years of peace, the rate being, for example, 853.53 per 1,000 in 1895, as against 871.69 in 1898.

Out of 23,986 men serving in the navy in 1898, only 173 deaths took place, a ratio of 7.21; in 1899, out of 20,819 men, there were 153 deaths, a ratio of 7.35. A surprisingly small number of these were due to injuries. For example, in 1898, 118 were due to disease and only 55 to injuries. The highest number of deaths took place in the Asiatic station in 1899, where 26 men died, a very slight number for a force of 4,652. More men, in fact, died in navy yards, barracks, etc., in the United States, as, for example, when in 1899, out of 3,684 men so stationed, 27 deaths took place. "The advantages of the naval force afloat over the men ashore is emphasized by the fact that in neither 1898 nor 1899 did the admission rate of the men in the Asiatic squadron reach that of the naval force ashore." The usual malarial and febrile diseases played a small part in the sick list, being offset, unfortunately, by venereal diseases, which afflict a very large proportion of sailors when they reach port after a long cruise.

The picture of tropical service is, on the whole, not a pleasant one, nor apt to inspire confidence in an insurance company. In view of facts such as these it can hardly occasion wonder that American life insurance has from the beginning been very reluctant to accept men either residing or traveling in the tropics. To quote Mr. Phelps again in his *Tropical Hazards*:

"The first policies issued by the Mutual Life Insurance Company of New York and the Nautilus Insurance Company, in the early '40's, practically prohibited the insured to travel south of the thirty-sixth parallel (about the latitude of Nashville, Tenn.). The companies which came after them, prior to the civil war, set up the same defenses against the tropical hazard, and for years the Southern boundary line of Virginia and Kentucky was practically the Ultima Thule of American life insurance."

At the present day a census of sixty-four leading American companies has given results as follows: Regarding travel or residence in the tropics, two companies place no restriction whatsoever on their policy holders; four impose a permanent restriction; one restricts policy holders between July 1st

and November 1st, and three impose restriction for a term of years (usually two) after taking out the policy. War service is unrestricted by only eleven companies, seven forbid it for a term of years (usually two, as in the former case), and forty-six prohibit it permanently.

That such discrimination should be made is entirely reasonable and easy of comprehension, the more so as even the appalling mortality of war in low latitudes is not the only factor to be reckoned on by actuaries. Figures for death and immediate illness do not, of course, show the effects of lingering diseases and constitutional deterioration. The best that can be done by the actuary is to make the most practical deductions possible from the figures as shown, assuming that civilian experience will, in the long run, coincide with or at least approach that of a continued military occupation; and, acting upon these data, to construct an entirely new set of tables and guides for the determination of premium rates. The greatest diversity at present exists among American companies in this matter, a diversity too extensive to permit of treatment here. One thing may, however, be confidently expected, that the recent tropical expansion of the United States will furnish materials and criteria for the continued evolution of actuarial science.

Therapeutic Notes.

NOTES ON THE NEWER MATERIA MEDICA

(Continued from page 1173.)

Acidol is the shorter name adopted for betaine hydrochloride, which forms colorless water-soluble crystals containing 23.8 per cent. of absolute hydrochloric acid. On account of the fact that it undergoes hydrolysis in contact with water to yield a solution of hydrochloric acid, acidol is recommended as a substitute for that acid. Five decigrammes of acidol is the equivalent of five drops of pure hydrochloric acid or ten drops of the diluted acid. As acidol exerts a caustic action in the undiluted form, it is preferably administered dissolved in water or mixed with some harmless vegetable powder or with pepsin. Tablets containing 0.5 gramme of the pure substance are also put up by the manufacturers.

Alban's Cera-Salve is composed of wax, 10 grammes; olive oil, 16 grammes, and lead acetate, 4 grammes.

Aluminum Carbonate, which up to now had been considered impossible of production, is produced in the form of a chalky-white, easily powdered substance. It is tasteless, readily absorbed, and possesses mild styptic and astringent properties which adapt it for use in the treatment of diarrhœa.

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THE ACTINOMYCES BOVIS.

We have received the first number of the *Publications of the Massachusetts General Hospital*, which, it is announced, are to be issued from time to time as suitable material is available, such as selected papers and reports based upon clinical and pathological investigations conducted in the hospital and in its laboratories. The first issue consists of an essay entitled *The Biology of the Microorganism of Actinomycosis*, for which the Samuel D. Gross prize of the Philadelphia Academy of Surgery was awarded. The author is Dr. James Homer Wright, director of the Clinicopathological Laboratory of the Massachusetts General Hospital and instructor in pathology in the Harvard Medical School. The essay presents 56 pages of text and 57 very handsome reproductions of photomicrographs. It is manifestly the result of a very thorough study of the subject.

Dr. Wright does not accept the prevailing belief that the specific infectious agent of actinomycosis is widely disseminated in the outer world in the form of one of certain branching microorganisms which differ profoundly from *Actinomyces bovis* in having sporelike reproductive elements. These organisms, he thinks, should be grouped into a separate genus, *Nocardia*, and the infection produced by them should be termed nocardiosis.

marked by absence of the granules characteristic of actinomycosis.

He believes that the usual habitat of *Actinomyces bovis* is the secretions of the buccal cavity and gastrointestinal tract of man and certain animals, though he cannot at present prove that this is the case. "In these secretions," he says, "it should not exist in the characteristic forms seen in the lesions, but it probably will be found in the form of fragmental filaments growing in company with bacteria and not now differentiated from them." As to the foreign bodies often found in actinomycotic lesions, he does not think that they carry the microorganism into the tissues, but by their traumatic and irritative effect furnish a nidus for it on its accession from its normal habitat, and thus enable it to develop into characteristic colonies and produce the lesions of actinomycosis.

THE "SPOTTED FEVER" OF THE ROCKY MOUNTAINS.

A disease popularly termed "spotted fever" has been known in Idaho for about thirty years, and in Montana, especially in the Bitter Root Valley, ever since the first settlement of the region by white men. Other popular names for it are "tick fever," "black fever," "blue disease," and "black measles," and some of the learned have applied to it the name of piroplasmosis hominis on the theory that it is due to infection with a protozoon of the genus *Piroplasma*. Charles Wardell Stiles, Ph. D., chief of the Division of Zoology of the Hygienic Laboratory of the United States Public Health and Marine Hospital Service, has recently made a very thorough study of the disease, and the Treasury Department has published his account of the investigation. Dr. Stiles has failed to confirm the *Piroplasma* theory, and he has not identified the microorganism upon which the disease probably depends, but he has contributed an account of its clinical history and pathology that must go far toward establishing in the future positive knowledge as to its nature and ætiology.

According to Dr. Stiles, Maxey, in 1899 (after other observers had given briefer definitions), described the affection as "an acute, endemic,

non-contagious, but probably infectious febrile disease characterized clinically by a continuous, moderately high fever, severe arthritic and muscular pains, and a profuse petechial or purpurial eruption in the skin, appearing first on the ankles, wrists, and forehead, but rapidly spreading to all parts of the body." The exanthem is said to be lacking in some mild cases, and in others the nervous perturbation is of a character to suggest cerebrospinal meningitis, though no signs of that disease are found post mortem and Kernig's sign is not observed. The aetiology is manifestly an inviting field for further research, and Dr. Stiles's investigation will doubtless stimulate its further study.

THE DANGERS OF ELECTRICITY.

A useful pamphlet prepared by Mr. D. Kleber has recently been published in Berlin. It deals with the dangers of electricity, both in the form of lightning and in that of the strong artificial currents employed in electric transportation and the other electric devices that have come into extensive use of late years. The author directs his efforts largely toward minimizing danger by improvements in the conduction of the current, so that his work appeals more to engineers than to the medical profession. Nevertheless, the pamphlet conveys much information that is of interest to physicians, compiled largely from the writings of Eulenburg and Jellinek.

The author reminds us of the well known fact that the skin is much more resistant to the current than the organism as a whole, adding that there are certain parts of the body, such as the throat and the rectum, that are particularly vulnerable. Again, the condition or peculiarity of an individual in regard to resistance to the electric current is of an importance hardly secondary to that of the strength of the current, so that it is not very uncommon to read of men having survived the passage of a current generally accounted deadly, whereas in other instances a current of very low voltage has produced death.

There is a singular variation among animals as to their susceptibility to electricity, and the horse falls a victim to currents much less in intensity than those necessary to kill many other

animals. In the cases of both man and the lower animals it is difficult to establish a minimum lethal voltage, so diverse are the effects of the current in different instances; therefore it behooves boards of health and all persons concerned in electrical construction and installation to allow amply for any possible high degree of susceptibility.

SUBWAY VENTILATION.

In the issue of this *Journal* of November 12, 1904, shortly after the opening of the subway, I wrote an editorial entitled *The Problem of Ventilation of Our New Subway*. In it I referred to the already perceptible and very characteristic odor of badly housed humanity, and, although not a prophet, I ventured to wonder what this odor, perceptible after two weeks of use in cold weather, would be after some months of heavy travel in summer? The complaints about the well nigh unbearable atmosphere in the subway, which are making themselves manifest in recent editorials in our leading newspapers and in letters of protest against existing conditions by the public, are evidence that things have turned out as I feared. Not even the analysis of the subway atmosphere by a great and celebrated chemist, who attempted to prove that the air in the subway was as good as the air in our streets, if not better, or the wide distribution of a pamphlet which indicated that the subway was equal to a health resort, can efface the effect on the travelers which a half hour in a subway car now invariably produces.

In the editorial I viewed the subway situation from a bacteriological standpoint, pointing out that numerous pathogenic microorganisms thrived there when there were moisture and darkness; they lose their virulence or become entirely innocuous when exposed to sunlight and air for a sufficient length of time. The grippe bacillus, the coccus of pneumonia, and the tubercle bacillus are perhaps the three which are most to be feared when confined to darkness and moisture. According to Koch, for example, the tubercle bacillus can be killed by exposure to the direct rays of the sun in from a few minutes to two hours, according to the thickness of the mass of tuberculous matter exposed. Straus experimented

with thin layers of dried sputum, and after an exposure of half an hour the bacilli had lost their virulence and no cultures could be produced from them. If expectorating in street cars, exposed to light and air, but ill ventilated, must be considered a source of propagation of infectious diseases of the respiratory organs, how much more must this hold good of subway cars only artificially lighted and with still less fresh and pure air!

Some tests made by a distinguished bacteriologist, afterward made public, showed that scrapings taken from the iron railings and several samples of dust taken from other sources of the subway were relatively free from pathogenic microorganisms. Whether these tests justify the lessening of precautions urged by the Health Department to combat respiratory infectious diseases I will leave to the judgment of higher authorities. As for myself, I am willing to say that there do not exist sufficient well kept spittoons, and that the signs prohibiting expectorating are not taken care of or conspicuous enough even where they are allowed to remain.

Some medical man recently said that it was difficult to prove that a single case of tuberculosis had been developed from indiscriminately expectorating on the sidewalk and the floors of conveyances, public buildings, etc. Let me hope that the sanitary advisers of the Rapid Transit Company do not consider this as evidence against the utility of precautions. We cannot trace the bacillus from its ejection from the consumptive into the system of the non-consumptive, where it takes months to develop, but we know that the enforcement of sanitary regulations concerning the indiscriminate deposit of sputum has resulted in a marked reduction of the morbidity and mortality of tuberculosis. Before the inauguration of the educational campaign by Dr. Hermann M. Biggs, of the Department of Health, and the enactment of a law against indiscriminate expectoration in street cars and public places, the mortality among the inhabitants of New York was forty per cent. greater than it is now.

To begin by rendering the subway sanitary, at least from a bacteriological point of view, let the Interborough Company work hand in hand with

the Department of Health in enforcing rules against indiscriminate expectoration, and thus minimize the danger of spreading infectious respiratory diseases. We have recently been spared any serious epidemic of acute respiratory diseases, such as grippe, but I am free to say that I feel greatly apprehensive of the consequences should we be visited by such an epidemic before conditions in the subway have been improved. To trace an infection of grippe, an acute disease of rapid development, to its source, might be easier than to trace one of tuberculosis, which is of slow evolution, and to make the spitting regulations more effective in the subway, I would reverse the usual method of putting numerous signs, reading "Do Not Spit," and put a sufficient number of well kept spittoons in convenient places with the sign "Spit Here Only." I venture to say that this would be more effective than the negative command.

To be just to the Interborough Rapid Transit Company, let us say that, according to the publications, they are willing to follow any suggestion, coming from sanitary engineers or experienced contractors and builders, as to the best way of improving the condition of the subway air. Numerous more or less complicated schemes have been suggested to the authorities, but these seem to have been found ineffectual. Perhaps the reason for this is that there is no single method sufficient to render the atmosphere in the subway relatively pure and sanitary. Only by a combination of all can we look for any appreciable result. I will enumerate those which, in my humble opinion, should be resorted to, and I hope that the Interborough Company will take my criticism and suggestions in a spirit of kindness.

We all know the inestimable value of the subway to the metropolis, and the more sanitary subways we have, instead of nerve racking elevated roads, the better it will be for our community. Throughout the extent of the subway there should be as many air and light holes as possible. Run with the motive power at hand, pumps or blowers could be placed at appropriate intervals over the subway to draw out the bad air and to force in good air. These pumping stations, of

course, should not be placed in narrow streets, but preferably in squares, small parks, or wide streets. Not to make them unsightly, shrubs or trees should be planted about them. All signs attached to railings in stations should be removed at once to insure a freer circulation of the air. Along both walls of the subway road there should be placed powerful revolving fans, so that the air current produced by those on one wall should be in the opposite direction to that produced by the others. Good sized electric fans for special ventilation of the stations should be added to the system of fans along the tunnel in order to help purify the atmosphere. The roadbed of the entire subway line should be kept moist by a sprinkling apparatus which could easily be attached to a number of trains, and thus allay the dust. Whether oil or water is best suited for this purpose will have to be found out by experimenting with both liquids. The dust, which invariably must result from the dirt brought into the cars by the thousands of passengers on the soles of their shoes, should be combated by a daily, if not twice daily, cleaning of the floors by the now well tried pneumatic exhausting process. Smoking in stations should be prohibited, and the broom for the purpose of dry sweeping should be banished. Mops alone should be used to clean the platform and stairs; the floors should be mopped regularly after the rush hours. While not exactly appertaining to the subject of ventilation, it would give additional comfort to the traveling public if the cars were remodelled and all new ones constructed like those in use on the Brooklyn Bridge or in the Boston Subway, with doors opening in the middle as well as at the ends of the car. The middle door would of course serve for passengers to leave the car, and the end door for those entering. Walker's system for the better ventilation of the cars should be given a thorough trial. In this system holes open from the "sash deck" toward the roof. A shingle extends outside the car, between the holes. As the car moves, the shingle's interference throws the fresh air into the first opening, while circulation forces the impure air out at the second. In addition, I would suggest numerous small fans, distributed throughout the cars, which should be put in motion on

especially hot days. I venture to say that it will well pay the Interborough Rapid Transit Company even to have a corps of men, especially trained, to look after the proper ventilation and sanitation of the subway.

I am convinced that by a combination of all these suggestions the Rapid Transit Company will render travel in the subway much more hygienic and much more pleasant. The health of its own employees will be better, the service more efficient, and accidents rarer. In an ever growing metropolis, like New York, the subway must become our most important means of travel between our homes and places of business. We shall have to have more subways and longer ones. Therefore it is the duty of the Interborough Rapid Transit Company to render this means of transportation as sanitary as possible, in its own interest as well as that of the millions of New York's citizens who are and will be obliged to use it all the year around.

S. A. KNOPF.

THE SUBWAY TEMPERATURE.

Concerning the air of the New York subway in its serious relations to the health of those who travel in it or are employed on the trains, Dr. Knopf treats in his usual vigorous way in this issue of the *Journal*. As to its temperature—a matter that may prove to be more than one of comfort or discomfort—it must be conceded that it has lately been high. Recalling, however, the fact that during the cold weather of last winter the subway was comfortably warm, we may assume perhaps that during a period of summer heat of several days' duration—which has not yet happened this year—the temperature, like that of a cellar, will be lower in the subway than above ground. This consideration should, of course, not be held as absolving us from every effort to renew and purify the air in the conduit.

THE FINAL FATE OF PARAFFIN INJECTIONS.

Some doubt as to the permanency of the cosmetic and other desirable results of paraffin injections may have arisen as the result of investigations by Eschweiler, who is reported to have found an injected mass in process of disintegration at the end of a year. But later observations by Broeckaert, reported at a recent meeting of the French Society of Rhinology, Otolology, and Laryngology (*Presse médicale*, May 27th), tend to show that encystment occurs, rendering absorption unlikely.

News Items.

Society Meetings for the Coming Week:

MONDAY, June 10th.—New York Academy of Medicine (Section in Ophthalmology); New York County Medical Association; Hartford, Conn., Medical Society; Chicago Medical Society.

TUESDAY, June 20th.—New York Academy of Medicine (Section in General Medicine); Buffalo Academy of Medicine (Section in Pathology); Ogdensburg, N. Y., Medical Association; Syracuse, N. Y., Academy of Medicine; Medical Society of the County of Kings, N. Y.; Baltimore Academy of Medicine.

WEDNESDAY, June 21st.—New York Academy of Medicine (Section in Genitourinary Surgery); New York Society of Dermatology and Genitourinary Surgery (private); Woman's Medical Association (New York Academy of Medicine); Medicolegal Society, New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society.

THURSDAY, June 22nd.—New York Academy of Medicine (Section in Obstetrics and Gynecology); New York Celtic Medical Society; New York Orthopaedic Society; Brooklyn Society for Neurology; Pathological Society of Philadelphia; Church Hill Medical Society of Richmond, Va.

FRIDAY, June 23rd.—New York Society of German Physicians; Philadelphia Clinical Society; Philadelphia Laryngological Society.

SATURDAY, June 24th.—New York Medical and Surgical Society (private); Harvard Medical Society, New York (private).

NEW YORK.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 10, 1905:

	June 10—		June 3—	
	Cases.	Deaths.	Cases.	Deaths.
Measles	770	18	727	17
Diphtheria and croup	322	30	320	27
Scarlet fever	152	13	152	14
Smallpox	1	1	1	1
Chickenpox	120	1	113	1
Tuberculosis	339	167	393	142
Typhoid fever	49	10	78	4
Cerebrospinal meningitis	52	57	21	60
	1,805	295	1,815	264

Endowment for Nassau Hospital.—Thomas W. Albertson, treasurer of the Nassau Hospital Association, and cashier of the Nassau County Bank, has received from Mrs. James R. Willets, a check for \$3,000, the amount to be used for endowment of a bed at the Nassau Hospital, to be known as the James R. Willets bed, in memory of her late husband.

Tuberculosis Among Negroes.—A special class for the treatment of pulmonary tuberculosis among negroes has been started at the Department of Health's Clinic for the Treatment of Communicable Pulmonary Diseases. This class will be held on the evenings of Tuesday, Thursday, and Saturday of each week, from 8 to 9 p. m., and only negroes will be seen on those days and hours. The establishment of such a class was due to a request made by the Afro-American physicians of New York; they believing that the colored people would attend such a special class more readily. The physicians in attendance are negroes, and arrangements have been made for the services of a colored nurse. The physicians are:

Dr. P. A. Johnson, 203 West Thirty-third Street, laryngologist; Dr. W. H. Johnson, 103 West Twenty-ninth Street; Dr. A. A. Kellogg, 151 West Fifty-third Street; Dr. A. S. Reed, 314 West Fifty-second Street; Dr. J. F. Thorpe, 418 West Thirty-sixth Street; Dr. E. P. Roberts, 242 West Fifty-third Street, attending physicians.

These physicians were recommended by the Medico-chirurgical Society (colored) of New York at a special meeting held on June 4th. Treatment and medicines are, of course, free; and the patients will be visited at their homes by the tuberculosis nurses of the department. Negroes may attend any of the other classes of the clinic, which is open daily from 9 to 4, and on Monday, Wednesday, and Friday evenings from 8 to 9.

PHILADELPHIA.

Marriages.—Dr. E. Forest Bickel, of Shamokin, Pa., and Miss Florence Simons were married on June 7th.

Dr. Mervyn Ross Taylor and Miss Jeannette Reilly were married on June 7th.

Dr. Howard R. Faringer, of Mount Holly, N. J., and Miss Gertrude E. Leopold were married on June 8th.

Scientific Society Meetings for the Week Ending June 24th.—Tuesday, June 20th, Dermatological Society. Wednesday, June 21st, Philadelphia County Medical Society (business meeting for members only); Association of Clinical Assistants, Wills Hospital. Thursday, June 22nd, Pathological Society; Entomological Section, Academy of Natural Sciences. Friday, June 23rd, Northern Medical Association.

The Annual Meeting of the Botanical Society of Pennsylvania was held in Biological Hall, University of Pennsylvania, on June 3rd. Among the collections exhibited was one from Arizona by Mrs. W. F. Ladds, one of drugs used by the Indians by Dr. L. Rosa Minoka, and one from Santa Barbara, Cal., by Miss Martha B. Shoemaker. Dr. Adolph W. Miller presided at the meetings.

The Health of the City.—The following cases of transmissible diseases were reported to the Bureau of Health for the week ending June 3, 1905:

	Cases.	Deaths.
Typhoid fever	130	13
Scarlet fever	53	1
Chickenpox	55	0
Diphtheria	92	9
Cerebrospinal meningitis	3	1
Measles	65	2
Whooping cough	10	2
Tuberculosis of the lungs	26	69
Pneumonia	27	24
Erysipelas	4	1
Tetanus	1	1

The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 10; dysentery, 1; diarrhea and enteritis under two years, 21. The total deaths were 450, in an estimated population of 1,438,318, corresponding to an annual death rate of 16.20 per 1,000 population. The total infant mortality was 98; under one year, 80; between one and two years, 18. There were 39 still births, 24 males and 15 females. The temperatures were not excessively high; the maximum recorded by the weather bureau was 82° on

the 20th. There were thunderstorms on May 28th, May 30th, and June 2nd. The total precipitation was 0.71 inch.

Charitable Bequests.—By the will of Miss Caroline Stevenson, who died on June 4th, the Presbyterian Home for Widows and Single Women in the State of Pennsylvania receives \$1,000 and the Presbyterian Orphanage \$5,000.

The thirty-eighth anniversary of the Methodist Episcopal Home for the Aged, at Belmont and Edgeley Avenues, was held on June 8th. Three thousand dollars were received in donations and as the proceeds of a sale held on the grounds.

Miss Eliza Wood has donated \$10,000 to the Home of the Merciful Saviour for Crippled Children for the endowment of two beds.

Personal.—Dr. B. W. Fassett, of Courtney, N. C.; Dr. E. L. Erhard, of Glassport, Pa., and Dr. Arthur A. Pratte, of Hinsdale, N. H., are registered at the Philadelphia Polyclinic.

Dr. R. Tait McKenzie demonstrated Jiu-jitsu methods before the eighth annual conference of Young Men's Christian Association Physical Directors of Pennsylvania on June 10th.

Dr. Edward Martin, Director of the Department of Public Health and Charities, was painfully but not seriously injured in a trolley accident on June 7th. Dr. Martin was still confined to his room on the 11th instant, but was improving steadily.

Resolutions Adopted by the Alumni of Jefferson Medical College:

Whereas, The Alumni Association of the Medical Department of the University of Pennsylvania have recently honored Professor William S. Forbes, an alumnus of the Jefferson Medical College, by the presentation to him of a loving cup, with resolutions of esteem, in recognition of his successful efforts in securing the passage of the Anatomy Act of 1883, in the State of Pennsylvania, and

Whereas, The agreeable relations already existing between these two schools of medicine are thus augmented and individual friendships are more firmly cemented by such action; therefore, be it

Resolved, That the Alumni Association of the Jefferson Medical College does hereby express to the Alumni Association of the Medical Department of the University of Pennsylvania, its earnest appreciation of the honor bestowed by this visible and lasting evidence of their professional regard for one of our most worthy and beloved alumni, and

Resolved, That the Alumni Association of the Jefferson Medical College recognizes the sincerity and felicity of the presentations so gracefully voiced by Professor George A. Piersol; and, further, be it

Resolved, That a copy of these resolutions be sent to Professor George A. Piersol, representing the Alumni Association of the Medical Department of the University of Pennsylvania, to Professor William S. Forbes, to the trustees of the Jefferson Medical College, and to the leading medical journals. By order of the Executive Committee of the Alumni Association of the Jefferson Medical College; Charles S. Barnes, recording secretary.

Opening of Summer Outing Grounds for Poor Children.—The Country Nursery at Chellen Hills opened for the summer on June 5th. In this charitable institution the children of the poor, sometimes with their caretakers, are allowed to spend a week in the country. Many children go to the nursery for the day, the institution being reached by the trolley lines to Chestnut Hill.

Last year 10,000 children and their caretakers visited the nursery.

The Children's Sanitarium at Red Bank, N. J., was opened for the summer on June 10th. The sanitarium, which is administered by the Sanitarium Association of Philadelphia, provides a day's outing on the banks of the Delaware River for the children of the poor of Philadelphia. The society owns two steamers, which make five trips each way daily. Last year 97,000 people were entertained at Red Bank; 12,521 adults, 7,779 infants under two years of age, 23,216 children between two and five years of age, 47,759 children between five and ten years of age, and 5,785 children over ten years of age. The property consists of bathing pools, games, amusements, hospital, diet kitchen, dining rooms, and a physician and nurses are in attendance. The expenses of the association are met by private subscription and an appropriation from the State. The following are the officers of the association:

President, George D. McCreary; vice-president, Monroe Smith; secretary, Dr. Eugene Wiley; treasurer, William S. J. Wetherill; solicitors, Attorney General Hampton L. Carson, Norman Grey, and Alexander L. Rogers. The board of managers includes also Dr. William B. Atkinson, Charles Thackara, James D. Winsor, John F. Coombs, Samuel Y. Heebner, W. Atlee Burpee, John Roberts, Edwin S. Dixon, and William E. Speakman.

GENERAL.

The Medical Missionary Society, of Nova Scotia, elected the following officers on May 30th: President, Dr. Stewart; vice-presidents, Dr. MacDonald and Mrs. H. Harrington; treasurer, Dr. Cowie; corresponding secretary, Mrs. Dickey; recording secretary, Dr. Weaver.

The City and Female Hospitals, of St. Louis.—The following thirty-two physicians were successful in the recent examination held in St. Louis to determine eligibility to internship in the two institutions mentioned: City Hospital:

Dr. Walter Fischel, Dr. M. D. Schoemaker, Dr. Conrad B. Vonnahme, of East St. Louis; Dr. C. B. Caldwell, of Monticello, Ill.; Dr. Eugene J. Brihach, Dr. B. C. Kern, Dr. P. D. McMillan, of Maryville, Mo.; Dr. Louis K. Guggenheim, Dr. Jesse W. Hale, Dr. R. D. Alexander, of Oak Ridge, La.; Dr. George M. Park, Dr. V. B. Kieffer, Dr. H. F. Lincoln, Dr. Jerome E. Cook, Dr. Leo C. Huelsmann, Dr. William J. Carter, of Gays, Ill.; Dr. Bert M. Brewster, of Macedonia, Mo.; Dr. Edmund F. Tackey, Dr. A. M. Gregg, Dr. John A. Wilkens, Dr. A. J. Chalkley, Dr. Sherwood Moore, Dr. George Hawkins, of Paris, Mo.; Dr. Robert C. Strode.

The doctors receiving Female Hospital assignments are:

Dr. C. M. Barr, Dr. Z. D. Lumley, of Kampsville, Ill.; Dr. Edwin L. Sheahan, Dr. Roy E. Mason, Dr. Max W. Jacobs, Dr. Clarence E. Betts, of Lovington, Ill.; Dr. Elmer E. Curtis, Dr. Oscar S. Coppedge.

The Johns Hopkins Hospital School for Nurses graduated the following on May 24th:

Corra Baker, of Stillman Valley, Ill.; Sarah Barnes, of Baltimore; Emma Batterman, of Brooklyn, N. Y.; Bessie Beck, of West Hartlepool, Eng.; Katrine Blackinton, of Blackinton, Mass.; Julia Bradfield, of La. Grange, Ga.; Mary Bunting, of La Crosse, Wis.; Mary Carter, of Baltimore; Ina Chambers, of Woodstock, Can.; Mollie Cook, of Baltimore; Alice Dammann, of Baltimore; Lillian d'Espard, of Toronto, Can.; Martha Ellison, of Richmond, Va.; Helen Erskine, of Newville, Pa.; Catharine Finney, of Harris-

burg, Pa.; Elizabeth Geddes, of Toronto, Can.; Isabel Grant, of Charlottesville, Va.; Ida Green, of Toronto, Can.; Elsie Hardenbergh, of Minneapolis, Minn.; Frances Hewes, of Catonsville, Md.; Clara Illig, of Ilion, N. Y.; Dorcas Jamieson, of Toronto, Can.; Gertrude Jones, of Wilkesbarre, Pa.; Lucy Kent, of Wytheville, Va.; Sarah Knox, of New York; Kate Lownsbrough, of Toronto, Can.; Cora McCabe, of Baltimore; Frances McQuaide, of Harrisonburg, Va.; Helen Mullen, of Hamilton, Can.; Ruby Riley, of Brooks, Ky.; Estella Rooth, of Toronto, Can.; Mary Rosser, of Rustburg, Va.; Lila Simpson, of Frederick, Md.; Edith Smith, of Huntington, N. Y.; Carrie Sparrow, of Montreal, Can.; Katherine Steelman, of Philadelphia, Pa.; Marion Vannier, of Sierra Madre, Cal.; Helen Wadland, of Woodstock, Can.; Helen Wilmer, of Baltimore.

North Carolina State Board of Health.—The annual meeting of the State Board of Health was held recently in Greensboro during the session of the State Medical Society. Four of the nine members retired this year. The State Medical Society filled two of the vacancies by the reelection of Dr. George G. Thomas, of Wilmington, N. C., whose term was expiring, and Dr. Thomas E. Anderson, of Statesville, N. C. The Governor appointed two members also, naming Dr. J. Howell Way, of Waynesville, N. C., and Dr. W. O. Spencer, of Winston, N. C. All the appointees are regarded as men of unusual ability. Dr. Thomas is the chief surgeon of the Atlantic Coast Line Railroad, and has been identified with the work of the board for a number of years. Dr. Way has been very active in the affairs of the profession, and has done good work on the State Board of Medical Examiners and as secretary of the State Medical Society for some years past has done much to make the revision plan of the American Medical Association a success in North Carolina. His appointment by the Governor gave great satisfaction to the profession. Dr. Thomas is well known to the profession, having been a member and secretary of the State Examining Board for several years. Dr. Spencer is the family physician of the Governor, and stands well in the profession in his section of the State.

Personal.—Dr. P. W. Ward has resigned the position of president of the Cleveland, O., Board of Health, and has been succeeded by Dr. J. D. McAfee.

The Maryland General Hospital staff for the ensuing year consists of: Resident physician, Dr. L. B. Cravens; assistants, Dr. Robert L. Blake, Dr. Ernest H. Gaither, Dr. B. W. Carey, Dr. Clarence B. Collins; in charge of lying-in hospital, Dr. George Rosenbaum; resident pathologist, Dr. L. E. Langley.

To take up the practice temporarily of her father and uncle in Rochester, Mich., Dr. Millie E. Wilson, for two years house physician at Emergency Hospital, Detroit, and the first woman physician to hold that position, has resigned from the hospital staff, and Dr. Margaret R. Otis has taken up her work.

Dr. Ira Applebee, of 318 South Pearl Street, has been appointed surgeon to the bureau of fire, Albany, N. Y., vice Dr. Louis Le Brun, resigned, to go to Europe. Dr. Applebee took up his new duties on June 7th.

Dr. J. J. Hoffmann, who graduated from the Ohio Medical College about two years ago, and

who for the past year has been identified with the German Deaconess Hospital, of Cincinnati, has been tendered an important position as a member of the medical staff of the Indiana State Insane Asylum.

The members of the Susquehanna County Medical Association, of Binghamton, N. Y., gave a banquet to Dr. W. L. Richardson at the Tarbell House on June 7th, in honor of his ninetieth birthday. A large number of physicians were present.

American Pædiatric Society.—This society will hold its seventeenth annual meeting at the Sagamore, Lake George, N. Y., June 19, 20, and 21, 1905. Programme:

The Use of Sodium Citrate in Infant Feeding, by Dr. Henry L. K. Shaw, of Albany; High Per Cent. Fat in a Mother's Milk, Producing Severe Enterocolitis in Her Infant, by Dr. W. P. Northrup, of New York; Acid Auto-intoxication in Infancy and Childhood, by Dr. John Lovett Morse, of Boston; Case of Sepsis in the Newly Born, by Dr. A. Jacobi, of New York; A Case of Acute Yellow Atrophy of the Liver in a Child, by Dr. A. H. Wentworth, of Boston; Presentation of a Heart Case, by Dr. Henry L. K. Shaw, of Albany; Report of a Case of Stenosis of the Pylorus in Infancy, by Dr. J. P. Crozer Griffith, of Philadelphia; Two Operative Cases of Pyloric Stenosis in Infants, by Dr. Thomas Morgan Rotch and Dr. Maynard Ladd, of Boston; A Case of Congenital Extrophy, with Extroversion of the Bladder, and Other Anomalies, by Dr. A. C. Cotton, of Chicago; A Plea for the More Timely Use of Intubation in Laryngeal Stenosis, and for the Use of Tracheotomy in Certain Neglected Cases, by Dr. E. W. Saunders, of St. Louis; On a Subject to be Announced, by Dr. F. Huber, of New York; Congenital Defect of the Brain, by Dr. George N. Acker, of Washington; The President's Address, by Dr. Charles G. Jennings, of Detroit; A Case of Acute Lymphatic Leucæmia in a Child Aged 14 Years, by Dr. A. D. Blackader and Dr. A. D. Gillis, of Montreal; A Study of the Leucocyte Count in Bronchopneumonia, Lobar Pneumonia, and Empyema of Infants and Children, by Dr. Henry Heiman, presented by Dr. Henry Koplik, of New York; Leucocytosis in Influenza, by Dr. F. S. Churchill, of Chicago; A Case of Uncinariasis in a Child, by Dr. Samuel S. Adams, of Washington; An Unusual Case of Tuberculosis in an Infant, by Dr. Charles W. Townsend, of Boston; Temperature, Pulse, and Respiration Relationships in Infancy and Childhood, by Dr. Myer Solis-Cohen, presented by Dr. J. P. Crozer Griffith, of Philadelphia; Milky Non-Fatty Effusion in a Case of Hodgkins's Disease, by Dr. D. L. Edsall, of Philadelphia; The Results in Children of the Decapsulation of the Kidneys for Nephritis, with the Report of an Apparently Successful Case in a Child Aged Twenty-six Months, by Dr. Edwin E. Graham, of Philadelphia; An Analysis of 141 Cases of Typhoid Fever in Children, by Dr. Alfred Hand, Jr., and Dr. J. C. Gittings, of Philadelphia; Note on the Frequency of Empyema in Children Under Two Years of Age, with Remarks on the Diagnosis of Empyema in Infancy, by Dr. D. J. Milton Miller, of Philadelphia; The Eye Symptoms of Infantile Scurvy. Autopsy—Large, Infected Retrobulbar Hæmatoma, by Dr. Irving M. Snow, of Buffalo.

Examination for Panama Canal.—Hospital Interne (Male). The United States Civil Service Commission announces an examination on July 12 and 13, 1905, to secure eligibles from which to make certification to fill vacancies in the position of hospital interne under the Isthmian Canal Commission on the Isthmus of Panama. Two days will be required for this examination. As an insufficient number of eligibles resulted from the examination held on January 18th, for this position, qualified persons are urged to enter

this examination, to which men only will be admitted. Each applicant for the Isthmian Canal Service will be required to submit to the examiner, on the day he is examined, a photograph of himself, taken within three years, which will be filed with his examination papers as a means of identification in case he receives appointment. An unmounted photograph is preferred. The date, place, and kind of examination, the examination number, the competitor's name, and the year in which the photograph was taken should be indicated on the photograph. Full information concerning transportation to the Isthmus, conditions of employment, etc., is contained in Form 1417. Age limit, 20 to 30 years on the date of the examination; salary, \$50 a month, with board and quarters, provided that if appointees are retained in the position of interne after one year they will be paid \$125 a month. Only graduates of reputable medical schools having a three years' course will be admitted to this examination. The examination will consist of the subjects mentioned below, with the relative weights indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. Letter writing (the subject matter on a topic relative to the practice of medicine).....	5
2. Anatomy and physiology (general questions on anatomy and physiology, and histological or minute anatomy).....	15
3. Chemistry, materia medica, and therapeutics (elementary questions in inorganic and organic chemistry; the physiological action and therapeutic uses and doses of drugs).....	10
4. Surgery and surgical pathology (general surgery, surgical diagnosis; the pathology of surgical diseases).....	20
5. General pathology and practice (the symptomatology, aetiology, diagnosis, pathology, and treatment of disease).....	25
6. Bacteriology and hygiene (bacteriological methods, especially those relating to diagnosis; the application of hygienic methods and prophylaxis and treatment).....	10
7. Obstetrics and gynecology (the general practice of obstetrics; diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical).....	15
Total.....	100

This examination is open to all citizens of the United States and also to aliens who comply with the requirements, provided that aliens appointed for service on the Isthmus of Panama shall not be eligible for appointment or transfer to any other branch of the public service. The county officer's certificate in the application form need not be executed. No person will be appointed for service on the Isthmus who is not physically sound and in good health. Persons appointed to positions under the Isthmian Canal Commission will be expected to proceed promptly to the Isthmus. Persons examined for positions under that commission will not be eligible, as the result of such examination, to positions in the United States or Philippine services. Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application form 1312. The medical certificate in form 1312 must be filled in by a reputable practising physician. No application will be accepted

unless properly executed and filed with the commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application. As examination papers are shipped direct from the commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The commission will, therefore, arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

Statement of Mortality in Chicago for the Week Ending June 10, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations of 1,990,750 for 1905 and of 1,932,315 for 1904:

	June 10, 1905.	June 3, 1905.	June 11, 1904.
Total deaths, all causes.....	314	467	420
Annual death rate per 1,000.....	15.46	23.22	21.36
By sexes:			
Males.....	307	245	247
Females.....	207	221	173
By ages:			
Under 1 year.....	96	73	66
Between 1 and 5 years.....	44	71	32
Over 60 years.....	108	87	73
Important causes of death:			
Acute intestinal diseases.....	18	23	24
Apoplexy.....	19	11	15
Bright's disease.....	46	37	25
Bronchitis.....	7	14	16
Consumption.....	70	47	63
Cancer.....	19	17	21
Convulsions.....	9	6	5
Diphtheria.....	4	8	6
Heart diseases.....	48	59	33
Mosles.....	12	9	1
Nervous diseases.....	12	24	12
Pneumonia.....	73	49	52
Scarlet fever.....	1	1	3
Smallpox.....	1	0	0
Suicide.....	10	14	8
Stroke.....	1	0	0
Typhoid fever.....	8	7	1
Violence (other than suicide).....	38	31	36
Whooping cough.....	8	15	3
All other causes.....	120	95	97

A sunstroke in April and overcoats, wool blankets, and another sunstroke in June are the sufficient explanation of the increase of mortality in of the two most healthful months in the year. The 47 more deaths than in the previous week and the 94 more than in the corresponding week of 1904 represent increases of 10.4 and 18.4 per cent., respectively, in the annual death rates per 1,000 of the population. The erratic weather is chiefly responsible for the 23 more deaths from consumption and the 24 more from pneumonia than reported during the week of June 3d. These two of the most important causes of death exhibit some remarkable features, comparing the two pneumonia seasons of this year and last. Consumption shows an increase of 48.8 per cent. in its mortality rate, while pneumonia shows a decrease of 14.3 per cent. Following are the figures for the two seasons:

PNEUMONIA, CONSUMPTION AND ALL CAUSES.—TWO PERIODS OF 224 DAYS COMPARED.

	Deaths from—	All causes.	Consump- tion.	Pneu- monia.
October 30, 1904, to June 10, 1905.....	18,868	2,044	2,950	
November 1, 1903, to June 11, 1904.....	18,433	1,950	3,354	
Per cent of total deaths—				
October 30, 1904, to June 10, 1905.....	12.12	17.48		
November 1, 1903, to June 11, 1904.....	10.58	18.19		
Death rate per 10,000 of population per annum—				
October 30, 1904, to June 10, 1905.....	16.85	24.25		
November 1, 1903, to June 11, 1904.....	11.35	28.32		

Pith of Current Literature

LYON MEDICAL

May 14, 1905.

1. Thrombophlebitis of the Longitudinal Sinus in a General Paralytic, By M. LANNOIS and A. JAMBON.
2. A Case of Subphrenic Empyema Diagnosed Exclusively by Means of the Radioscope. Basculation of the Two Parts of the Diaphragm, By E. DEVIC and A. CHALIER.

1. **Thrombophlebitis of the Superior Longitudinal Sinus.**—Lannois and Jambon report a case of general paralysis which was following a rapid course when an unexpected complication took place. A little while after a lumbar puncture the patient had a sudden epileptiform attack, followed by hemiplegia of the right side. He soon after died and autopsy revealed the presence of a thrombosis of the superior longitudinal sinus.

2. **Subphrenic Empyema.**—Devic and Chaliere report a case in which a diagnosis of subphrenic empyema was made with the radioscope, although no physical signs of the presence of such a condition could be made out. The diagnosis was confirmed by exploratory puncture and the abscess was opened on the following day. Another interesting observation made with the radioscope was that the two portions of the diaphragm moved in opposite directions like see-saw, a true movement of basculation. The patient died eight days after the operation was performed.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

June 10, 1905.

1. Differential Diagnosis Between Coxa Vara and Other Static, Inflammatory, and Traumatic Affections of the Hip Joint, By NICHOLAS SENN.
2. Chorioepithelioma Malignum. With Report of a Case, By P. BROOKE BLAND.
3. Proprietary Therapeutics, By HORATION C. WOOD, JR.
4. Federal Control of Vaccine Virus, By JOHN F. ANDERSON.
5. The Advantages of Expeditious Surgical Work, By ROBERT T. MORRIS.
6. Treatment of Psoriasis by the General Practitioner, By DREUW.
7. What is Dyspepsia? By FENTON B. TURCK.
8. Puerperal Arthritis, By EDWARD C. MORSE.
9. The Sequence of the Pathological Changes in Appendicitis; a Study of the Significance of the Lesions Found in Different Stages of Appendicitis, Based on the Pathological Findings in a Series of Operative Cases, By E. MACD. STANTON.
10. Immunity. Chapter XVI (Concluded).

1. **Coxa Vara.**—Senn writes an elaborate paper on the symptomatology, diagnosis, and treatment of coxa vara. Outside of Germany, the condition is little understood, hence the importance of calling attention to it. A genuine coxa vara is characterized by a non-inflammatory softening of the neck of the femur, accompanied or followed by a downward bending and torsion. The condition has been thought to be an expres-

sion of late rachitis. It occurs usually between the ages of fourteen and eighteen, though the author reports a case which occurred in a man of forty-two years. The condition is most often mistaken for coxitis.

2. **Chorioepithelioma.**—Bland reports one case of chorioepithelioma. With this for a text he writes a very complete formal paper on the subject.

5. **Expeditious Surgical Work.**—Morris reports briefly twelve operations (consecutive) during which he was timed. No special effort was made to break any records. The author holds that after a patient has been on the table over fifteen minutes his resistance against infection is greatly reduced. It is well therefore to try to finish most operations within fifteen minutes.

6. **Psoriasis.**—Dreuw recommends the following ointment for psoriasis:

R Acid. salicylic. 3iiss;
Chrysarobin, Ol. rusci (birch tar), aa. 3v;
Sapo. virid., vaseline, aa. 3viiss.

For from four to six days the ointment is applied by the aid of a stiff brush to the affected area (after this has dried somewhat it is well to apply a little starch or zinc powder). On the fifth or sixth day the patient starts taking hot baths daily for from one to three days, and after the bath vaseline is to be well rubbed in from one to three times a day. This course of treatment, which embraces a period of eight days, may be repeated several times, according to the severity of the disease, but as a rule the psoriasis patches disappear soon after the first treatment.

8. **Puerperal Arthritis.**—Morse contends that every arthritis occurring during the puerperium is septic in character, and that there is really no such thing as an arthritis of a distinctly rheumatic character.

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 8, 1905.

1. The Surgery of Renal and Ureteral Calculi.
 - (a) Observations on Ureteral Calculi, By ARTHUR TRACY CABOT.
 - (b) The Cases of Renal and Ureteral Calculi at the Boston City Hospital, By JOHN H. CUNNINGHAM, JR.
 - (c) Results of Cases Operated Upon for Stone in the Kidney, Massachusetts General Hospital from 1897 to 1904, Inclusive, By HUGH CABOT.
 - (d) Notes on Operations for Renal and Ureteral Stone, By PAUL THORNDIKE.
 - (e) The Diagnosis of Renal and Ureteral Calculi, By BENJAMIN TENNEY.
 - (f) The Aids to Diagnosis of Renal Calculi Obtained Through the Examination of the Urine, By H. F. HEWES.

1. **Surgery of Calculi.**—Cabot reviews in a very brief way the chief points of interest concerning ureteral calculi. He reports nine personal cases and points out the practical lessons,

from the operative point of view, that may be drawn from each case. (b) Cunningham analyses forty-eight cases of renal calculus, nineteen of which were operated upon, and one case of ureteral calculus which have been treated at the Boston City Hospital. (c) Cabot, in his study of the cases of calculus treated at the Massachusetts General Hospital, excludes, for one reason or another, all but twenty-six cases. On these patients, thirty-three operations were performed, and six died. As to the permanency of results: Of the 20 patients who survived operation, 13 have either been seen, or have been communicated with, recently. Of these 13, 10 have been entirely relieved and are well to date. With the remaining three the situation is as follows: One had large double calculi, and two operations were done, separated by an interval of a few months. He has been entirely relieved of pain, from which he suffered for years, but still continues to have a purulent urine and occasional attacks of irritability of the bladder. One still has pain, referred to the bladder and prostate, for which no cause has been found. There has been no recurrence of pain or bleeding from the kidney. One continues to have pain in the kidney and pass gravel at irregular intervals, as before operation. (d) Thorndike discusses only certain points in the technics of operation upon the kidney or ureter. His observations are based on his personal experience, and are somewhat disconnected and fragmentary. (e) Tenney systematically covers the diagnosis of renal and ureteral calculi. His paper is in two parts. In the first he discusses the usual data upon which a diagnosis is based, that is, the symptomatology and the condition of the blood and of the urine. In the second part he discusses the special means of diagnosis; the x ray, catheterism of the ureters, and cystoscopy. (f) Hewes asserts that the actual feasibility of the diagnosis of calculus by urinary examination may be stated as follows: The presence of gravel or a movable stone in the kidney or pelvis or ureter is in all probability recognizable by a urinary examination in the vast majority of cases, provided that the urine is obtained at the time of the acute process or attack. A fixed stone in the kidney or renal pelvis, on the other hand, shows as a rule no definitely diagnostic signs in the urine. Occasionally, as in the instance of the excretion by the ureter of an ammoniacal urine, it may do so. In the majority of cases of this affection we have simply the signs of a pyelitis of varying grades. Where conditions are quiescent a slight sediment of leucocytes alone occurs. Where inflammation is active large quantities of pus and some blood and casts are seen. If decomposition of urea occurs in the pelvis we have the phosphatic deposits with the ammoniacal urine. The existence of these pyelitis signs, together with other symptoms, such as pain or the history of previous intermittent spells of hæmaturia, is always suggestive, but nothing more than suggestive. In certain cases of stone the passages may become occluded, under which condition no evidence of disorder may be found in the urine.

MEDICAL NEWS.

June 10, 1905.

1. Mosquitoes of Florida, By HIRAM BYRD.
2. Suicide; Its Consideration from a Medical Standpoint, By RALPH WAIT PARSONS.
3. Immigration—The Medical Examination of Immigrants and What the Nation is Doing to Debar Aliens Afflicted with Trachoma, By GEORGE W. STÖNER.
4. "Sore Throat": As Caused by Systemic Conditions, By NATHAN G. WARD.
5. Medicinal Treatment of Affections of the Thyroid Gland, By CHARLES M. GRANDY.
6. A Very Simple Method to Locate the Stomach, By MARK I. KNAPP.
7. Drainage After Laparotomy, By L. A. EWALD.

1. **Mosquitoes.**—Byrd asserts that Florida can boast of raising about twenty-two species of mosquitoes. The whole of North America, according to Giles, harbors 36 species, and recently it has been alleged that New Jersey alone contains the same number. The world at large can probably boast of 500 species, though to date only about 300 have been described and accepted. From the sanitary point of view the *Anopheles* and *Stegomyia* are the most important. The former are the malarial carriers (Florida has five species of this genus), and the second are the yellow fever carriers (Florida has one species, the *Fasciata*, which, however, is accused of being the real and only culprit of the genus). In addition to these two very important diseases, it is known that mosquitoes transmit the filaria, probably the trypanosoma, and the specific cause of dengue. They are also held responsible for certain animal diseases. The author discusses in a general way the habits of mosquitoes and their mode of propagation, and gives advice as to the best way of ridding towns and communities of these dangerous pests.

2. **Suicide.**—Parsons asserts that suicides have doubled in frequency during the past ten years. He believes that if the subject once attracts the attention it deserves, suicides among the mentally afflicted can be materially diminished. In order to gain a clear understanding of the subject, it is well to consider it under three heads: (1) Suicide which occurs as the result of an imperative conception; (2) suicide of the sane; (3) suicide of the insane. Very much condensed, the author's advice amounts to this: The insane, with suicidal tendencies, should be watched by competent attendants and not by members of the family or other unskilled persons. Means of self-destruction should be kept out of their way.

3. **Immigration.**—Stoner describes the methods by which the government inspects immigrants. Last year about eight thousand aliens were excluded on medical grounds. Of these, nearly one tenth were excluded at the port of New York, on account of trachoma.

5. **Affections of the Thyroid Gland.**—Grandy summarizes his advice thus: We may have goitres with excessive secretion or goitres with too little secretion, which can as a rule be distinguished by the pulse rate. When the symptoms are not too urgent try thyroid extract and iodine in the

latter and rest treatment and blood from thyroidectomized animals in the former class, but, if these measures are of little avail and the symptoms demand it, do not hesitate to call on a competent surgeon to partially remove the gland.

6. **To Locate the Stomach.**—Knapp recommends the following, not very accurate, method of locating the stomach: The patient sits or stands, with the clothing freed, but the abdomen not uncovered. He is made to drink a glass of ice water. In about half a minute the cold from the stomach will spread to the overlying skin and can be recognized by the examiner's hand.

7. **Drainage.**—Ewald holds that it is an impossibility to effectually drain the peritoneal cavity. Drainage has its chief use in cases in which the intestines have been injured and repaired, but in which there is some doubt as to whether the stitches will hold. Instead of relying on drainage, it is best so to treat a patient that the chances of a general infection will be reduced to a minimum. This is best accomplished: (1) By careful indication for operation and operative procedure. All those patients who show a severe infection through high temperature and other symptoms should be operated upon only when operation is made necessary to save life, and then a preliminary vaginal incision should be made. We know that pus located intraperitoneally or in the parametrium is highly infectious. (2) By selection of the proper time for operative procedure. Pus from a pyosalpinx is sterile after nine months. When no immediate indication for operative interference exists, it is better to wait. (3) By careful observance of the following preventive measures: Protection of the abdominal cavity with layers of gauze; careful separation of adhesions; removal of all visible pus; exact hæmostasis, and rapid operative procedure.

MEDICAL RECORD.

June 10, 1905.

1. A Contribution to Hæmophilia, with Special Reference to the Joint Symptoms of the Disease,

By FRANCIS P. KINNICUTT.

2. Remarks on the Ætiology of Fissure in Ano,

By J. RAWSON PENNINGTON.

3. On the Early Diagnosis of Pulmonary Tuberculosis,

By G. R. POGUE.

4. Encephalomenigeocele, By WILLIAM D. HAGGARD.

5. Is Craniotomy on the Living Child Ever Justifiable?

By I. MARX.

6. Gunshot Wounds of the Abdomen,

By JOHN EGERTON CANNADAY.

7. Cushion Diseases,

By JEROME D. POTTS.

1. **Hæmophilia.**—Kinnicutt reports one case of hæmophilia which he had under observation for seven years. At the end of this time the patient died. The case possessed many points of interest: Its congenital yet not ascertainable inherited character; the frequency and severity of the arthritic attacks; the involvement of the smaller joints (the hand) on one occasion; the eventual development of permanent structural changes of the joints; and, finally, the occurrence of intraabdominal hæmorrhage and death, probably from this cause. The author summarizes the present views regarding the treatment of

hæmophilia as follows: (1) The internal administration of the lime salts, especially of the chloride of calcium, in doses of two grammes (30 grains) twice or thrice daily. Its continued use should be interrupted every two or three days by a period of twenty-four hours. The salt is soluble in 1.5 parts of water and is well borne by the stomach. (2) The application of solutions of the same salt, with compression, for accessible surface bleedings. Aqueous solutions of one half per cent. are efficient. Another convenient mode of employment is in the form of a finely powdered chalk mixed with one half per cent. solution of the calcium chloride. The less soluble lime salts, such as calcium phosphate, are equally efficient for local application. (3) The use of a combination of a one half per cent. solution of calcium chloride and one sixth volume of a solution of nuclealbumin, for local application. The nuclealbumin can be obtained from aqueous extracts of various cellular tissues—testicle, thymus, thyroid, ovary, etc. If the prepared extracts are not available, a supply may be procured readily by mincing any of these tissues in a weak alkaline solution ($\frac{1}{500}$ solution carbonate of sodium) and filtering through gauze after a few minutes. (4) The application of a stream of carbonic acid gas to the bleeding surface, in accessible hæmorrhage. Its inhalation, freely mixed with ordinary air or oxygen, in concealed hæmorrhage. (5) The use of four per cent. solution of cocaine hydrate for surface bleedings, and also of adrenalin ($\frac{1}{1000}$) with compression.

2. **Fissure in Ano.**—Pennington holds that the chief predisposing factor in the occurrence of fissure in ano is anatomical. He devotes his paper to demonstrating that the posterior quadrant of the anal margin is the weakest of the four. But why a fissure should occur at all is not explained. The author's conclusions are: "(1) The dorsal surface is the most frequent location of fissure in ano, the anterior the next and the sides the least. (2) The dorsal surface receives the least support from the muscular cylinder that surrounds the anal canal, the anterior the next, while the sides receive the greatest. (3) Experimentally, with and without anaesthesia, a conical end dilator, when forced into the anal canal, tears the dorsal surface first and almost universally, the anterior occasionally, and the sides rarely. (4) From the foregoing it will be seen that the sequential points of muscular weakness, experimental tears, and location of fissure in ano correspond."

3. **Pulmonary Tuberculosis.**—Pogue holds that one should not wait to be too sure before making a positive diagnosis of pulmonary tuberculosis. If one waits until the diagnosis can be proved it will be too late to save the patient. It is better to err on the right side than on the wrong, and, as Dr. Hall has said, "It is better that ten men should be cured and our diagnosis be in doubt in some of the cases, than that five should be dead and five permanently disabled and we be 'dead sure' that all had suffered from tuberculosis." For reaching an early diagnosis the tuberculin test is of great value. The author

has never seen bad results follow its use in properly selected cases.

4. Encephalomeningocele.—Haggard reports one case. The patient was operated upon and died. At birth a tumor of the size of a goose's egg was present on the back of the child's head. It grew progressively, and at the age of four months measured 23 inches in its long or transverse diameter, and 17 inches in the horizontal diameter. The tumor was kidney-shaped, and together with the child had to be carried on a pillow with great care. The child weighed 6 pounds and the tumor 5 pounds after removal. It sprang from the occipital region. It was smooth, transparent, fluctuating, very thin walled, and destitute of hair, save at the pedicle and about the hilus, where there was a rather abundant, long growth. The blood vessels could be plainly seen. The child, while small for its age, was otherwise apparently normal and seemed hearty. The knee jerks were present and sensation normal. The author discusses the general treatment of this condition and describes the operation he performed in detail.

5. Craniotomy.—Marx asserts his own conviction that the life of the mother deserves much more consideration than that of an unknown fetus. Craniotomy on the living child is therefore at times justifiable. The author considers in some detail the absolute and the relative indications for craniotomy. It is perhaps not possible to condense the author's arguments without misrepresenting him. The following quotation shows his general position: "When from an early rupture of the waters a version is impossible, the tentative use of typical or atypical forceps . . . might be of value. The application must not be persisted in too long, or be too powerful, for fear of doing injury to the fetus. If this be unsuccessful, the woman and child in good condition, and the patient in such environment that the outcome of an operation is reasonably certain, then and then only would a Cæsarean section be allowable. But all our discussions and inclinations will in nine cases out of ten receive their quietus by the ever familiar phrase you all know so well, 'Save my wife and destroy the child.' Is this not true? Discussion among scientific men at a meeting and heart to heart consultations at the bedside of the parturient woman are two widely different factors. One is theory, the other practice. Let not our positions change from one to the other; and in all sincerity it is my firm conviction that perforation has a place in midwifery; and as I grow older and more experienced in my own work I feel that the field for perforation and the allied operations is widening, and that for Cæsarean section, safe and life saving as it may be, is narrowing for cases essentially among our private clientele and private consulting work."

7. Cushion Diseases.—Potts asserts that by nature we were intended to sit on a hard surface and not on a soft cushion. He regards soft cushions as the chief ætiological factors in the production of the three following classes of disease:

The first of these has its seat in the integument, or beneath the integument of the perineal, and circumanal regions, and embraces such well known diseases as eczema simplex, eczema marginatum, intertrigo, erythema simplex, pruritus ani, and abscesses—tegumentary and subtegumentary. The second class has its seat in the mucous membrane, and submucous tissue, and embraces such disorders as simple urethritis, simple proctitis, anal ulcers, etc. The third class has its origin in the blood vessels and glands, and includes such diseases as hæmorrhoids, papillomata, adenomata, etc. The general treatment of each one of these affections is briefly considered.

AMERICAN MEDICINE

June 10, 1905.

1. The Treatment of Chronic Diarrhœa.
By REYNOLD WEBB WILCOX.
2. Observations Upon Amœbas Infecting the Human Intestine, with a Description of Two Species, *Entamoeba Coli* and *Entamoeba Dysenteriae*,
By CHARLES F. CRAIG.
3. Dysentery in Cook County Hospital,
By C. G. GRULEE and J. S. WELCH.
4. The Bacterial Element in Catharsis,
By GROESBECK WALSH.
5. The Lloyd Reaction for Morphine and Other Alkaloids,
By DANIEL W. FETTEROLF.
6. A Sign of Value in Splenic and Hepatic Disease,
By T. HORACE EVANS.
7. A Study of Reprints and Clinical Reports on Proprietary Medicines,
By ROBERT HESSLER.

1. Diarrhœa.—Wilcox emphasizes the fact that chronic diarrhœa is not always due to demonstrable changes within the alimentary tract. Symptomatic treatment is always a reproach, and for the present the best we can do is to divide diarrhœas into classes, based on their causation, and then treat them on general lines.

2. Observations Upon Amœbæ.—Craig ends his article with the following conclusions: (1) The intestine of man may be infected with two varieties of amœbas, one pathogenic (*Entamoeba dysenteriae*), and the other non-pathogenic (*Entamoeba coli*). (2) *Entamoeba coli*, the non-pathogenic variety, is found in 65 per cent. of the healthy individuals studied, and in 50 per cent. of individuals suffering from diseases other than dysentery, if a saline cathartic has been administered. (3) These organisms can be easily distinguished in both fresh and stained specimens. (4) They differ widely in their method of reproduction, and this is the most important method of distinguishing them. (5) *Entamoeba dysenteriae*, whether fed in milk or injected through the rectum, produces in kittens the typical lesions of amœbic dysentery as observed in man. (6) In kittens, *Entamoeba coli*, whether fed in milk or injected through the rectum, is absolutely harmless. (7) Neither feeding experiments nor rectal injections of fecal material or the bacteria occurring in such material produce any of the lesions of amœbic dysentery, unless *Entamoeba dysenteriae* is present.

3. Dysentery.—Grulee and Welch report the

1. Angina Pectoris.—Broadbent defines angina pectoris as pain in the cardiac region, chiefly behind the sternum, with radiation, most frequently down the inner aspect of the left arm to the elbow or to the hand. The pain is usually accompanied by a sensation of impending death, and the distinctive characteristic of true angina is that it is induced by exertion, more easily soon after food. Next to exertion in provoking an attack comes excitement. The effect on the circulation is increase of the blood pressure in the arterial system—this is the determining antecedent. The attacks are usually brief, subsiding with the cessation of exertion or with the inhalation of amyl nitrite, etc. Sooner or later sudden death occurs during, or at the onset of a paroxysm. But the pain may last for hours. During the paroxysm the one condition that seems to be always present is contraction of the peripheral arterioles. The pulse remains steady or becomes irregular, but rarely rapid. The most constant post mortem condition is more or less occlusion of the coronary arteries from a calcareous or atheromatous or sclerosed condition of these vessels with perhaps thrombosis. As a consequence to the obstruction to the blood supply, general or local degeneration of the walls of the heart is usually produced. As regards the causation the author holds that the condition of the heart walls is the dominant factor. Speaking generally, in all cases in which the attacks come on chiefly during repose, however severe or however closely they conform to true angina, the presumption is that they are spurious, false, or pseudoangina. The cases which most closely simulate true angina are those in which there is dilatation of the stomach. True angina is established when the coronary arteries are implicated. Mitral disease does not give rise to angina, nor does aortic disease of rheumatic origin. In acute aortitis, which is rare, there may be frequent anginoid attacks while the patient is lying in bed, if the mouths of the coronary arteries are blocked. In many cases of angina general arteriosclerosis is present, but the angina may manifest itself in a very early stage. The cases in which the prognosis is most unfavorable and in which least can be done for the patient, are those in which the physical signs are negative. The treatment resolves itself into that of high arterial tension. Such high tension is due to toxins in the blood, and these must be prevented from forming, and eliminated. Simplify the diet, regulate the exercise and supplement it by massage, and promote elimination by the use of water and the alkaline salts. Mercurial aperients and iodides definitely reduce arterial tension, and form the basis of the medicinal treatment. The direct vascular relaxants, amyl nitrite, etc., are invaluable for the relief of the paroxysms, but their influence is, of course, brief. Dilatation of the stomach may in cases of angina or heart disease, precipitate death. In illustration of these various points the author cites eleven cases of true and false angina.

2. Puerperal Infection.—McCann states that in puerperal fever the principal sites of infection

are: (1) the interior of the uterus, especially the placental area; (2) the cervix; and (3) the vagina and perineum. The commoner causative organisms are: (a) streptococci; (b) staphylococci; (c) bacillus coli communis; (d) gonococci; and (e) various putrefactive organisms. Two principal varieties of puerperal fever may be distinguished—wound intoxication and wound infection. The former is produced by organisms growing in dead matter, and producing toxins which are absorbed. Under wound infection are included the severe and fatal forms of the condition, the vast majority being due to streptococcal invasion. The infection spreads from the wound—(1) by the blood vessels producing thrombophlebitis, pyæmia, and septicæmia; and (2) by the lymphatics producing suppurative metritis (metritis dissecans), puerperal parametritis, perimetritis, and peritonitis. In putrid endometritis the interior of the uterus should be thoroughly cleaned out under an anæsthetic, puerperal ulcers wherever situated should be touched with tincture of iodine or pure carbolic acid, and the vaginal canal swabbed out carefully with corrosive sublimate. Rubber gloves are of great service. In most cases the finger is able to remove any retained products and no instrument is required. If curetting is attempted, a blunt instrument should be used and with the greatest care. Ergot is helpful in promoting uterine involution. In septic endometritis the organisms have already penetrated deeply into the uterine muscle and here the curette should certainly not be used. Careful swabbing of the interior of the uterus is to be preferred to douching. Up to the present time the results obtained from the employment of serum have been disappointing. In the treatment of puerperal infection it is necessary to maintain the patient's strength by means of the administration of a fluid, easily digested diet, and, above all, by the free administration of alcohol in large doses which are well borne in this disease. Quinine may still be relied upon, but it should not be given in very large doses. Calomel is also of great value. For the relief of pain some form of opium may be required. The presence of a collection of pus in the pelvis calls for prompt surgical treatment.

4. Pneumococcal Sore Throat.—Pasteur reports a fatal case of pneumococcal angina occurring in a boy, aged three and a half years. The prominent symptoms were sore throat with great pain on swallowing, and high fever. There was no laryngeal implication. Although cultures were negative diphtheria antitoxine was given, but without any effect. The patient grew steadily worse, and a gray gangrenous slough involved the uvula and palatal arches, and the patient died on the twenty-second day of the disease. Cultures *post mortem* showed the pneumococcus in large numbers. The condition has not received the attention it deserves, although it has been recognized for many years. The membranous form may closely simulate diphtheria. Of diagnostic significance are the sudden onset, often with a rigor, the severe initial symptoms, and the sharp

rise of temperature. The disease tends to run a short course—two or three days. The erythematous form of the affection is likely to be mistaken for scarlatinal angina.

5. "Plummer's" Bodies.—Farmer, Moore, and Walker have found a remarkable resemblance to exist between the so called Plummer's bodies of malignant growths and certain normal constituents of reproductive cells of animals. Plummer's bodies, which are found in the younger or growing regions of cancerous growths, are vesicles, consisting essentially of a fairly well defined wall containing a clear space in which is suspended a small darkly staining granule. They lie in the cytoplasm of the cancer cell and usually in close proximity to the nucleus. They have been commonly regarded as peculiar to the cancer cells, but the authors' investigations indicate that there are good grounds for reconsidering the whole position, and they suggest that a parallel between these bodies and certain vesicular structures occurring regularly in the gametogenic cells may be found to hold good.

6. Acute Aortitis.—Broadbent reports a fatal case of acute aortitis occurring in a man, aged forty-five years. When seen he complained of pain in the chest. The pain grew worse and began to radiate down the left arm, the pulse became soft and the heart's action weak. The patient died suddenly after being admitted to the hospital. At the autopsy the most striking feature was the bright red color of the aorta both inside and outside. The aortic valves were competent, but were thickened and atheromatous. The mouths of the coronary arteries were almost completely occluded. This was an acute inflammation attacking an aorta already damaged by atheroma, and the cause of death was the blocking of the coronary arteries. The duration of the disease from the first onset of cardiac pain was only seventeen days. There was no degeneration of the heart muscle.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of Thursday, April 6, 1905.

(Concluded from page 1192.)

The President, Dr. RICHARD C. NORRIS, in the chair.

Dr. NOBLE said he had never operated in one of his own cases for obstruction of the bowel a long time after a previous operation. He was told of one patient that had died of obstruction in a hospital. He had operated in a certain number of cases of septic peritonitis with so called obstruction, and all the patients had died. While he did operate in these cases, he always felt that the patients were going to die and they always had died. He doubted whether anything was gained by opening the abdomen again in a few days after an operation when there was septic peri-

tonitis. The more he saw of secondary operations done within a week after the primary operation, the less faith he had in the value of the procedure to the patient. So far as the hospital was concerned, there was the risk of infecting the operating room. Therefore, if it was of no advantage to the patient and was an injury to other patients, he thought it further objectionable to reopen the abdomen.

Dr. HIRST contributed three cases of interest to this list. He operated some years ago in a curious case of acquired atresia of the vagina and pyelometritis. There was a large abscess in the vaginal and uterine cavities above the point of atresia, with perforation of the vesicovaginal septum, suppurative cystitis, and infection of the kidneys. He found on examination a row of silver sutures across the vagina which had been inserted three years before in a hospital in Philadelphia in an operation for prolapse. The operation had cured the prolapse, but had caused the acquired atresia. The easiest way to deal with the condition was to remove the uterus and to close the vesicovaginal fistula from above. The woman was relieved of her symptoms and left the hospital in good condition. Nine months later she had obstruction and went to another hospital, where she was operated on and died. He was told by the operator that the point of obstruction corresponded with one corner of the stump of the supravaginal hysterectomy.

In another case he operated more than a year after the first operation, by Dr. Beyea, who had removed one tube and ovary. The woman was brought into the Orthopaedic Hospital with the symptoms of partial obstruction. There was a large and distended loop of gut on the right side in the region of the caput coli. There were great pain and sensitiveness on pressure over this distended loop of gut. There was constipation almost to complete obstruction. He opened the abdomen and found a fan-shaped sheet of adhesions spreading from the appendix around the colon, but having nothing to do with Dr. Beyea's operation. At one point four inches above the caput coli there was constriction of the ascending colon, so that the woman had partial and increasing obstruction of the large bowel. The bowel was released and the symptoms disappeared after separation of the adhesions. The abdomen became flat, the fever subsided, the pain disappeared, the bowels moved easily, and the patient was now well.

The third case was very interesting. Dr. Kelly had published a full page illustration of it in his recent book on appendicitis. The patient was taken to the Howard Hospital one evening in a cab, in a very serious condition, for what Dr. Musser and Dr. Hirst thought to be fulminating appendicitis. So sure were they of the diagnosis that a lateral incision was made, but to their chagrin they found only a circumappendicitis of very acute type, the chief trouble being an acute salpingitis with pus dripping out of the abdominal ends of both tubes. Dr. Hirst removed the appendix and both tubes through the lateral incision and closed the wound without drainage. The

woman made a good recovery. After going home, at the end of three or four weeks, she was slowly attacked with the symptoms of increasing obstruction, which continued over a period of five or six weeks. At length the condition was unmistakable and Dr. Hirst recommended reopening the abdomen. At the request of the family, Dr. Kelly was asked to witness the operation. Dr. Hirst found a slight adhesion between a point of the omentum and the site of the appendicular stump. It was scarcely an eighth of an inch broad, but the omentum had been pulled out, making a small circular orifice through which twelve or fourteen inches of gut had prolapsed. This was quite dark in color and badly constricted. The woman had had vomiting, constipation, and distention of the abdomen and was rapidly passing into a serious condition. The obstruction was easily relieved, whereupon the symptoms all disappeared and the woman made a perfect recovery.

Dr. Hirst thought these cases showed the possibility of intestinal obstruction late after abdominal section. In the earliest of these cases the operation was done about nine weeks after the first operation, and in the latest nearly two years.

Dr. SHOEMAKER said, in answer to Dr. Noble's question about the dry treatment of the plastic cases, that he found his cases did distinctly better. Not that he had any special trouble, but he always felt dissatisfied about the nurse's putting in the irrigation tubes when he had done extensive plastic work, especially on the anterior wall, and in sphincter cases.

In reference to late postoperative obstruction, he recalled a case in the Presbyterian Hospital, not in this series, but which fortunately came back to him one year after operation for gonorrhœal salpingitis. He had done excision of both tubes and one ovary, and was highly gratified at the second operation to find that the remaining ovary was absolutely normal in appearance, and that the adhesions had all disappeared, except one. The symptoms of acute obstruction were due to one strong, narrow adhesion band now crossing the descending colon. This was released, the symptoms disappeared, and the patient recovered perfectly.

The adhesions in these bad cases undoubtedly disappeared if the focus was removed, but there might occasionally remain a band long enough to produce mechanical obstruction. He had had some interesting experiences in observing the disappearance of adhesions. One of the cases included in this one hundred was that of a woman under the care of a surgeon near Pittsburgh, who had had several attacks of appendicitis in which pus had escaped spontaneously into the bowel. She had then refused an operation. After one of her attacks pus had appeared on the surface within the line of the pubic hair, giving rise to a temporary fecal fistula. At the time of his operation all these anterior adhesions had disappeared and no trace of this fecal fistula remained. He was able to save her by taking out the appendix and doing away with the point of communication with the bowel posteriorly.

Book Notices.

Elements of Anatomy and Physiology, Especially Adapted for Nurses. By W. BERNARD SECRETAN, M. B. (Lond.), F. R. C. S. (Eng.), L. R. C. P. London: The Scientific Press, Limited, 1905. Pp. xvi-74. (Price, 2s.)

The author has sought to prepare a manual that will embrace such facts in anatomy and physiology as are required by the average hospital nurse, with an avoidance of all unnecessary and confusing matter. To one familiar with the superfluous detail in the works usually used by students of nursing this book will seem meagre and inadequate, but it contains all the facts regarding these subjects that are essential for the nurse's information and for the intelligent discharge of her duty.

The General Practitioner as a Specialist. A Treatise devoted to the Consideration of Medical Specialties. By J. D. ALBRIGHT, M. D. Third Edition, Revised, Enlarged, and Illustrated. Philadelphia: Published by the author, 1904. Pp. 367.

The fact that this book has reached a third edition indicates that it has found a number of readers, and we trust that they were professional men rather than laymen, who hoped by the instruction given to find an easy way to masquerade as specialists. In the hands of men who have been properly trained the treatment advised may be of some value, but those who are untrained, or who do not appreciate the necessity of a detail that the author does not give, are likely to do more or less serious injury to patients subjected to the treatment recorded.

Recurrent Effusion into the Knee Joint After Injury, with Especial Reference to Internal Derangement, commonly called Slipped Cartilage. An Analysis of 750 Cases. A Clinical Lecture delivered at St. George's Hospital, by Sir WILLIAM BENNETT, K. C. V. O., F. R. C. S., Senior Surgeon to St. George's Hospital, etc. With Eleven Illustrations. Reprinted, after revision, from the *Lancet*. London: Longmans, Green, & Co., 1905. Pp. 29.

This lecture, which was published in the *Lancet* last January, is a consideration of 750 cases of recurrent effusion into the knee joint caused by injury or constitutional conditions. So extensive an experience is unusual. Where an operation was needed to remedy defective power of movement or to relieve pain, the author has never found the transpatellar operation necessary, the lateral longitudinal incision being sufficient to give access to the joint. The result in all but two of the cases was perfect.

Miscellany.

Primary Lesion of the Tonsil.—The extragenital primary lesion almost always presents difficulties in diagnosis to the trained dermatologist, ever on the alert to the suspicion of syphilis, and becomes especially grave for the patient and his or her surroundings when the lesion is upon the tonsil where the practitioner either ig-

noses the possibility of syphilis or where, as in the case described by Dr. D. W. Montgomery in his paper in this issue (*Journal of Cutaneous Diseases*, for May, 1905), a benign staphylococcal infection of the tonsil simulated a chancre. That among extragenital lesions an initial lesion of the tonsil is not rare is shown by the statistics of Neumann¹ who reports ten cases of chancre of the tonsil out of a total of 207 cases of extragenital infection. Neumann's observations extended over the period 1880 to 1901, and during this time 4,634 cases of primary lesions were treated.

The writer has observed two cases of chancre of the tonsil in hospital and dispensary practice. One case, in a young girl, had been operated in two weeks before and the satellite group of enlarged cervical glands had been removed under the wrong diagnosis of tuberculous glands of the neck.

The other case was in a man convalescent from typhoid fever in a hospital who presented a chancre of the left tonsil, general adenopathy, and a maculopapular syphilide. Methods of infection in the two cases were not ascertainable.

Vincent's angina is another condition which may cause doubt in diagnosis, and it must be remembered that the finding of the fusiform bacilli and spirochetæ of Vincent does not exclude the presence of syphilis, as we have observed in three cases, two of women and one of a man, all of whom presented thick, dark brown patches on the tonsils, in which a microscopical examination revealed the presence of Vincent's bacilli and spirochetæ, while other well marked signs of syphilis were present.

Diphtheria, of course, is to be considered in the diagnosis, and while cultures would furnish positive evidence, the coexistence of syphilis must be kept in mind also, as the writer has had under treatment a physician who became inoculated upon the index finger with syphilis while inserting an intubation tube into the larynx of a child suffering with both diseases.

G. Nobl,² after calling attention to the great resemblance between syphilitic lesions of the mucous membranes and mucous processes of other ætiology, such as catarrhal angina, follicular inflammation, ulcerative changes, acute streptococcal infections, mercurialization, ulceromembranous affections, Vincent's angina, aphthous patches, etc., records two cases of primary lesions of the tonsils in which, under a wrong diagnosis of tonsillar abscesses, both cases had been operated in by crucial incisions with resulting necrosis and suppurative breaking down of the tonsils, and also of the satellite glands, with unusually severe specific exanthemata and other symptoms. This incision of primary lesions under a wrong diagnosis, he maintains, opens the way for severe mixed infections to complicate the prognosis and all haste in advising operative interference in a suspicious lesion should be guarded against.

¹I. Neumann. Der extragenitale Primäraffekte und das venereische Geschwür in ihrer klinischen und volkshygienischen Bedeutung. *Woch. Oestr. Sanitätsztg.*, 1902, No. 3-4.

²G. Nobl. Fehldiagnosen extragenitaler Primäraffekte und ihre Folgen. *Wien. Med. Presse*, No. 17, u. 18, 1904.

Official News.

United States Public Health and Marine Hospital Service Health Reports:

The following cases of smallpox, yellow fever, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ending June 10, 1905:

Places.	Smallpox—United States.	Cases.	Deaths.
California—Los Angeles.	May 29-27.	27	3
Florida—Jacksonville.	May 27-June 3.	3	3
Illinois—Chicago.	May 27-June 3.	18	3
Illinois—Danville.	May 27-June 3.	1	1
Illinois—Galesburg.	May 27-June 3.	3	3
Kansas—Wichita.	Apr. 29-May 27.	21	21
Louisiana—New Orleans.	May 28-June 3.	5	5
Massachusetts—Haverhill.	May 27-June 3.	1	1
Michigan—Grand Rapids.	May 27-June 3.	10	4
Nebraska—Omaha.	May 27-June 3.	2	2
New York—New York.	May 27-June 3.	1	1
Ohio—Toledo.	May 27-June 3.	15	15
Pennsylvania—Altoona.	May 27-June 3.	1	1
Pennsylvania—Lebanon.	May 27-June 3.	1	1
Pennsylvania—York.	May 27-June 3.	10	2
South Carolina—Greenville.	May 27-June 3.	2	2
Tennessee—Memphis.	May 27-June 3.	1	1
Tennessee—Nashville.	May 27-June 3.	5	5
Utah—Ogden.	May 1-31.	7	7
Wisconsin—Appleton.	May 27-June 3.	3	3
Wisconsin—Milwaukee.	May 20-27.	3	3
Philippine Islands—Manila.	Apr. 8-29.	3	3
Africa—Cape Town.	Apr. 15-22.	1	1
Belgium—Ghent.	Apr. 29-May 9.	1	1
Brazil—Rio de Janeiro.	May 7-14.	8	3
China—Hongkong.	Apr. 8-15.	3	3
Ecuador—Guayaquil.	May 2-4.	3	2
France—Paris.	May 13-20.	18	2
Great Britain—Bristol.	May 6-20.	1	1
Great Britain—Liverpool.	May 6-13.	1	1
Great Britain—London.	May 13-20.	3	1
Great Britain—Newcastle-on-Tyne.	May 6-13.	7	7
Great Britain—South Shields.	May 6-20.	5	5
India—Bombay.	May 2-9.	37	37
India—Calcutta.	Apr. 15-May 6.	24	24
India—Karachi.	Apr. 15-20.	11	3
India—Madras.	Apr. 29-May 5.	11	3
Italy—Genoa.	May 4-11.	111	111
Italy—Palermo.	May 18-25.	1	7
Italy—Naples.	May 15-20.	1	1
Japan—Yokohama.	Apr. 2-9.	1	1
Russia—Moscow.	May 6-13.	7	2
Russia—Odessa.	Apr. 22-May 6.	15	4
Russia—St. Petersburg.	Apr. 15-May 6.	32	1
Russia—Warsaw.	Mar. 11-18.	1	1
Straits Settlements—Singapore.	Apr. 15-20.	1	4
Brazil—Rio de Janeiro.	May 7-14.	42	18
Ecuador—Guayaquil.	May 2-4.	1	1
Mexico—Tierra Blanca.	May 21-27.	1	1
Panama—Colon.	Jan. 23-May 19.	15	15
Panama—Panama.	Jan. 1-May 26.	65	65
Philippine Islands—Manila.	Apr. 8-29.	1	1
Africa—Cape Colony.	Apr. 15-22.	8	6
Arabia—Aden.	Apr. 28-May 12.	10	10
Australia—Brisbane.	Apr. 1-8.	1	1
China—Hongkong.	Apr. 8-15.	3	3
India—General.	Apr. 18-22.	64,214	54,602
India—General.	Apr. 22-29.	37,986	35,732
India—Bombay.	May 2-9.	702	702
India—Calcutta.	Apr. 15-May 6.	1,807	1,807
India—Karachi.	Apr. 30-May 7.	202	189
India—Madras.	Apr. 22-May 5.	2	2
India—Rangoon.	Apr. 7-28.	613	539
Japan—Tokyo.	Apr. 16-30.	4	4
Peru—Chile.	Apr. 16-30.	2	2
Peru—Eten.	Apr. 16-30.	6	8
Peru—Lima.	Apr. 16-30.	6	2
Peru—Mollendo.	Apr. 16-30.	13	3

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending June 7, 1905:

- ACHENBACH, J., Pharmacist. Granted leave of absence for sixteen days from June 13th.
- BEAN, L. C., Acting Assistant Surgeon. Granted leave of absence for three days from June 8th.
- CLARK, TALIAFERRO, Passed Assistant Surgeon. Granted leave of absence for three days from June 7th, under paragraph 191 of the regulations.
- KERR, J. W., Passed Assistant Surgeon. Granted leave of absence for one month from June 13th.

MASON, W. C., Acting Assistant Surgeon. Granted leave of absence for five days from June 26th.

McCONNELL, E. F., Acting Assistant Surgeon. Relieved from duty at Nuevitas, Cuba, and directed to proceed to New York, and report to Surgeon G. W. Stoner, Ellis Island, for duty.

OAKLEY, J. H., Passed Assistant Surgeon. Detailed as inspector of unseizable property at the United States Marine Hospital, Port Townsend, Wash.

PORTER, J. Y., Sanitary Inspector. Granted leave of absence for seven days from June 20th.

RANSOM, S. A., Acting Assistant Surgeon. Granted leave of absence for two days from May 3rd.

SALMON, T. W., Assistant Surgeon. Granted leave of absence for five days from June 4th, under paragraph 191 of the regulations.

SAWTELLE, H. W., Surgeon. Relieved from duty at Purveying Depot, New York, and directed to proceed to Washington, D. C., for special temporary duty.

SPRATT, R. D., Assistant Surgeon. Relieved from duty at New Orleans, La., and assigned to duty at Louisville, Ky., effective June 15, 1904.

STONER, G. W., Surgeon. To proceed along Canadian border as far as Sault Ste. Marie, Mich., stopping at intermediate points, especially Quebec, Montreal, Niagara Falls, and Detroit, on special duty.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending June 10, 1905:

BARTLETT, C. J., First Lieutenant and Assistant Surgeon. Reported for temporary duty as attending surgeon and examiner of recruits, San Francisco, Cal.

BLANCHARD, R. M., First Lieutenant and Assistant Surgeon. Left Fort Thomas, Ky., on ten days' leave of absence.

BROOKE, ROGER, JR., First Lieutenant and Assistant Surgeon. Having arrived at San Francisco, Cal., from Manila, P. I., will report to the commanding officer, Fort Bayard, N. M., for duty at the General Hospital.

BRUNS, EARL H., First Lieutenant and Assistant Surgeon. Assigned to duty at the Sequoia National Park, Cal., relieving Assistant Surgeon Kiersted.

CHIDESTER, W. C., First Lieutenant and Assistant Surgeon. Ordered to accompany Companies A and B, First Battalion Engineers, from Fort Leavenworth, Kan., to San Francisco, Cal.; on completion of this duty to revert to status of leave of absence.

CRAUTREE, GEORGE H., First Lieutenant and Assistant Surgeon. Ordered to proceed from Fort Jay, N. Y., to Fort Monroe, Va., for duty in connection with the joint Army and Navy exercises.

DALE, FREDERICK A., First Lieutenant and Assistant Surgeon. Relieved from duty at the United States Army General Hospital, Washington Barracks, D. C., and ordered to Fort Walla Walla, Wash., for duty. Granted two months and fifteen days' leave of absence.

GIENER, HERBERT C., First Lieutenant and Assistant Surgeon. Assigned to duty at the Yosemite National Park, Cal., to relieve Major Reynolds, surgeon.

PORTER, R. S., First Lieutenant and Assistant Surgeon. Left Fort Niobrara, Neb., on leave of absence.

POWELL, JUNIUS L., Major and Surgeon. Left Fort Hamilton, N. Y., on ten days' leave of absence.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Relieved from further duty at Jackson Barracks, La., and ordered to Fort Slocum, N. Y.

RENO, WILLIAM W., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Washington Barracks, D. C., and from duty with troops at Saunders's Range, Md., and ordered to return to his station, Fort Meyer, Va.

REYNOLDS, F. P., Captain and Assistant Surgeon. Relieved from duty at Yosemite National Park, and to return to station at Presidio of San Francisco, Cal.

ROBERTS, WILLIAM, First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Greble, R. I., and ordered to return to Fort Hamilton, N. Y.

SHIMER, IRA A., Captain and Assistant Surgeon. Left Washington, D. C., *en route* to Ancon, Isthmian Canal Zone, for duty with the Isthmian Canal Commission.

SMITH, HERBERT M., First Lieutenant and Assistant Surgeon. Relieved from further duty at Fort McDowell, Cal., and ordered to the United States Army General Hospital, Presidio of San Francisco, Cal., for duty.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 10, 1905:

BISHOP, L. W., Passed Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Dubuque*.

EYTINGE, E. O. J., Assistant Surgeon. Ordered to the Naval Hospital, New York, N. Y.

FARWELL, W. G., Assistant Surgeon. Detached from the Naval Hospital, New York, N. Y., and ordered to the *Brooklyn*.

MAVERS, G. M., Assistant Surgeon. Ordered to Washington, D. C., for examination for promotion, and then to await orders, June 19, 1905.

MURPHY, J. F., Assistant Surgeon. Detached from the *Dubuque* and ordered to continue duties on the *Hancock*.

STITT, E. R., Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the Naval Hospital, Canacao, P. I.

The following passed assistant surgeons have been ordered to report to the president of the Naval and Medical Examining Boards, for examination for promotion, June 26, 1905, and then to await orders: F. L. BENTON, F. M. FURLONG, W. M. GARTON, J. F. LEYS, and J. C. THOMPSON.

Births, Marriages, and Deaths.

Married.

DYE-PERRY.—In Philadelphia, on Thursday, June 1st, Dr. Frank Hazzard Dye and Miss Jean Perry.

FARINGER—LEOPOLD.—In Germantown, Pennsylvania, on Wednesday, June 7th, Dr. Howard R. Faringer and Miss Gertrude E. Leopold.

LAZARUS—CAMP.—In Brooklyn, N. Y., on Tuesday, June 6th, Dr. George Frederick Lazarus and Miss Leslie Virginia Camp.

RAUTERBERG—HULLIKEN.—In Baltimore, Maryland, on Saturday, June 3rd, Dr. L. E. Rauterberg and Miss Meta Hulliken.

TAYLOR—REILLY.—In Philadelphia, on Wednesday, June 7th, Dr. Mervyn Ross Taylor and Miss Jeannette Reilly.

Died.

DONAVIN.—In Baltimore, Maryland, on Monday, June 5th, Dr. Matthew W. Donavin, in the sixty-seventh year of his age.

GETMAN.—In Oneonta, N. Y., on Tuesday, May 30th, Dr. Arthur D. Getman.

GILLISS.—In York, Pennsylvania, on Friday, June 2nd, Dr. Joseph A. Gilliss, of Baltimore, in the sixty-third year of his age.

GOODIN.—In Cincinnati, Ohio, on Wednesday, May 31st, Dr. William Isaac Goodin, in the sixty-ninth year of his age.

LIPPINCOTT.—In Campbell Hall, N. Y., on Wednesday, June 7th, Dr. De Witt G. Lippincott, in the forty-fifth year of his age.

MALONEY.—In Keene, New Hampshire, on Thursday, June 1st, Dr. William E. Maloney, in the forty-first year of his age.

ORR.—In New Orleans, Louisiana, on Monday, May 29th, Dr. Henry B. Orr.

PALMER.—In Warsaw, N. Y., on Sunday, May 28th, Dr. George Miles Palmer, in the sixty-eighth year of his age.

STREETER.—In Lake Forest, Illinois, on Sunday, June 4th, Dr. John William Streeter, in the sixty-fourth year of his age.

TAYLOR.—In Richmond, Missouri, on Friday, May 26th, Dr. James D. Taylor, in the seventy-first year of his age.

New York Medical Journal AND Philadelphia Medical Journal

A Weekly Review of Medicine

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SATURDAY, JUNE 24, 1905

WHOLE No. 1386.

Original Communications.

TWO CASES OF RARE CONGENITAL MALFORMATION.

By HERMANN FISCHER, M. D.,

NEW YORK,

ADJUNCT SURGEON, GERMAN HOSPITAL.

Congenital malformations and defects are, as a whole, not very frequently met with in this country and for the reason that the following two cases are unparalleled, I may be pardoned if I briefly describe them:

I. A CASE OF MENINGOENCEPHALOCELE OF UNUSUAL SIZE.

On April 17, 1900, I was called to Mrs. K., a primipara, to assist her in her confinement. When I reached the patient, the child was already born. After two vigorous uterine contractions the child had been expelled, the whole labor having lasted only two hours. The short time of labor in a primipara was certainly very unusual, but after an examination of the child's head was easily explained.

The whole head of the baby, a well developed boy, was much larger than normal and of an oblong shape. The scalp was covered with fine hairs. A caput succedaneum was absent. On palpation I found that the upper part of the head was soft, like a cystic tumor; no underlying bone could be felt. Five centimetres above the nasal process of the frontal bone, one could palpate a transverse bony ridge, indicated in the overlying soft parts, by a slight groove. This bony ridge extended all around the head. In its course backward it curved a little downward until it reached the level of the external occipital protuberance. This ridge marked the limit of the bony cranium. The appearance of the head was similar to that of a skull, of which the bony vault had been removed at autopsy. The tumor itself was of a soft cystic consistence. True fluctuation could not be elicited. Pulsation was absent. If the child cried the tumor became more tense and elastic. Pressure upon it caused the child to show uneasiness, but no marked cerebral disturbances. Reposition of the swelling was impossible. The reflexes were normal. There was no paralysis of limbs or face. If the finger was inserted into the mouth, the child eagerly began to suck.

Transillumination of the tumor gave a negative result. The child was otherwise well developed.

We have to deal in this case with an unusual large defect in the formation of the bones which help to make up the roof of the cranium, with a prolapse of its contents. They are, however, covered by a well developed hairy scalp. There is also undoubtedly an hydrocephalus internus present, as shown by the cystic consistence of the whole mass.

The upper third of both frontal bones is missing. The two parietal bones are totally absent and the occipital bone is formed only as far as the external protuberance; its squamous portion being undeveloped. Of the two temporal bones, the petrous portion is well developed, whereas the upper third of the squama is wanting. The bones of the face are well formed. Examination for other defects is negative.

The unusual feature in this case is the position and the large size of the cerebral hernia. It takes up the whole upper portion of the skull and is almost twice as large as the face. The measurements of the head are the following: Measurement from the upper edge of the frontal bone to the edge of the occiput is ten and three quarter inches; from the external right to external left auditory meatus, ten and a half inches. The height of the frontal bone from glabella to the ridge is two inches. The height of the temporal bone from antitragus is one and a half inch on the right side and one and three quarter inch on the left.

The usual site of an encephalocele is at the sinciput or occiput. The encephalocele sincipitalis appears in front upon the forehead, directly above the nasal bone. In these cases the nasal processes of the frontal bones or parts of the frontal bones itself are wanting; or the encephalocele appears below the nasal bones. Then the defect is in the neighborhood of the foramen cæcum and the anterior portion of the ethmoidal bone. Furthermore, the nasal processes of the superior maxillary bones and the lacrymal bones may be missing and the cerebral hernia protrudes externally into the nasal cavity or laterally into the orbital cavity. The encephalocele occipitalis appears either above or below the protuberance. In the latter case, the defect in the bone extends frequently into the foramen magnum or even

into the bodies of the vertebræ, producing a condition known as craniorrhachischisis. Those cerebral hernias that occupy the sagittal suture or the lateral fontanelles are not frequent. Those that make their way through the pharyngeal canal close to the body of the sphenoid bone into the pharyngeal cavity are very rare.

As to the coverings of cerebral hernias, we see in our case a well developed scalp covered with hair, which, however, appears somewhat thinned out. When the child cries the scalp becomes glossy in appearance through increased tension. Little, of course, can be said with certainty about the condition of the meninges. We can assume, however, that through pressure and tension atrophy has taken place and that the different layers have become adherent one to another.

The diagnosis was not a difficult one, because the enormous defect in the cranium, which was easily palpable, led to the correct interpretation of the condition. In other cases, however, where the tumor is of a small size and where the defect in the bone is not easily palpable, the diagnosis may present a good deal of difficulty, especially in adult persons. Important in such cases is the determination of the presence of the tumor at birth, the demonstration of an opening in the skull, the sinking in of the tumor at quiet breathing and the appearance of symptoms of cerebral compression when pressure upon the mass is exerted.

Concerning the ætiology of these tumors the opinion of authors differ. St.-Hilaire, Foerster, and Panum assume as their cause a hydrocephalus of the primary vesicles of the brain. Daresté and Perls, however, consider that the pressure of the cephalic end of the amnion upon the growing head is responsible for the arrest of development. In our case the cause of the malformation is probably a primary agenesis of the bones that are normally destined to form the vault of the cranium. It seems to me hardly rational to assume that external pressure upon the head was responsible for the arrest of development of the bones. If such pressure had existed for any length of time during the embryonal stage, we undoubtedly would see some signs of it on the external coverings, in form of scars or atrophy of the scalp. No such symptoms are found. The theory of St.-Hilaire, Foerster, and Panum seems to be more plausible for the case in question. Heredity does not seem to play any ætiological part in our case. Father and mother are both healthy; neither of them is infected with lues. Other malformations have not happened among the nearer relatives of the two. Two years after the birth of this malformed boy, the mother gave birth to well developed twins, two girls. Both died when a few months old, one from a bronchopneumonia, the other in consequence of an acute osteomyelitis of the tibia. The prognosis in such a case is of course extremely bad. Therapeutically, we are powerless.

The interest that this case presents is increased through the unexpected longevity of the little pa-

tient. When a few months old the mother took the child to one of our hospitals, where an incision was made into the mass. I have seen the child off and on for four years. It had to be fed with the bottle, and in spite of the unfavorable surroundings in which it had to live was bodily thriving. In the summer of 1903 it passed through an severe attack of cholera infantum. When I saw the child in December, 1903, it presented the following condition:

Anæmic, poorly developed boy. The tumor of the head has grown to an enormous size and was covered with unusually thick hair. The mass fluctuated distinctly, was very soft. Alteration in its consistency had not occurred. The old scar of the incision in the scalp had become very much thinned out by the intracranial pressure and looked like parchment paper. Handling of the tumor seemed to annoy the child a good deal, as it cried violently as soon as its position was changed. The measurements taken over the highest point of the mass from the glabella to the external protuberance of the occiput was twenty-five and a half inches; from the antitragus of the left ear over the tumor to the right at the corresponding point it measured twenty-three inches. A year ago the child showed an internal strabismus on both eyes, which, however, passed off after some time. There was no paralysis of ocular muscles. An ophthalmoscopic examination that was kindly done by Dr. Wolff revealed the existence of an atrophy of both optic nerves. The child was blind. The hearing was intact, for the child had learned to recognize the voice of its mother. The right arm was held in slight spastic flexor contraction. The elbow joint, the wrist joint, and the finger joints were flexed. The thumb was flexed and adducted. This arm was very little moved by the child, although a complete paralysis did not exist. The spasm of the flexor muscles could be easily overcome. The left arm was moved about freely. Both legs showed the same spastic condition as the right arm. The symptoms were here more pronounced on the right side. Babinsky's phenomenon is present in the right foot. The muscles of the thigh and calf were very much atrophied. No clonus; reflexes were exaggerated. If the child kept the feet at rest they showed the condition of *pes equinus*, owing to the weakness of the dorsal flexors of the foot. The boy had never learned to speak or to walk. I saw the child again on October 4, 1904. His aunt told me, that during the summer the boy had had two convulsions. His whole body become very stiff, and he was very cyanotic. His condition was otherwise unchanged.

The fact that there have not developed any serious symptoms of pressure upon the brain is not difficult to explain. We know through the experiments of Grashey, Bergmann, Cramer, Cushing, Kocher, and others that the clinical picture of cerebral compression is instituted as soon as the extravascular pressure through any reason is raised above the intravascular pressure in the venous blood channels of the brain. The first requisite for such an accident, of course, is a cavity closed in by rigid and unyielding walls. This

condition is wanting in our case. If the extra-vascular pressure through increase of hydrocephalic fluid rises, the soft parts, closing in the brain, give way and thus shield the brain vessels from dangerous compression.

II. A CASE OF PEROBRACHIUS AND PERODACTYLISM.

The second case of malformation, that I am about to describe is that of a Polish Jew. The case was sent to me for an x ray picture through the kindness of Dr. Bachmann and Dr. Hotzen, of the German Dispensary. The patient is a man 62 years of age. He came to the dispensary in order to be treated for a left sided paralysis of the arm and leg, the consequence of an apoplectic stroke he sustained two years ago. He presents the rare malformation known as perobrachius and perodactylism.

Both humeri are well developed. There is a complete bony ankylosis of both elbow joints.

On the right side, the ulna is developed only to about two thirds of its upper portion. The radius of this side is much thicker than normal and much shorter. The carpal bones are only two in number. They represent according to their shape in the skiagram most probably the

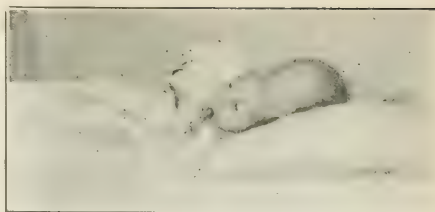


FIG. 2.—External appearance of child in Case 1.

os trapezium and trapezoid, so that the radiocarpal joint is formed by these two bones and the lower end of the radius. The thumb and index finger are perfectly shaped, whereas the other three fingers are missing. On the left side the defect of the ulna is more pronounced than on the right. Here only the upper third of the ulna is developed in form of a short stump. The radius of the left arm is shorter and thicker than that of the right arm. There is no attempt at forming a radiocarpal joint at all, but the first metacarpal bone articulates with the carpal end of the



FIG. 1.—Skiagram of Case 1.

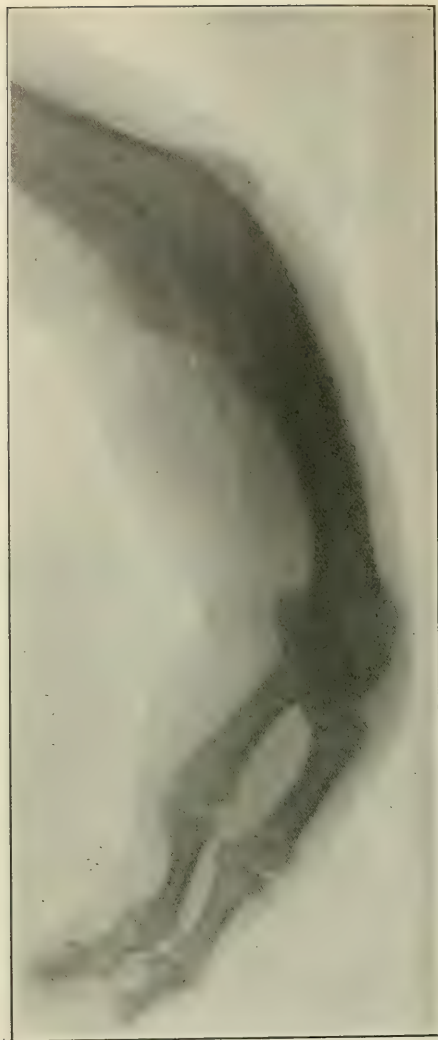


FIG. 3.—Case 2; skiagram of right hand.

radius forming a radiometacarpal joint. On the volar surface of the joint the skiagram shows two carpal bones which, however, do not take part into the formation of the joint. What these two bones are cannot be determined with certainty. The well developed first metacarpal bone articulates with the first phalanx. In place of the terminal phalanx there are three small bones, one evidently the poorly developed terminal phalanx, articulating at the radial side of the first phalanx. On his ulnar side, however, are two poorly developed bones, articulating end to end. Besides this we notice upon the ulnar side of the distal articular surface of this bone (first phalanx) a small



FIG. 4.—Case 2; skiagram of left hand.

hooklike process. I consider this process to be the intimation of a third phalanx that did not fully develop. On the left side we have therefore the condition of perodactylism combined with syndactylism. Another interesting point in our case is that the ulna is the subject of arrest of development, whereas usually in congenital malformations of the forearm the radius is the one affected.

As to the usefulness of his two arms with only three fingers, the man informs me, that he thought he got along just as well as other people with normally developed upper extremities. Before he had his apoplectic stroke he was a watch repairer, an occupation that certainly calls for a good deal of dexterity. But now, while his left arm is paralyzed, he earns his living by giving lessons in penmanship and acting as secretary to those in his Jewish community who are not able to write.

130 EAST SEVENTY-SIXTH STREET.

THE DEMONSTRATION OF THE FLAGELLA OF MOTILE BACTERIA AND A SIMPLE METHOD OF MAKING PHOTOMICROGRAPHS.*

By EDWARD W. DUCKWALL, M. S.,

PITTSBURGH, PA.,

MEMBER OF THE SOCIETY FOR THE ADVANCEMENT OF SCIENCE.
OF THE AMERICAN CHEMICAL SOCIETY, OF THE SOCIETY
OF AMERICAN BACTERIOLOGISTS, DIRECTOR AND BACTERIOLOGIST OF THE NATIONAL CANNERS' LABORATORY, BACTERIOLOGIST OF THE HEALTH DEPARTMENT, ASPINWALL, PA.

It affords me great pleasure to present a paper on this subject of staining flagellated bacteria. I have demonstrated the flagella on nearly all pathogenic bacteria, but my particular study has been with the non-pathogenic or saprophytic bacteria, which are associated with the spoiling of food products. This work is done under my direction in the Sprague cannery's laboratory, an institution founded and maintained for the food product industry. When making my reports each month to the *Canners' Journal*, I was impressed with the necessity of having specially attractive illustrations, and I believe that the motile bacteria should be represented in the illustrations just as they are naturally. The photomicrographs usually displayed in works on bacteriology do not as a rule represent motile bacteria as they should. I therefore took up the study of staining these organisms and endeavored to discover a method which would give good results with all kinds of bacteria and I made a comparative study of technique.

I have always obtained the best results with all species of bacteria, excepting the anaerobic, by streaking the surface of two per cent. agar in Petri dishes, and the streaked culture should always be made from the young growth in bouillon and never from an agar or gelatin transfer. I usually inoculate a tube of bouillon the night before, streak the surface of the agar early on the following morning, and then place the dishes in optimum temperature, so that I may get the most rapid growth possible. I find that two per cent. agar is preferable to that of less percentage, because the bacteria as a rule do not collect much debris from the culture media. Bacteria differ widely in the number and character of their flagella. Some are peritrichous, having large numbers growing out from all parts of the cell; some are lophotrichous, having a bunch of flagella at one end; some are amphitrichous, having a flagellum at either end; some are monotrichous, having a single terminal or polar flagellum. The flagella of different organisms vary in character; some are extremely fine, so delicate that they stain

with difficulty; some are long and wavy; others are short and may be almost straight. The anaerobic bacteria possess flagella which are extremely curly, and I could determine from the character of its flagella whether an organism was an anaerobe or an aerobe. Many motile bacteria produce spiral bodies which are termed "giant whips" by Novy; some of these will reach 100 inches in length.

I found that the methods for flagella staining described by the old authors had to be modified considerably in order to get good results. By constant practice and very hard work, often prolonged into the small hours of the morning, I finally succeeded in my efforts. I found there were six general classes of bacteria, each different from the other in its manner of growth, making it necessary to treat each class in a different manner. I divided the motile bacteria into six classes for staining purposes.

First, Bacilli which grow like the streaked culture of the typhoid, such as typhoid and colon.

Second, Bacilli which produce wrinkled or folded growths, such as *Mesentericus fuscus*.

Third, Bacilli which send out a thin, almost transparent growth over the surface of the agar, such as *Bacillus subtilis* and *Bacillus megatherium*.

Fourth, Bacilli which produce slime, such as *Bacillus vulgaris* and *Bacillus viscosus*.

Fifth, Bacilli which produce pigments, such as *Bacillus prodigiosus* and *Bacillus cyanogenes*.

Sixth, Anaerobic bacteria, such as *Bacillus tetani*, and the bacilli of oedema and symptomatic anthrax, etc.

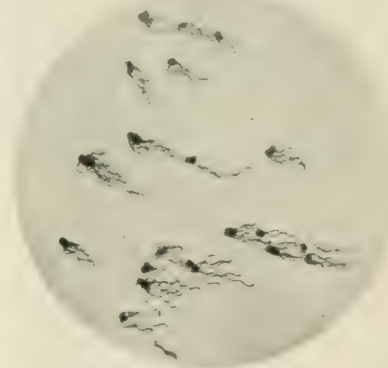


FIG. 1.—*Bacillus Typhi Abdominalis*, multiplied 1,000 times.

MANNER OF MAKING SUSPENSIONS IN WATER.

(1) Bacteria resembling typhoid streak cultures have very young and actively motile bacteria on the periphery of the growth. From this the material is taken and transferred to a large drop or two of

* Presented to the Society of American Bacteriologists.

distilled water which has previously been boiled. The platinum loop should be made from very fine platinum wire, only about half the size of the loop used for general purposes. This fine loop will gather sufficient material without taking up any of the agar. The material usually clings tenaciously to the loop, but may be liberated by the aid of another platinum wire if care is exercised. The bacteria are then allowed to disseminate spontaneously throughout the drop of water, so that the finest specimens will swim to the outer edges from which the coverglass preparation is made. Bacteria which have few flagella and those whose flagella have been broken will remain near the centre.

(2) Preparations made from bacteria which produce wrinkled or folded growths are made before the wrinkled growth is formed. In order to get a good preparation from this group of bacteria the agar should be streaked in the morning and then carefully watched for the first appearance of growth and from this a satisfactory preparation can be made.

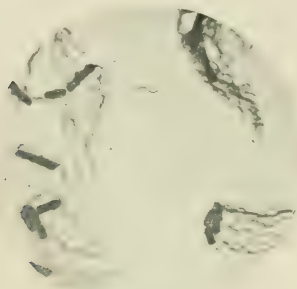


FIG. 2. *Bacillus Mesentericus Fuscus*, multiplied 1,500 times.

(3) The thin, transparent, spreading growth is one of the best for demonstrating flagella. This growth is almost invisible and is composed of very young and actively motile bacteria. In order to get a good preparation from this a curved platinum wire is used to gently collect the bacteria *en masse* and then the small loop is employed to make transfers to the distilled water.

(4) The slime producing bacteria are very difficult for the demonstration of flagella. The slime collects between the flagella and the mordant fixes the slime as well as the flagella, so that the stain completely covers the delicate organs of locomotion. I found that this slime could be precipitated by shaking a water suspension with chloroform. A very young growth of the organism is used and transfers are made to about 1 c.c. of distilled water in the test tube until the water is made very cloudy. The slime increases the cloudiness and this is neces-



FIG. 3. *Bacillus* of blueberries, multiplied 1,000 times.

sary in order to have a sufficient number of bacteria to make a fine preparation. This cloudy suspension is then shaken with chloroform, which seems to cut away the slime from between the flagella; then the coverglass preparation is made from the water above the chloroform.

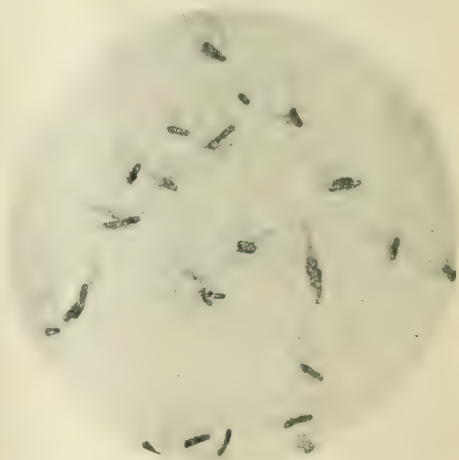


FIG. 4. *Bacillus Mesentericus Vulgatus*, multiplied 1,200 times.

(5) Bacteria which produce pigments soluble in chloroform are treated in the same manner. Those whose pigments are soluble in water and not in chloroform are more difficult to stain. I usually hold the coverglass under the tap after fixing the preparation in the flame previous to adding the mordant. In this way much of the soluble pigment is removed.

(6) Good suspensions of anaerobic bacteria are the most difficult of all to obtain. Bacteria which

are imbedded in stab cultures do not make good preparations, because the agar and débris cling tenaciously to the flagella. It is extremely difficult to get a good surface growth of obligative anaerobes because it usually requires two or three drops of a young bouillon culture for surface inoculation and when the growth appears the surface is covered with the old, partially dissolved cells and free spores. Still, some very fine preparations can be made from the surface of the culture. The

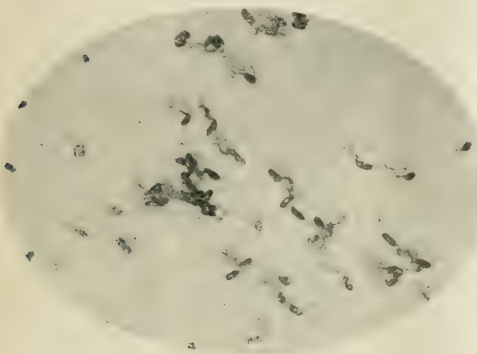


FIG. 5.—*Bacillus Cyanogenus*.

best results are obtained as follows: The medium is two per cent. glucose agar in slants and the inoculation is made back of the slant between the agar and the wall of the tube. I slide the needle down back of the slant and let it fall forward; I introduce two or three drops of a young bouillon culture and then replace the agar. By excluding oxygen and maintaining a blood temperature for thirty-six hours, a fine growth of bacteria usually appears between the agar and the wall of the tube and beautiful preparations can be made from this. Many rods containing spores still retain a full equipment of flagella.

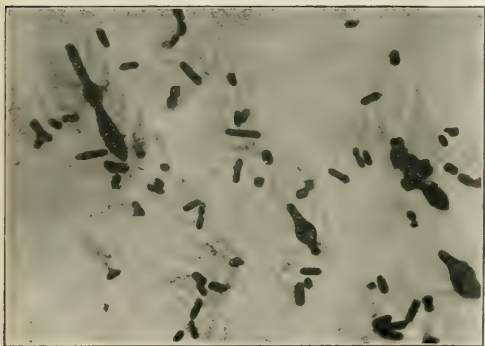


FIG. 6.—*Bacillus of tetanus*, multiplied 1,000 times.

CLEANING THE COVERGLASSES.

I prefer the No. 1 round coverglasses, which when new are covered with a thick, greasy substance quite difficult to remove. Coverglasses used for the demonstration of flagella must be absolutely clean, and this is a most important feature. For removing the grease they are covered with sulphuric acid and allowed to stand for one day. The sulphuric acid is poured off and they are then covered with potassium bichromate and allowed to remain in this for several hours. This acid is then poured off and the coverglasses are washed with distilled water and transferred to a jar containing absolute alcohol, where they remain until ready for use. A single coverglass is removed with clean forceps from the alcohol, transferred to a piece of clean, well washed linen and dried without touching it with the fingers. The coverglass is then taken in the forceps and passed several times through the Bunsen flame, so that every particle of fat or grease is removed, and it must appear clear and free from blemishes. Many coverglasses are lost after heating in the flame, particularly if there are any currents of cold air through the room, but since the perfect condition of the coverglass is so important the loss of two or three is immaterial.

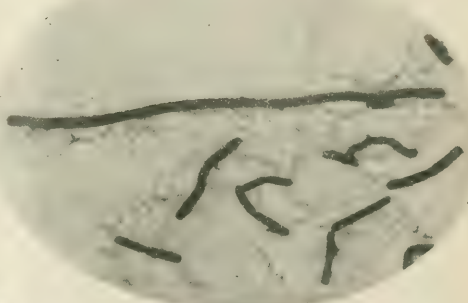


FIG. 7.—*Bacillus of malignant edema*, multiplied 1,500 times.

PREPARATION OF THE STAINING AGENTS.

The fixing agent is mordant and the stain is carbol gentian violet or preferably carbol fuchsin.

The mordant requires for its preparation 2 grammes of desiccated tannic acid, 5 grammes of cold saturated solution ferrous sulphate (aqueous), 15 c.c. of distilled water, and 1 c.c. of saturated alcoholic solution of fuchsin. The tannic acid is dissolved in the water first, by the application of gentle heat; then the ferrous sulphate and then the alcoholic solution of fuchsin are added.

To these ingredients, I have always found it advisable to add a certain amount of sodium hydroxide,

a one per cent. solution, varying from $\frac{1}{2}$ to 1 c.c. The best grade of filter paper is used for filtering the mordant, and there should be left a heavy precipitate. After filtering the color of the mordant should be of a reddish brown hue, not clear but somewhat cloudy, and this mordant must be used within five hours after it is made; after that time it loses its staining power. This is indicated by its gradual clarification and darkened color. It gives the best results when strictly fresh, and accomplishes its work in a much shorter time, so that very little if any heating is required when it is placed on the coverglass preparation.

Carbol fuchsin.—Take about 1 gramme of granulated fuchsin (not the acid fuchsin), put it in a bottle, and pour over it about 25 c.c. of warm absolute alcohol. Shake vigorously, and let it stand for several hours before using. The carbol fuchsin is made by diluting the saturated alcoholic solution four or five times with a five per cent. solution of carbolic acid. Carbol fuchsin should be freshly made, heated and filtered before using.

METHOD OF PROCEDURE.

Every organism differs from other organisms in its manner of absorbing the stain, so that some experimental work is necessary to determine just how the stain should be applied. In a general way we proceed as follows: A small loop full of the clouded water, obtained as described in the first part of this article, is transferred to the coverglass and gently spread over as large a surface as possible. Care must be exercised in spreading the drop. I usually carry the drop around the surface without touching the glass with the loop. In this way the surface is moistened, and the loop does not tear off the flagella. A confluent spread does not give as good satisfaction as a streak spread with a small space between each streak. The finest specimens for photomicrography are obtained from the periphery of the streaks. The spreading must be done rapidly, because evaporation takes place very soon. After evaporation takes place, there should appear very thin films along the track of the loop. The preparation must be fixed in the flame so that the bacteria will not wash off during the staining, but the fixing must not be accompanied by too much heating, because the delicate organs of locomotion are easily burned off. The Bunsen flame should be about one inch high; the glass held by the forceps, preparation side up, is passed down on to the flame just once and instantly removed. The coverglass is then ready for the mordant, which is poured on, just enough to cover the surface without flowing over the edges. I find that the Cornet forceps are best suited for staining purposes, and if the coverglass is held just a short distance within the edge,

the mordant or stain will not run off. It usually happens that we are unsuccessful in demonstrating flagella, if the mordant runs off, or goes on the under side of the glass. During the steaming of the mordant, it is advisable to keep up a rotary motion in order to avoid too much precipitation. When the mordant is fresh, it requires only about one half to one minute to get sufficient staining. The mordant is completely washed off under the tap, and this is done pretty thoroughly; a small quantity of absolute alcohol is poured on to the surface and instantly washed off. The alcohol removes a great deal of the precipitation which is found in coverglass preparations, but considerable care should be taken to wash it off quickly and thoroughly, because it will remove the germs and flagella if it is allowed to act even for a short time. If the alcohol is thoroughly washed off, the water is removed by holding the glass edgewise to a piece of filter paper. If the filter paper is not clean, considerable dust and fibre will be carried up on to the coverglass, and if there is any danger of this, it is better to finally wash the coverglass off with the distilled water and shake off the drops which cling to the glass. Then cover the surface with a carbol fuchsin or carbol gentian violet. I find in nearly all cases, that fuchsin is better than violet, and gives less precipitation, but in some cases the gentian violet brings out the flagella more prominently. This must be fresh, however, and thoroughly washed off after staining. We allow the fuchsin to stand on the coverglass for about one half minute, being heated just sufficiently for a thin vapor to be visible. We then heat it so that steam is given off quite freely, but never until ebullition takes place. Care must be used when heating the stain, because it is not unusual to find that there is entirely too much precipitation and the flagella are burned off. It rarely happens that we get a coverglass which will be stained well all over. Usually we get only certain sections where the flagella stand out prominently, and the field is free from precipitation. Views sufficiently attractive for photomicrographing are rare. While the staining may be perfect, there will be some defects in the germs. Some may have lost part of their flagella, or there may be too much precipitation in the field, or the germs may be too close together or too scattered. Ideal views for photomicrography are few, and it is sometimes necessary to stain up several coverglasses before we get a fine view. During the staining with the mordant and dye a thin film is formed all over the glass. This must not be broken up by the application of too much alcohol if a clear field is desired.

Some writers advocate the idea of examining the coverglass preparations on the slide with a drop of water under the coverglass, before finally clearing

and mounting the specimen. I have been unfortunate in this procedure and on several occasions have lost some beautiful specimens on attempting to float off the coverglass with water after examination. It frequently happens that the germs will stick to the slide and pull off, leaving graves surrounded by beautiful bunches of flagella, so I make it a rule to mount my coverglass in xylol balsam, as soon as I have finished staining. I do this as follows:

I select very thin slides, pieces of glass about 3 inches long and 1 inch wide, perfectly clear, and having no blisters. Having thoroughly cleaned the slide, I heat it over the flame to drive off moisture, and place in the centre a small drop of xylol balsam (which is Canada balsam dissolved in xylol, and comes in collapsible tubes). After thoroughly drying the water from the coverglass after staining, I pour pure xylol all over the surface, and immediately touch the edge to clean filter paper, and then drive off the xylol with heat. It is absolutely necessary to have the coverglass free from moisture before applying xylol (a refined benzin), otherwise a hazy appearance will be imparted to the preparation, spoiling it for microscopical purposes. After clearing with xylol and drying, the drop of balsam is heated gently and the coverglass, preparation side down, is pressed on to the slide so that the balsam is spread out in a thin layer between the two pieces of glass, the preparation thus being, of course, protected from injury. The method for the demonstration of the flagella of different organisms varies, as we have said. The differences which I have noticed have been in the length of time allowed for staining with the mordant and the fuchsin; also the amount of one per cent. sodium hydroxide. Great success is achieved only by careful and patient study of each organism. It is not a difficult matter to demonstrate the flagella of most motile organisms, but to get beautiful preparations is a study and requires great care in every step of the work.

SUMMARY.

Culture to be made on two per cent. agar from young growth in bouillon.

Suspensions in water to be made according to nature of organism.

Coverglasses to be absolutely clean.

Mordant to be used only when fresh.

Dye to be made fresh and used while warm.

Spread on coverglass not to be confluent.

Fixing to be done without injury to flagella.

Staining to be done without overheating.

Washing with alcohol and water without breaking the film.

Clearing with xylol after thorough drying.

Mounting in xylol balsam without previous examination.

A SIMPLE METHOD OF MAKING PHOTOMICROGRAPHS.

A large, cumbersome apparatus is unnecessary. The camera is about twice as long as the ordinary four by five inch camera, and the photomicrographs are taken with the camera in a horizontal position. It must be a steady apparatus and the microscope stand should be substantial and with the cone fine adjustment. Much depends upon the objective. In order to get negatives showing a flat field with clean definition I have used nearly all kinds of objectives, but have found none equal to the $\frac{1}{12}$ oil immersion objective and No. 6 compensating eye piece made by the Spencer Lens Company. The best plates are the isochromatic or orthochromatic swift plates, which are corrected for colors. I have found the acetylene radiant preferable to gas, oil, or electric light. It is slower than electric light, but brings out all details with wonderful nicety. The only screen I ever use is green glass. Printing from the negatives on glossy velox brings out the best detail. The glossy velox is then ferroplated, which makes a beautiful photograph.

McGill University, Montreal, Canada, has graduated the following from the medical faculty:

A. R. Alguire, of Cornwall, Ont.; J. A. Briggs, of New Westminster, B. C.; F. F. Brown, of Cornwall, Ont.; H. C. Burgess, of Sheffield Mills, N. S.; H. A. Chisholm, B. A., of Lindwood, N. S.; E. L. Connor, of Berlin, Ont.; W. J. W. Costello, B. A., of Montreal; C. F. Covert, of Montreal; A. Cumming, B. A., of Scottsburg, N. S.; B. H. Dougan, of Hampstead, N. B.; W. H. Dowler, of Billings Bridge, Ont.; W. Dykes, of Nanimo, B. C.; R. W. Geddes, B. A., of Deseronto, Ont.; J. H. Gillis, of Metapedia, Que.; R. D. Grimmer, of St. Andrews, N. S.; J. W. B. Hannington, of Victoria, B. C.; J. J. Heagerty, of Montreal; E. H. Henderson, B. A., of Franklin Centre, Que.; E. G. Henry, B. A., of Lennoxville, Que.; G. M. Hume, of Leeds Village, Que.; S. S. King, of Albert, N. B.; H. A. Leslie, of Souris, P. E. I.; D. S. Likely, B. A., of St. John, N. B.; W. S. Loggie, of Chatham, N. B.; J. H. McDermott, of Gordontown, Jamaica; M. E. McKay, of Whycocomagh, N. S.; J. D. McLean, of Beaton's Mills, P. E. I.; J. A. McDonald, of Valleyfield, Que.; J. C. McDonald, of Peak's Station, P. E. I.; G. J. McIntosh, of Dalkeith, Ont.; W. A. McLeod, of Finch, Ont.; A. E. T. McMicking, of Victoria, B. C.; S. O. McMurtry, B. A., of Montreal; W. C. McMurthy, of Port Hope, Ont.; W. B. McNaughton, of St. Raphael West, Ont.; J. H. Mason, of Lachute Mills, Que.; H. C. Mersereau, of Doaktown, N. B.; A. P. Miller, of Chatham, Ont.; C. F. Moffat, B. A., of Montreal; F. W. C. Mohr, of Arnprior, Ont.; H. S. Muckleston, M. A., of Perth, Ont.; J. W. Mulligan, of Omeme, Ont.; J. A. Munro, of Pugwash, N. S.; T. R. B. Nelles, of Simcoe, Ont.; A. R. Prendergast, B. A., of Montreal; W. G. Pruyn, B. A., of Napanee, Ont.; E. T. F. Richards, of St. Vincent, B. W. I.; A. R. Robertson, of Victoria, B. C.; B. W. Robertson, of St. John, N. B.; E. Rommel, of Alma, N. B.; L. McD. Ryan, B. A., of Newburg, Ont.; A. R. Sawyer, of Rosindale, Mass.; W. J. Scott, B. A., of Montreal; F. A. C. Scrimger, B. A., of Montreal; F. W. Seifert, B. A., of Quebec; T. E. Sinclair, of Summerside, P. E. I.; W. A. L. Styles, of Montreal; W. A. Smith, of Almonte, Ont.; J. A. Sullivan, of Arnprior, Ont.; F. J. Tees, B. A., of Montreal; J. A. C. Tull, of Antigua, B. W. I.; E. G. Turnbull, of Brantford, Ont.; R. E. Valin, of Ottawa, Ont.; N. Viner, B. A., of Montreal, Que.; C. Waterman, of Ogdensburg, N. Y.; P. G. White, of Woodstock, Ont.; C. A. Wigle, of Warton, Ont.; W. M. Wilkinson, of Woodstock, Ont.; J. B. Winder, B. A., of Compton, Que.; W. C. Winfrey, B. L., of Sault Ste. Marie, Mich.; G. O. Wood, of Kenmore, Ont.; W. H. Wood, of Montreal, Que.; C. A. Young, of Ottawa.

CLINICAL EXPERIENCE WITH ANTI-TOXINE, AND THE ADVANTAGES OF LARGE DOSES.

BY LOUIS FISCHER, M. D.,

NEW YORK.

VISITING PHYSICIAN TO THE WILLARD PARKER AND RIVERSIDE HOSPITALS, ETC.

(Concluded from page 1211.)

RASHES.⁶

The following series of rashes was observed at the Willard Parker Hospital:

Animal.	No.	Serum.	Number injected.	Rashes.	Character of rash.
Horse A.	234	Red serum.	19	4, or about 21 per ct.	Morbilloform, 1 Erythematous, 1 Urticarial, 2
Horse B.	246	Yellow serum.	33	11, or about 33 per ct.	Erythematous, 1 Urticarial, 1 Scarlatiniform.

Time at Which Rashes Appear.—Rashes usually appear between the fifth and seventh days after the injection of antitoxine. The size of the dose injected does not vary the intensity, form, or the time of appearance. In one child injected with 25,000 units, the rash lasted about six hours. In another child injected with 16,000 units, a rash appeared which lasted eight hours. The average duration of the rash is about three days. In one case the rash persisted as long as twenty-two days, while in another case the rash lasted but six hours.

In some cases two distinct rashes can be found which will correspond on two different days with injections given the first and second days of the illness. For example, if a child was injected on the first and on the third day of the month, one rash may appear on the seventh and another on the ninth of the month.

Preeruptive Fever.—Before an eruption appears there is usually a sudden rise of temperature which remains until the rash appears and gradually declines with the fading of the eruption. This is an important point, and should be remembered in suspecting complications during the course of diphtheria. Exceptionally a rash may appear without febrile exacerbation, as in the following case:

Eva L., 3 years 5 months old, was admitted to the Willard Parker Hospital October 29, 1904. There was a slight exudate on the tonsils and a severe laryngeal stenosis with croup. October 29th, received 5,000 antitoxine units; October 30th, 5,000 units. In all, 10,000 units were injected. The stenosis required intubation. The tube was removed forty-eight hours later. As no laryngeal stenosis reappeared, the tube was not required. There was a slight exudate visible when the child was extubated, but all evidence of this disappeared on the fifth day.

November 1st, an erythematous rash appeared, diffuse, almost covering the entire body. In this

case there was an exception to the usual rule, in so far as there was no preeruptive temperature. The temperature remained normal throughout the entire eruption.

Morbilloform Rash Following Antitoxine.—Lizzie F., 5 years old; admitted to the Willard Parker Hospital September 27, 1904. Was ill seven days before admission. There was a slight exudate on both tonsils. September 27th, received 5,000 antitoxine units; September 28th, 4,000 units; October 4th, had a temperature of 102°. Later a morbilliform rash appeared on the face, chest, abdomen, back, and extremities (a universal rash).

October 5th, temperature, 100°; October 11th, rash fading; October 12th, abdomen free.

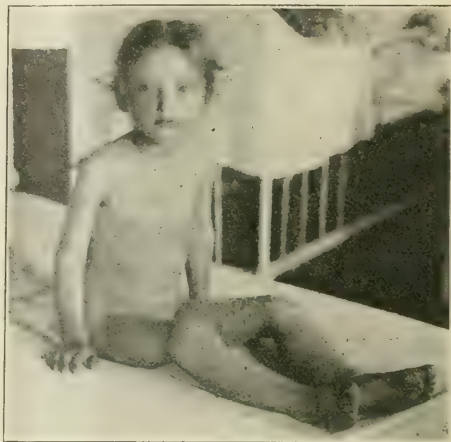


FIG. 4.—Morbilloform antitoxine rash, lasting twenty-two days.

The rash appeared six days after the last injection, or seven days after the first injection. It

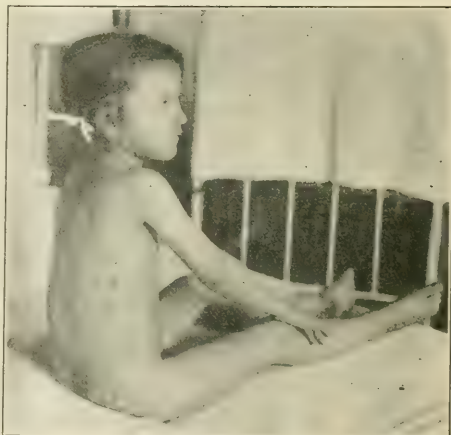


FIG. 5.—The same; another view.

I am indebted to Dr. Binford Thorne for assistance with this compilation.

persisted twenty-two days, and was confined chiefly to the arms and legs. The circulation of the child was very poor. No evidence of the disease could be seen in the throat after four days, so that the child was practically well. No complications followed. The membrane did not extend. The child left the hospital in excellent condition.⁷

WHAT IS THE PROPER DOSE OF ANTITOXINE?

That dose of antitoxine which will inhibit the extension of the pseudomembrane, subdue the fever, and check the progress of the disease in general. For a mild case of diphtheria from 2,500 to 5,000 units should be given. If there is no improvement noted in twelve hours and the exudate, temperature, and pulse remain the same then another dose of 2,500 to 5,000 units should be given. If there is a large exudate on the tonsils and pharynx and the cervical glands are enlarged, then it is safer to inject 5,000 to 10,000 units on the first day of illness. If no improvement is noted repeat this dose in twelve hours. The same dose should be repeated from day to day until all visible exudate has disappeared, the glandular swelling subsided, and the fever, if present, reduced to normal.

The condition and not the age of the child should be the guide as to the dosage. A toxæmia in a young infant is absolutely identical with the toxæmia of an older child.

To produce effects with belladonna we know that it must be pushed until its physiological effect is manifested. The same is true with antitoxine. To produce results give enough.

Idiosyncrasies.—I have never seen a case that showed ill effects from large doses of antitoxine; on the contrary. The blood serum—if anything acted as a nutrient and restored serum for the devitalized system.

Croup Cases.—When we are dealing with laryngeal stenosis due to diphtheria then the first injection of antitoxine should be at least 10,000 units. It is surprising to see how quickly the system responds in many cases. Exfoliation of membrane can be noted as early as twenty-four hours; in other cases it takes forty-eight hours or seventy-two hours. This exfoliation necessitates earlier extubation than formerly, and I have seen patients who, when extubated forty-eight hours after sufficient antitoxine was injected, could breathe without recurring stenosis.

I do not wish to infer that all cases can be extubated after forty-eight hours and remain cured, but I have seen cases that were extubated to relieve exfoliated pseudomembrane and the child got along without further tubing.

Nasal Cases.—The worst cases of diphtheria and the most fatal are frequently nasal cases. Excellent results have been seen by me at the Willard Parker Hospital when large doses of antitoxine were used. Septic and nasal cases require the same dosage as laryngeal cases.

WHAT CAN BE GAINED BY GIVING ENOUGH ANTITOXINE TO NEUTRALIZE THE TOXINE PRESENT IN THE SYSTEM?

First; we can limit the disease, and prevent the extension of the pseudomembrane into the posterior nares or downward into the larynx or bronchi; we can by this means prevent the most dreaded and most frequent fatal complication, namely, bronchopneumonia.

Second; by neutralizing the toxine we prevent degenerative complications, such as myocarditis and nephritis.

Third; we undoubtedly prevent postdiphtheritic paralysis, which has been recently emphasized by Comby, of Paris.

Fourth; when laryngeal stenosis exists the intubation period is shortened.

Immediate Effect of Antitoxine on the Temperature and Pulse.—In some cases there is a slight reaction, such as a rise in the temperature of one or two degrees, although many cases exhibit a decided fall in the temperature within twelve hours after an injection of 5,000 to 10,000 units. As a rule, the pulse rate is not affected. In some instances a very rapid pulse, such as 160, had dropped to 140 or less in twelve hours after an injection of antitoxine. In a septic case complicated by myocarditis, in which treatment was begun on the seventh day of the child's illness, a myocarditis was found. The pulse rate was 76. Twenty-four hours after an injection of 10,000 units the pulse rate was 82. Another dose of 10,000 units was injected forty-eight hours later. The pulse rate twelve hours later was 84.

A temperature of 103° dropped to 99° in forty-eight hours after 8,000 units had been administered. As a rule the temperature falls after the required dose of antitoxine has been administered.

Next in importance to giving the proper dose of antitoxine is the nutrition of the body.

FEEDING OF TONSILLAR AND PHARYNGEAL CASES.

Mouth Feeding.—As a tissue and blood builder no medication equals food. It is, therefore, imperative to support the general nutrition by proper feeding. Milk diluted with some cereal decoction, like oatmeal, barley, or rice will be better borne than pure milk alone. Sometimes it is necessary partially to peptonize to render it more absorbable. If the child is old enough the yolk of a raw egg can be added to the milk. Concentrated beef broth, chicken broth, clam broth, or oyster broth should be thought of. When feeding once in three hours, it is a good plan to give some of this concentrated broth, followed in three hours by a milk feeding, and so alternate. In this manner we give our patient milk once in six hours. Acid fruits, such as oranges, lemons, grapes, and cranberries, are very well borne. When acid fruits are ordered they should be given an hour before milk feeding. Older children can be given raw scraped steak, calf's foot jelly, and ice cream, which is nutritious and pleasant.

⁷ For a more complete description of rashes and their details I refer to my forthcoming book on *Diseases of Children*, in press of F. A. Davis & Co., Philadelphia.

FEEDING OF INTUBATION CASES.

Natural methods of feeding an infant with an ordinary feeding bottle, in an older child from a cup or spoon. Bread or crackers soaked in milk, toast in milk, zwieback in milk, the yolk of a raw egg beaten with powdered sugar, rice or corn-starch pudding, junket, custard, and jellies, are nutritious.

In rare cases in which the tube is frequently autoextubated and where no food is taken, rectal medication may be necessary to sustain life.

Rectal Feeding.—No more than two ounces should be injected at one time.

Milk, predigested.....	I ounce;
Starch water.....	I ounce;
Laudanum	I minim.

To be injected slowly through a colon tube, after both colon and rectum have been cleansed by a soapsuds enema.

If the small nutritive enema is well retained then we can repeat the injection once every four hours, and add the yolk of a raw egg.

Children will swallow milk and broth when fed in the dorsal position on the lap of the nurse. The Casselberry method is quite useful in most cases.

Gavage.—Forced feeding with the aid of a catheter *has never been used by me in private practice.* I have frequently seen bleeding produced by pushing the catheter through the nose, denuding membrane and opening up new areas of infection. The question as to whether pseudomembranous masses cannot be pushed directly into the stomach, causing a diphtheritic gastritis, is worth considering.

COMPLICATIONS.

Complications that arise during the case of diphtheria, such as pneumonia, myocarditis, nephritis, polyarthritis, or otitis, require the same treatment as they would if not associated with diphtheria.

The ordinary shortcomings that are most frequently met with consist of first, placing too much reliance on the specific nature of antitoxine regardless of other vital necessities. In addition to the required dose of antitoxine, vitality must be supported by food. The toxine of diphtheria causes distinct atony of the stomach and bowels, hence it is important to aid the emunctories by stimulating them. Hot saline colonic flushings at a temperature of at least 115° to 120° will cleanse the colon, stimulate diuresis, and when absorbed into the system will modify by dilution the toxine in the system. The heart should be carefully watched and supported by caffeine, sodium benzoate, musk, strychnine, and small tonic doses of quinine.

Restorative treatment should be remembered during convalescence.

65 EAST NINETIETH STREET.

THE TREATMENT OF DISEASE WITH
THE ROENTGEN RAYS.*

By W. P. GOFF, M. D.,

CLARKSBURG, W. VA.

I will not attempt a detailed description of the many diseases, in the treatment of which the Röntgen ray has been applied with gratifying results, but in a brief way will call attention to a few of the conditions in which I have found it of great value. Like many therapeutic agents, its value is not appreciated and not generally accepted by a large majority of the profession, but this unfavorable opinion is probably fast disappearing, and, moreover, the treatment itself is much more agreeable and attractive to the patient than other therapeutic agents that might be used in some cases with gratifying results.

CASE I.—I saw the patient in October, 1903, when she gave the following history: Married, age 50 years, general health had always been good. About one year previous to first seeing her, she noticed small red spots on fingers, which rapidly transformed into large blisters, remaining as such for about three days, then disappearing, which took about three days' time; then the hand remained normal for two days, when the same condition would reappear and take the same course as already mentioned. The blisters contained a cloudy fluid, and the patient stated she had received much relief during each attack by opening them. She had been treated by several physicians, but I was unable to get their general treatment. The condition became so bad on one finger that the latter was amputated—this before the blebs had ever appeared on the hand or wrist. Fig. 1 shows the condition as it was on the first



FIG. 1.—Case 1, before x ray treatment.

day patient called for treatment. I applied the Röntgen rays daily for a week, the exposures last-

* Read before the Harrison County Medical Society.

Personal.—Frank Parsons Norbury, A. M., M. D., editor of the *Medical Fortnightly* and medical superintendent of Maplewood Sanatorium, Jacksonville, Ill., has accepted the chair of nervous and mental diseases at Keokuk Medical College.



FIG. 2.—Case 1, after treatment.

ing from five to ten minutes, and after that twice and three times a week for the same length of time, until towards the end of December. At the end of the first week I had set up quite a dermatitis, which lasted for about a week, during which time there was disappearance and return of the blebs as already stated. At the end of the third week, the blebs entirely disappeared, and until this time there has been no indication of their return. I gave thirty exposures in all, but I believe that the good result obtained could have been reached much sooner had the patient



FIG. 4.—Case 2, after treatment.

lived where she could have taken treatment regularly, or at such times as I thought advisable. Unfortunately she lived in the country, and when desirous of giving two or three exposures consecutively, I would frequently be prevented from doing so by her inability to come to my office. Fig. 2 shows the hand as it is to-day, and there has not been the slightest indication of any return of the trouble.

CASE II.—A. N. L., aged 52 years, general health good, noticed about two years ago a slight abrasion on the cheek, but thought nothing of it



FIG. 3.—Case 2, before x ray treatment.

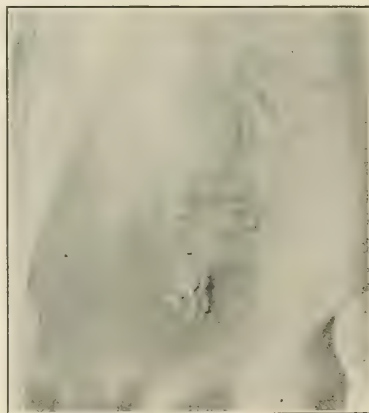


FIG. 5.—Case 3, before x ray treatment.

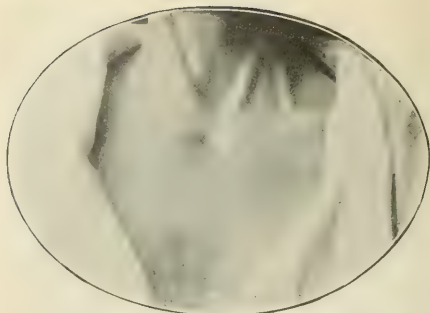


FIG. 6.—Case 3, after treatment.

at the time, until a crust formed, which upon becoming detached while bathing the face, left a small ulcerated spot, from which occasionally a few drops of blood flowed. This process of temporary scabbing over began without causing any pain or inconvenience, although there was a general increase in the ulcerated area. After six months the growth began to spread more rapidly, and with the spread of the ulceration there was itching and some pain. No particular treatment was adopted until the patient presented himself September 1, 1903. After examination, I suggested the Röntgen ray treatment, and made a microscopical examination from a section taken from the affected spot, so that we might determine accurately the cause of the trouble. The result of this examination demonstrated that the diagnosis of epithelioma was correct. I continued the exposures until January 1, 1904, before feeling satisfied that the patient could discontinue them permanently. Fig. 3 shows the condition of the patient when treatment was begun, and Fig. 4 as it is to-day. In this case, as well as in the one previously mentioned, I was interrupted in giving the exposures with any degree of regularity, sometimes three or four weeks intervening without treatment. At the present time there is no indication of any return of the diseased condition, and no exposures have been given for several months.

CASE III.—A. B. H., aged 50 years, noticed about December 1, 1903, tenderness and redness over the sternum, which gradually increased in extent until small ulcerated spots appeared, from which at times would flow a few drops of watery fluid, and later some pus. The soreness increased to such an extent that the patient was compelled to give up his business. I first saw him March 11, 1904, and was told that he had been using different salves for the past four months without any beneficial result. The history was very incomplete, being entirely negative, and therefore I was unable to make a satisfactory diagnosis. His general health was much impaired; he had become very nervous and depressed over his condition. As shown in Fig. 5, taken the day that the treatment was begun, a nodular condition will be noticed which, according to the statement of the patient,



FIG. 7.—Case 4, when x ray treatment was begun.

began about two months previously. After making an examination and believing that the infected area in all probability contained pus, I



FIG. 8.—Case 4, at the end of treatment.

suggested that it be thoroughly drained, which, however, the patient absolutely refused. The exposures in this case lasted from eight to twelve minutes, having been given four times a week for three weeks, and about twice a week thereafter until towards the end of June, 1904. No improvement was noticed until after the first month. The soreness and inflamed condition gradually disappeared, and to-day the patient experiences no trouble whatever. His general health has much improved, and the nodular condition has entirely disappeared, as shown in Fig. 6.

CASE IV.—R. B., aged 55 years, presented himself for examination and treatment August 5, 1904, and gave the following history: 28 years previously he was struck under the eye with a pitchfork, making two punctures of the skin, one quite deep, which bled profusely for a few minutes, but no special treatment was employed. At times it gave evidence of healing completely over, but did not do so entirely, always breaking down before the process of healing was completed. Frequently the area of healthy skin surrounding the sore would become somewhat inflamed, and he was conscious all the time of some soreness. The process of temporary scabbing over had continued for the past twenty-eight years, but recently—within the previous six months—the infected area had seemed to increase somewhat in size. The patient gave a negative history and presented himself for treatment on the date given. The condition when treatment was begun is shown in Fig. 7, which was taken the day treatment was begun. In this, as in the others, each exposure lasted from five to eight minutes, seventeen exposures being made in all. I gave an exposure of five minutes daily for five days, then every other day, until ten exposures had been given, and then as the condition of the parts would allow. At the end of twelve exposures I had set up quite a dermatitis, and then discontinued treatment for a week. The patient is now well, as is shown in Fig. 8. It is of course too early to state what the condition will be in a year from now, but I have no reason to believe that there will be any return of the trouble.

Mortality of Michigan During May, 1905.—The total number of deaths reported to the Department of State for the month of May was 2,700, a decrease of 322 from April. The death rate was 12.5 per 1,000 population, as compared with 14.4 for the preceding month. By ages there were 456 deaths of infants under one year, 140 deaths of children aged one to four years, and 837 deaths of elderly persons aged 65 years and over. Important causes of death were as follows: Tuberculosis of the lungs, 204; other forms of tuberculosis, 28; typhoid fever, 22; diphtheria and croup, 28; scarlet fever, 5; measles, 20; whooping cough, 16; pneumonia, 171; meningitis, 43; cancer, 147; accidents and violence, 181. There were also 18 deaths from smallpox, one in the city of Detroit, one in the city of Big Rapids, Mecosta county, one in Walker township, Kent county, and 15 in the city of Grand Rapids.

ANÆSTHESIA IN THROAT SURGERY.

By HENRY WALLACE, M. D.,

GLEN RIDGE, N. J.,

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The administration of an anæsthetic is a post of responsibility, and too frequently relegated to the inexperienced. In the majority of cases it is next in importance to the operation, and the fact that in not a few cases we fear the results of the anæsthetic more than of the operation places its administration in the first rank of responsibility.

There is nothing more trying to the surgeon than to be continually obliged to keep his eye on the anæsthetizer and be unable to concentrate his entire attention upon his own work. It is for this reason that the writer has always felt that the art of surgical anæsthesia is worthy of the attention of a specialist and believes that there is a large field for those who will devote their time and attention to this subject.

The average medical graduate is woefully ignorant of the subject and the fortunate minority who receive hospital appointments are almost the only ones who get practical training in this important branch.

In throat surgery, the choice of anæsthetic, the degree of narcosis, and the position of the patient are the special points worthy of our attention and these will depend very largely on the individual operator. There are some who ignore anæsthesia, local or general, in these cases, and there are others who prefer the swifter anæsthetics, such as nitrous oxide or ethyl chloride. The great majority, however, operate under general anæsthesia and consider it cruel to do otherwise. Such being the case, the study of some points of importance in the production of narcosis in these cases may not be amiss.

As to operating without anæsthesia, let me quote a statement of Ingals's, made in a paper of recent date, detailing the technics of his cold wire snare operation for tonsillar hypertrophy. He says: "Furthermore, we should not forget that the fright and pain to the little one caused by amygdalectomy is often as great as that an adult would suffer from amputation of the arm." Some of us may think that this is putting it rather strongly, but there is no doubt in the writer's mind that the combined operations of amygdalectomy and adenoidectomy at one sitting produce a degree of shock which no child should be permitted to endure. Ingals's statement, however, shows the feeling of one well known spe-

cialist on the subject and without question many can be found to agree with him.

Gradle, of Chicago, removes the tonsils without general anæsthesia. He says, in his work on *Diseases of the Nose, Pharynx, and Ear*, that "Tonsil operations require anæsthesia only when active resistance on the part of the patient is to be expected. The pain is considerably reduced, but not entirely avoided, by free brushing with a twenty per cent. solution of cocaine." Gradle also performs adenoidectomy without anæsthesia. He states that "Narcosis makes the operation more formidable and necessitates more assistance. It does not in any way permit a more thorough operation, as most of the relapses which the writer has seen had been operated upon previously by others, or by himself under anæsthesia. The pain in well arranged operations is not sufficient to necessitate the superfluous risk of an anæsthetic." However, he later states that "Narcosis is also preferable when the faucial tonsils are to be exercised at the same sitting, as this triple operation is usually too severe a tax on a child's tolerance." Although many operate satisfactorily under nitrous oxide or chloride of ethyl, the writer believes that the *average* operator requires a longer period of narcosis and a more complete relaxation than is ordinarily produced by them to enable him to do a thorough tonsil and adenoid operation.

His preference is decidedly for ether in all cases, preceded, where possible, by nitrous oxide. The results have been uniformly good, and as he does not class himself among the very rapid operators this sequence has proved most satisfactory.

Without question, both patient and operator are to be congratulated on the power of nitrous oxide to bridge over the stage of irritation and excitement produced by ether, and thus almost eliminate the element of fear in our young patients.

Chloroform.—In these cases, the first and last statement in the discussion of this anæsthetic should be one of condemnation; the object of such condemnation being to sound a note of warning to members of the profession, and especially to those in general practice who operate in these cases and who may not be aware of the risks they run in selecting chloroform as the anæsthetic.

Under ordinary circumstances chloroform is considered about five times as dangerous as ether. Reference has been made to the effect of fear as a contributing danger, and in this connection I quote from Patton, of Chicago, in his work on *Anæsthesia and Anæsthetics*. He states: "There are various factors which constitute a source of danger during chloroform inhalation besides the toxic action of the drug itself. Psychological causes may contribute toward danger or death early in the ad-

ministration. Cases have been reported by various observers of death apparently due to fright alone before the administration had begun. It is a fact, however, that the cases of fright syncope are practically limited to cases where chloroform has been employed, and we must therefore regard psychological influences as merely a more potent contributory cause under chloroform than under other anæsthetics."

It is interesting to read what Lennox Browne has to say on the subject of anæsthesia in throat surgery. Generally speaking, the Europeans have been much more partial to the use of chloroform than we, yet this writer, as he himself states, is "an energetic opponent of the administration of chloroform under such circumstances." His preference is very great in favor of gas "when dealing with operative measures which to the dexterous occupy but a few seconds, and have little or no claim to be dignified as aught but manifestations of minor surgery." This statement may be true from his standpoint, but there are a goodly number of special operators, and competent ones, too, who do not look so lightly upon these operations and for whom gas would not be the ideal anæsthetic by any means.

In his objections to chloroform this writer seems to lay most stress on its dangers from mechanical causes. In addition to the danger of the fact that chloroform abolishes the cough reflex so as to favor the entrance of blood into the larynx, he emphasizes the fact that these patients are already suffering from air starvation and require a smaller dose of the anæsthetic, being, he says, "as it were, in their ordinary condition already advanced a stage toward asphyxia." Hence are explained those not infrequent cases in which chloroform has been used in nasopharyngeal surgery and the patient has died before the operation had actually been begun.

It is true that the advantages of gas are that the cough reflex is not abolished, that the narcosis is not so profound and may be discontinued almost as soon as the mask is withdrawn, as is not the case with chloroform or ether, and, finally, the readiness of the patient's recovery without after effects. So far, so good, but this writer makes no reference to the condition of lymphatism which these cases represent and the dangers of chloroform anæsthesia in such. One might properly infer, as he speaks of this condition only to define it according to Loewenberg and gives the names of well known men who do not consider that this diathetic state constitutes an ætiological factor in the production of adenoid growths, that he regarded the dangers of chloroform as mechanical rather than constitutional. However, there is not much doubt that the constitutional peculiarity or dyscrasia known as lymphatism, or the *status lymphaticus*, bears chloroform badly

and that there are weighty reasons, other than mechanical, why chloroform should be avoided. Constitutional reasons have never been urged against ether in this condition, or in fact mechanical ones, although we all know that in cases of marked crowding of the passages, anæsthesia proceeds more rapidly and smoothly after the first strokes of the operative attack. The mechanical objection against chloroform is based on the fact that air should form a large portion of the mixture, and herein lies the danger when it is not properly administered.

In the August 27, 1904, number of the *New York Medical Journal and Philadelphia Medical Journal* will be found an account of a chloroform death after an adenoid and tonsil operation. This case was evidently a good example of the lymphatic temperament in which there was tonsillar and adenoid hypertrophy. The article states that, after a hurried circumcision and a rapid throat operation, the patient exhibited a sudden failure of pulse and immediate cyanosis of the face, and that, in spite of every known and available means of resuscitation, the patient died.

The paper goes into detail regarding the gross autopsy findings, which proved conclusively that it was a case of lymphatism, and concludes with a statement, made by a jury of physicians at the coroner's inquest, which exonerated the physicians and the hospital on the ground that the death was due to cardiac paralysis following chloroform anæsthesia occurring in a subject having a disease not determinable before death, and because every possible precaution was taken in the case. Here the danger was evidently not due to mechanical causes, for the danger signs did not appear until after the completion of a circumcision, an amygdectomy, and an adenoidectomy. Had it been due to mechanical reasons, pure and simple, would it not be natural to infer that the danger signs would have manifested themselves earlier in the operation?

The *American Year Book of Medicine and Surgery* refers to Chaldecott's article in the *Lancet*, of September 13, 1903, in which he condemns the use of chloroform in these cases and refers to fifty instances of death occurring in these otherwise simple operations, and in which he further makes statements as follows in regard to chloroform, ether, and the other anæsthetics: "Even in the hands of an experienced anæsthetist, chloroform in these cases is extremely dangerous. For infants less than twelve months old ether should be employed on an open mask. Children from one to four years of age do not take nitrous oxide well, especially if there is any obstruction of the respiratory tract. Ether in these cases is usually taken without trouble. From four to twelve years of age nitrous oxide is gen-

erally satisfactory. This agent is also usually satisfactory in adolescents and adults. Gas and ether are to be preferred to gas and oxygen." The author closes with repeated advice against the use of chloroform in nose and throat work.

In the same volume are given the results of McCardie's experience with ethyl chloride, published in the *Lancet* for April 4, 1903. This writer gave ethyl chloride in 620 cases, a large proportion of which were throat or tooth cases. Its advantages are much the same as those of nitrous oxide, and he states that the rapid production of anæsthesia is sometimes startling, occurring in one instance after six full breaths.

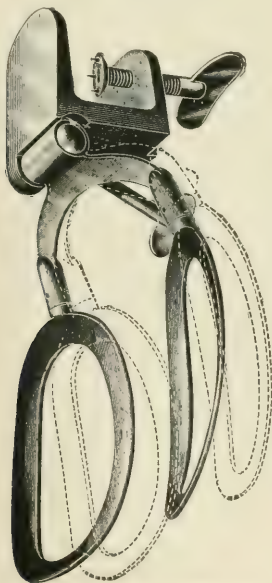
If anæsthesia is not induced in less than a minute, or a minute and a quarter, it is because air is being admitted too freely to the inhaler or because insufficient ethyl chloride has been given. In operations on the throat and nose, McCardie prefers the patient to assume the recumbent posture, the head being somewhat lower than the body. In none of the 620 cases mentioned had he noticed any syncope, either cardiac or respiratory, the only difficulty arising from obstruction of respiration, the result of hæmorrhage or the falling back of the tongue. When full anæsthesia is employed the muscles are almost invariably flaccid, although rigidity has been complained of by a number of writers. The only contraindication to the administration of ethyl chloride is marked narrowing about the larynx, when McCardie considers chloroform a better anæsthetic, as it is less stimulating. In most of his cases he used a Hewitt inhaler.

As to the degree of anæsthesia, the writer's preference is decidedly in favor of narcosis to the extent of palatal relaxation. Unless there is a marked relaxation of the soft palate, the use of instruments in the postnasal space is difficult, uncertain, and dangerous. He finds that it is advisable to get the patient well under the anæsthetic and complete the operation as far as possible before the palatal reflex returns, attend to the hæmorrhage, and give more ether, if necessary, to make removal thorough.

As to the position of the patient, the writer, after a fair and impartial trial of all the usual positions but the lateroprone, uses almost universally the dorsal position with moderately lowered head. As to the upright position, we must agree that it takes some special training to anæsthetize properly and further the operator's efforts. The upright position is preferred by a good many well known operators. Hooper, who was probably one of the first to realize the importance of adenoid growths in this country, and the late Morell Mackenzie are among them. French, of Brooklyn, invariably prefers this position and has devised an excellent chair for

facilitating the handling of the patient. The only advantage that I can see in the upright position is that the operator is credited with being more familiar with the landmarks, having been accustomed to perform the majority of his manipulations with the patient sitting erect in his office chair. However, this seems to be but a point of minor importance, for very little practice would render him as familiar with the faucial and postnasal landmarks with the patient in the dorsal or other position. It is stated by those who prefer it that there is less danger of ear complications after operation, by favoring the drainage of blood from the fossæ of Rosenmüller. It is averred on the other hand that there is more danger of blood entering the air passages by gravity.

As far as the writer has noticed, after a considerable experience both as anæsthetist and operator where the upright position has been employed, there has been little or no trouble with blood entering the larynx where the correct technics was employed. On general principles it seems that the patient should conform as nearly as possible to the usual and safest anæsthesia position, especially if the operator cannot count on an anæsthetist trained to work with the patient in the upright position and where he will have no other assistant. To reduce the number of assistants and to operate with the greatest convenience, especially in house to house work, the writer has devised a portable head rest attachable to any table.



Dr. Wallace's portable head rest.

This rest has the advantage of steadying the patient's head as it depends at any desired angle over the end of the table. In this position it is difficult for blood to enter the larynx. In using the rest, the patient is anæsthetized before placing the head on it. Too great extension of the head is inadvisable and should be avoided. Even in this position blood will enter the digestive tract, and, as unfortunate results have been attributed to this occurrence, some operators make a practice of washing out the stomach before the patient leaves the table. Vomiting after these operations is very likely to occur, owing to the absence of profound narcosis and the presence of the swallowed blood. Generally speaking, it is not to be considered undesirable that vomiting should occur.

To favor the passage from the intestinal tract of such blood as is not ejected in this way, it is the custom of many of us to give the patient a dose of calomel, or a saline, or both, as soon as the stomach will retain the medication.

SUMMARY.

It seems, then, from the writer's standpoint at least, that for the operator of average skill, the gas ether sequence, with narcosis pushed well to palatal relaxation, the patient being in the dorsal position with moderately lowered head, secures the best results as regards least danger to the patient and the greatest facility of operative technics.

Annual Meeting of the American Medical Society for the Study of Inebriety and Alcohol.—

The thirty-fourth annual meeting of this society will be held in the hall of the Atkinson School Building, Portland, Ore., July 12 and 13, 1905, beginning at 9 a. m. The president's address, by Professor W. S. Hall, of the Northwestern University of Chicago, Ill., will be a review of the progress of the study of the action of alcohol during the year. The Committee on the Influence of Alcohol in Literature and History will present a report by its president, Dr. John Madden. The Committee on Heredity as a Cause in the Disease of Drug and Spirit Taking will report, and the Committee on Patent Medicines will also submit a statement of their work. Papers will be read by Dr. MacNicholl, Dr. Steward, and others. The second session, Thursday, July 13th, at 9 a. m., will be a memorial service to the memory of the late Dr. N. S. Davis, and a continuation of a similar meeting before the American Medical Association. Addresses are expected from Dr. Hall, Dr. Webster, Dr. Crothers, Dr. Kellogg, Dr. Hollister, and remarks by ex-presidents Musser, Billings, Mathews, and President McMurty, of the American Medical Association. The public are cordially invited to be present. T. D. Crothers, M. D., secretary.

Lectures and Addresses.

THE MODERN DOCTOR.

By A. JACOBI, M. D., LL. D.,

NEW YORK.

(Concluded from page 1201.)

The more you know the better will you be in a position to judge of the utility of new teachings, theories, and methods. Let me give you an instance of what occupies many medical minds just at present. Infectious diseases, such as rheumatism, scarlatina, etc., are believed to enter the organism through the throat. The teaching is that they pass in through the tonsils. Now, it is true that the tonsils consist of lymphoid tissue which is apt to absorb whatever comes in contact with it, particularly when the surface is sore, maybe in consequence of a burn, a hot drink, or a cold. Even tuberculosis has been believed to enter through the tonsils, and a modern author has preached a crusade against the tonsils. They must be removed totally if mankind is to be freed from its arch enemy. Unfortunately, however, this author added that there were very few men living who could remove the tonsils according to his effective method. In the same way the tonsils are charged with admitting other infectious diseases. But as early as 1860 I proved that diphtheria, for instance, when it affected the tonsils alone was mild, while the danger was great when the neighboring surfaces, particularly those of the nose, were affected, and twenty years later I was able to publish the anatomical reasons for that difference. So I have no doubt that the tonsil theory will be restricted. Indeed, in comparison with the dozen lymphoid follicles of which the tonsils are composed, there are thousands in the proximity. It is through the latter rather than through the tonsils that the invasion of infecting microbes and toxines takes place.

Why do I say all this? Because I wish you not only to be willing recipients of great men's gifts, but to learn to see with *your* eyes, to hear with *your* ears, and use *your* judgment. Believe Epicharmus when he said 2,000 years ago: "Sobriety and constant doubt, these are the marrow and bone of the mind."

It is not necessary to live in big medical centres to make good and epoch making observations or even to write immortal works. Beaumont was a military surgeon in one of our outposts when he gathered the materials for his *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* (Plattsburg, 1833). Drake was a practitioner and teacher in a small town

when he published his *Diseases of the Mississippi Valley*; McDowell was a country practitioner in Kentucky; Marion Sims in Alabama.

You gentlemen have been born and bred in a democratic country. Thus it should be easy for you to have respect for the individual patient, male or female. I know that what I have seen in European clinics could never happen in our country. In Europe they expose nude women for half hours at a time, shivering and almost annihilated with shame and terror, to the gaze of students and nurses. Our students would scorn and hiss the teacher who would thus blunder or sin. That is why you American men will find it easy to imagine yourself in a patient's place. Where you cannot save, you can relieve or comfort. Now, a learned and sagacious friend in the Far East has repeatedly expressed his opinion that truth should be told in every case no matter what the result. I decline, have ever declined, to follow that ruling. I never told a patient he must die of his illness, and I hope I never shall do so. Tell a patient he must die of his cancer, and you will shorten his life and make the brief remnant of it miserable beyond description. Tell the truth to one of his reliable and discreet friends.

Truth is a remedy. Both have their indications as to individuals and timeliness. The same remedy, given at different times and for different conditions and to different persons, may have different effects. Never forget that the good of your patient is your first and only object. To tell the whole truth will sometimes kill, in other cases it will benefit, provided it is given in proper doses. For instance, a patient will come with a cough and short breath and the history of frequent colds; perhaps even of occasional bleeding. He has the physical symptoms of pulmonary tuberculosis and you find tubercle bacilli in his sputum. Will you tell him that he is tuberculous or will you conceal the fact? When you tell him he is tuberculous he will ask the momentous question: I never thought I was consumptive; what will you do about it? I think the very solution of the difficulty, if there is any, is this: You will tell him that he is tuberculous, but not consumptive, that he is not going to die, that he may become consumptive if he should get worse; that many, indeed most people like him have a good opportunity to get well, that it is a common experience to find people die of all sorts of diseases at sixty or eighty years of age, in whose lungs there are tubercles healed; that, indeed, there are comparatively few persons who have had no tuberculosis some time in their lives; that he can save himself and protect his family with a moderate amount

of care and foresight. You may do that and be truthful. You tell him truthfully that he has tuberculosis and that it is his duty to get well. What you will not do is what I experience several times a week. A poor patient tells you his doctor has told him he has consumption, and unless he goes to Colorado at once he will die. Imagine a poor person, very often with a wife and children, with no money to pay even his railroad fare, much less to live upon, told in just so many words that he cannot be helped. There are much ignorance, thoughtlessness, and cruelty in the intercourse of men, but I know of no act of brutality that equals this treatment of poverty and malady stricken persons on the part of members of our own profession. There is no reason to indulge in it in your relations to the sick. If you have the cruelty of your convictions, try it on the rich who are independent of you, but neither on the poor in private life nor on hospital patients.

Never, my young friends, give up watching a case as long as you are in charge. Most cases of disease have a tendency to get well; that does not mean, however, that the sufferers should be left to themselves; for the measure of strength saved from an illness determines the duration of convalescence, the restoration of the tissues, and the future power of resistance. Many may recover unless they are neglected; if they do not so recover, their blood is on your heads. Some will die no matter what you do or try; even then euthanasia is welcome if you cannot procure more; it is better than the anguish and the suffering of many that are moribund. In many such conditions the question has been raised whether or not it might be permitted to shorten the life of a hopeless martyr who is in torture which *must* end in death. I was present when a minister of the gospel in my city rebuked us doctors roundly for not finishing the misery by a friendly poison. When I heard it, I remembered the little sentence in the Latin primer of my early childhood: *Medæ projeciebant moribundos canibus*; the Medes threw the dying to the dogs. When we doctors become Medes, we shall obey the ruling of that clergyman. Meanwhile we have sworn with Hippocrates: "I will give no deadly medicine to any one if asked, or suggest any such counsel."

In order to fulfill the indications required by the sick, the convalescent, or the dying, make yourself acquainted with the rules of nursing and dieting, and with the nature and effect of remedies both external and internal. When I was a young student, the medicine of Germany was just waking up from a forty years' slumber caused by the unintelligence of what was called *nature phil-*

osophy. At that time the Viennese learned pathological anatomy from the French. One of the greatest teachers of that branch was Rokitansky. For him all there was in medicine was the study of the dead body. For Skoda, however, all there was in medicine was diagnosis, mostly through percussion and auscultation. For the patient, all there was to do was to go to the hospital, to be diagnosticated by Skoda, and to be opened by Rokitansky. Medical science and the patient met only twice, once on the hard hospital bed, next on the autopsy table. The doctor had done his full duty when the diagnosis and the result of the post mortem examination agreed. Of therapeutics there was none. The time of the big medicine bottles with the nauseating draughts had gone by, thanks to Hahnemann; whatever was presented by Hahnemann, however, could not meet with the approval of sophisticated savants. So there were no drugs, no treatment. While formerly both medication and bloodletting had been overdone, now everything was discarded. Dietl, of Vienna, and Hammernjk, of Prague, founded that nihilism of the Vienna school that under the flag of so called pure science had resulted in driving the patients into the camps of sectarians or quacks, who after all do hold out some promise to the despairing.

All that has changed; modern medicine has learned its responsibility to the individual patient and to the community. We have entered upon a new era, that of therapy; both the individual and the community are recognized as claimants upon our bounty.

Gentlemen, you are not alone in the world, nor in the profession. You could not live a hermit in the midst of millions, away from the village, county, State, nation, and the universe. A hundred ties bind you to benefit and be benefited by the rest. So you are bound up with the profession from the first day you enter it. I advise you to join one or more societies at once, at all events your county society, or any other that commends itself for its scientific work or for its affiliation with the American Medical Association. The complaint we often hear that there are too many medical societies may be justified as far as large cities are concerned, but there should be enough of them all over the country to give an opportunity to every practitioner to join at least one. The benefit to all its members is mutual. As there is a political, so there is a professional citizenship, meant to improve the individual, increase his knowledge, compare experience, adjust mistakes, and learn modesty. We were not made to be alone. Capsulation kills the efficacy of tri-

china, bacilli, and men equally; and the interests of a profession or a political commonwealth are not safe unless in the application of a universal democratic spirit. Nor can great results be obtained except by the altruistic cooperation of many. Legislators were aware of that more thoroughly a century ago than at present. At that time they were always willing and anxious to endow the medical profession with such legal rights and privileges as would enable it to look after the interests of public health and sound legislation. Even the authorization to practise was left to their judgment. Nor has the profession ever to my knowledge misused the confidence placed in it. The Sanitary Commission of the civil war which has become a model for the world's imitation and the spiritual mother of the Red Cross was controlled by the spirit of such eminent doctors as Cornelius R. Agnew and Ernst Krackowizer. The fight against epidemic diseases, which, as Virchow expresses it, should teach a statesman that when they exist they are a preventable or curable disorder in the social and political organism, has always been taken up by medical men. Unfortunately, however, it is too often true what Anarcharsis said of Athens, that the wise men do the talking and the others the acting. A few weeks ago, Gorgas and Reed and Panama formed no exceptions. A number of years ago we spent a million a day on a war of our making while a mere quarter of a million was refused that was to be spent on an instruction camp and life saving station. With what we spend in half a year to keep the survivors of a foreign population in subjection, we could eradicate tuberculosis from the United States within a generation. The battles against disease, prejudice, shortsightedness, and incompetence are always fought by the medical profession, sometimes in single combat, more effectually, however, by consolidation and cooperation. To this profession you have dedicated yourselves. Be sure, my friends, that its practice be not a trade for you, but a vocation and a sacred calling.

Many of you will enter the practice of medicine within a reasonable time. When your medical neighbor has patients, while you are still waiting, never grudge him his own, and—wait. When the first one has turned up, never feel that you own him. When your neighbor is well spoken of, do not believe that your reputation suffers when he is eulogized, and watch your shoulder lest it shrug. It is better that patients should seek you than that you run after them. Do all you can and all the teaching of your medical friends and of such books as you have rea-

son to believe in. Do not despise after your graduation a good text book. I consult them to-day, aye, even my own, for on a page or two some of them may contain the ripe experience of a generation; indeed, not every text book is compounded by a young man at the beginning of what he means to become a brilliant career. In the beginning of your practice—and later on for that matter, if time permits—be sure to read up in reference to every case under your care, and take exact histories. Never believe you know all about any case, or enough—for I assure you you don't. At least I don't, though I have studied medicine nearly sixty years. When a patient leaves you for some other doctor it depends on your temperament, or vanity, or needs whether you feel chagrined; but do not blame the doctor who is called in your place. On the other hand, when another doctor robs you of your patient by hook or by crook—they say such things do happen—be sorry for that doctor, and for the profession he should not belong to, and be glad you are not the other man, but a gentleman. Remember that a gentleman finds it easy to compete honestly; when you are not treated that way, it worries you—but *you* are the gentleman, and people will eventually find you out. Not to take honest competition on the part of others kindly shows disregard for the rights of others, either doctors or patients, and bad citizenship, and exhibits jealousy, avidity, and senility of the young or the old heart.

Unfortunately we are not all angels. Indeed there was a time, not very far distant, when the facility of obtaining a diploma and the license to practise so filled the profession with undesirable men and women as to crowd the ideal as to what a physician should be to the wall. It is only with the growing difficulty of matriculation and increasing severity of examinations, particularly also the establishment of State license boards, that the number of underweight doctors has become smaller. Their large number and consecutive competition rendered, as it does in any trade or vocation, the obtaining of a livelihood more difficult, and subjected the morals of the profession to a severe strain. Moreover, the commercialism which is the signature of our period has invaded industries, arts, science, and the professions, but has not proved so detrimental as it has in Europe, where poverty is greater and the innate pride of our democratic citizens is absent. The moral requirements of the profession found their expression in the code of ethics of the American Medical Association, first enunciated by an Englishman, Percival, in 1807. It has cer-

tainly done much good; it is true it cannot make a gentleman out of an evil disposed person; no law can. It simply codified the rules a gentleman will obey without being told; but the inexperienced may be guided by its teachings. When finally, in 1882, we decided in the State of New York to modify and later on to abolish the code as a law book, as none was required to guide our methods of intercourse, the observance of the rules valid amongst gentlemen became even stricter in the profession in the State of New York than ever before. The result was, however, that our affiliation with the American Medical Association was interrupted. But such has been the gradual change of public opinion that the American Medical Association saw its way two years ago to abolish the code as a law book enforcing obedience, and to recommend for general acceptance in place of a criminal code a series of principles of ethics, not compulsory but suggestive, as a guide. This wise action has enabled the two warring factions in New York State to make active preparations for a lasting consolidation which is in the interest of both and, as we hope, also of the American Medical Association. The best men of the profession are actively engaged in overcoming the legal difficulties we met with in our way, and I know whereof I speak when I say that the old and tried men of the Medical Society of the State of New York, the very men who abolished the code as a law book with punishments attached, are pledged to accept the new principles of ethics as agreeable to them and a guide to the colleagues.

Now, gentlemen, there are two indispensable factors that render practical success possible. Do my young friends want to hear what they are?

Firstly, be sure to accumulate all the science and art within reach.

Secondly, acquire the confidence of your patient.

The first recommendation is the main thing. Acute infections, epidemic diseases with a limited or unlimited course, injuries, operative cases, the vast number of the disorders of childhood, indeed the greatest number of ailments with disturbances of the blood or of organs, require nothing but a clear insight into the nature of the disorders and the knowledge of the action of the remedies, besides energy, consistency, and the knowledge of what is either possible or impossible. No confidence of any patient will do him or you good. But, in a large number of nervous disorders, or of chronic diseases, the confidence of your patients, if you can obtain and retain it, is invaluable. When they know that you have

worked for knowledge and possess it, and that besides you place it in their service and are interested in them, their confidence will be a powerful asset in behalf of both parties concerned.

Constant study, my friends, should be a requisite. Whoever cannot or will not learn from every case he meets, will not improve. A hundred cases not studied are like the first. Experience is not gained by committing the same mistakes a hundred times; and an old man, who never had a young heart and a searching eye, was never a physician that deserved any confidence. It is true that confidence may be misplaced. There are men in the profession as well as outside of it who play the confidence game. A long while ago there lived in New York two doctors with whom I was intimately acquainted. One of them called on the other long after midnight—it was before the telephone era—for a consultation, and the following conversation took place: "I am glad to find you up, come along, but what are you doing at this time of the night?" "I am studying." "You are very queer. One quarter of *savoir*, and three quarters of *savoir faire*, that makes the successful practitioner." "Yes, that may be true, but where do you come in? For you have the three quarters of *savoir faire*, but not the one quarter of *savoir*." Perhaps you can imagine that diplomatic relations between the two men became strained and there was no other consultation after this.

Be honest in all things! Work! And while you are studying and applying your drugs, do not forget the principal remedies offered, not as they say, by nature—she offers poison and salvation with equal generosity—but by common sense. Exercise and rest, open windows, hygiene in general, diet in particular, hot and cold water are together a panacea when judiciously ordered. Frequently you may do without the apothecary. Then, however, your patient may turn upon you. "Is that all? Exercise, open windows, starving, cold water, no tobacco, no coffee, no high ball, and no prescription? Doctor, I know that much myself. I see I must go somewhere else. Now, doctor, really, is there any bill?" He does not appreciate that you have given him the quintessence of two thousand years' worth of medicine, goes to your neighbor, who gives him no quintessences, no two thousands years' worth of study, but a prescription and gets his ungrudged fee. Never mind, however, that very patient will some day return to you, will try to run down your neighbor, your so called colleague, and you—well you will stop him from so doing.

For you will not forget that since the man

does not know how to discriminate between doctors, you have to take the part of the profession in the person of your rival. The dignity of the profession should be upheld by and in every member. Do not speak ill of a professional brother, or half brother, or cousin, for the layman will take your sneer as a slur on the profession. Now, when you are asked for your opinion of a medical man, who is above the average in knowledge and virtue, or who is your peer, do not spare your praise; when of a doubtful or no longer doubtful person, tell your inquirer that you are not the judge of other doctors. Mind, whoever of you says, or is believed to say, anything derogatory to the profession, which is a calling, and not a trade, acts foolishly. While not benefiting his worldly interests, he is injuring himself, the medical world, and the public that should in its own interest be educated into respect and appreciation. And never forget that praise of the other man does not detract from your worth.

One more lesson which you may take or not. Those of you who labor in the most beneficent, but least paid part of professional work, I mean that of the general practitioner, must never get tired. A doctor has no right to be tired, he must not get sick unless he wants to be sneered at, most of all, he must not permit himself to die; a poor doctor who could not save himself, though he expected to save others! You should be prepared to enjoy all the miseries of life, many of which you cannot escape. There are, indeed, good reasons for doctors being serious and perhaps tired looking, for they have shared thousands of sleepless nights with their patients without finding rest the next day. But you are well off after all. Imagine you had been the doctor of Hephæstion, the friend of the great Alexander. When he died, the king was sad and rather displeased. So he crucified the doctor and burned the temples of Æsculapius. Imagine how you would feel if you were killed every time you lost a patient and medical schools were burned as a punishment. We are more modern, however. The only thing that is crucified is your good name, in addition perhaps to a malpractice suit. I have lived through both and I still hear a woman's shriek in a public thoroughfare fifty years ago: "There goes the murderer of my child." I tell you life is a serious thing, and you have to face it in the best way you can. Imagine you had been a practitioner in Venice under the rule of the God fearing Godfrey of Bouillon, only seven hundred years ago. If you had been a Christian doctor you would have had to pay for every slave that died under your care; if a

Hebrew you would have been hanged with a urinal in your hand. It should be your joy forever you did not live in the good old times of the Crusaders. What would you say to being a great discoverer and benefactor like Harvey or Gall, two of the great names in medicine. When and because they discovered and taught new lessons, they were persecuted and lost their practices. We are better off nowadays. But, still, listen to what I read in Ughetti's book—I believe he spoke of you and me: "When a doctor runs away from an epidemic he is a coward; when he stays and fights it, he is forgotten; when it kills him, his family will starve." I have seen all that and it looks gloomy, does it not? But you do not look frightened at all. And such is the fascinating sacredness of the calling you are entering upon, my young colleagues and fellow students, that if you asked an old man who had been through hard lifelong work and heart rending scenes, through successes, maybe, and endless failures and disappointments, if you asked him what he craved to be if he began life again, he would, I think, reply: "Just a modern doctor."

Therapeutical Notes.

Antidiarrhoea Tablets contain 0.25 gramme albumin tannate in each tablet, made agreeable to taste by the addition of sweetened chocolate.

Blutan is a carbonated solution of peptonized acid-albumin-iron-manganese, free from alcohol, and containing 0.6 per cent. iron and 0.1 per cent. manganese. The preparation is also put up with bromine and iodine, as in

Bromo-blutan, which contains 0.1 per cent. of bromine in organic combination, and

Iodo-blutan, containing 0.1 per cent. of iodine in organic combination and said to be a better tasting preparation than the ordinary compounds of iodine.

Catalase is the name applied to a special ferment in the animal and vegetable tissues which has the power of decomposing hydrogen dioxide. In animals it is found most plentifully in the liver, and the substance obtained from this organ, a brownish powder, has been called for obvious reasons hepatocatalase. This powder acts energetically on hydrogen dioxide water, one part decomposing 3,000 to 4,000 parts.

Cresylone is a non-toxic antiseptic solution containing 50 per cent. of cresylic acid. It is miscible with water in all proportions.

Emulgen is an emulsifying agent of recent introduction which is said to form good emulsions with oil in the proportion of one part of emulgen to five parts of oil. The substance is said to consist of tragacanth, 10 parts; acacia, 5 parts, gluten, 5 parts; glycerin, 20 parts; alcohol, 10 parts; water, 50 parts.

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VARIOLA VACCINE.

We believe it is universally conceded by persons of experience in the matter that the so called variolation of the cow is an undertaking of great difficulty, one in which the most careful experimenters rarely succeed. When success is achieved, the fact is heralded as the essential step in the raising up of a new stock of vaccine more potent in its protective energy than the stocks already in use, the latter being assumed to have become impaired if not effete. We do not believe that this assumption is justified, and, without entering upon the theoretical question of the possibility of converting smallpox into cowpox, we must express our sense of the dangers almost inseparable from attempts to variolate the cow and from the use on the human subject of the virus resulting from a successful attempt.

Nobody need be told that smallpox is communicable by effluvium as well as by actual contact. The virus used in the variolation of the cow is manifestly dangerous to the persons concerned in the experiments, and it may easily become dangerous to others, owing to some laxity or oversight. But, granting that this danger is escaped, who can assure us that the pocks formed in consequence of the inoculation do not contain some of the original variolous contagium in a condition capable of giving rise to smallpox?

The supposition that they may contain it has been entertained by good observers and good reasoners.

It would be warrantable to brave these dangers if it had been proved that the vaccine in use at any given time had really grown too feeble to be relied on as a protective against smallpox, but we do not believe that this has ever been the case. True, the virus employed in a particular series of vaccinations may show weakness, but it is usually susceptible of regeneration, and in the few instances in which this proves not to be the case it can be superseded by vaccine from some other series, for the whole world's supply is in no danger of simultaneous degeneration. Therefore we believe that variolation of the cow should not be encouraged.

VARIOLOUS AND VACCINAL SUSCEPTIBILITY.

Almost all general practitioners of medicine of considerable experience must have met with cases in which it was difficult to account for the apparent insusceptibility or the excessive susceptibility of individuals to smallpox or vaccinia, for the variable duration of the protection afforded by vaccination, or for the somewhat abrupt termination of the immunity furnished either by vaccination or by a previous attack of smallpox. Hardly any great variolous epidemic completes its course without exemplifying almost everything that is unusual as regards these matters. We see men die of smallpox who had been supposed to be proof against it by virtue of having already had it; very rarely we see those escape it, in spite of undoubted exposure, who are not known to have been protected. We meet with persons whom it seems almost impossible to vaccinate with success, but in whom after a time vaccinia is produced with the usual facility. In addition, we encounter subjects in whom we can produce typical vaccine pocks repeatedly and at short intervals.

All this is puzzling; of course, and the facts that tend to throw doubt on the protective power of vaccination in certain instances are apt to induce in the mind of the observer a state of doubt as to the efficiency of the vaccine with which he is working. But generally one can dissipate any such doubt by comparing the exceptional results

with those obtained in the great majority of cases from the use of the same virus. Yet this question of the efficiency of the vaccine comes up for discussion every now and then, as it did recently apropos of some curious facts reported by M. Joseph Belin at a meeting of the Medical Society of the Paris Hospitals (*Bulletins et mémoires de la Société médicale des hôpitaux de Paris*, May 18th). Our own decided impression is that what happens in these unusual cases is due rather to variations of susceptibility than to any defect of the vaccine employed.

AN OLD ANTISEPTIC REVIVED.

Oil of turpentine, commonly called "spirits of turpentine," is the substance that we have in mind. Long before the germ theory of disease was anything more than the fragmentary product of an individual imagination here and there—certainly long before the antiseptic routine came into vogue—it was not unusual for the physician to rub oil of turpentine on his hands before making a post mortem examination, and he did it in the conviction that he was thereby protecting himself against cadaveric poisoning. The balsamics have indeed been recognized as efficient against putrefaction since the most ancient of historical periods, and it was not unnatural that in times past frequent recourse should be had to oil of turpentine, for it was a substance almost always and everywhere easily obtained, hardly a household being without it.

It has lately been particularly recommended by M. Fabre, of Lyons, before the Paris Academy of Medicine (*Semaine médicale*, June 7th), in the treatment of streptococcus puerperal infection. M. Fabre, who has used it both topically and by the mouth, regards it as superior to other antiseptics in this affection. So long as the infection remains local, he contents himself with bathing the interior of the uterus with "terebinthinated water," made by adding to a quart of sterilized water about half a fluid ounce of oil of turpentine dissolved in its own volume of alcohol. When the infection tends to become generalized, he administers the drug by the mouth and subcutaneously. There is no objection, he finds, to giving a drachm daily by the mouth and half a drachm under the skin. For the subcutaneous

administration, however, he prefers the employment of a "terebinthinated serum," prepared by adding to a quart of sterilized artificial serum about a drachm and a quarter of oil of turpentine with the same amount of strong alcohol. A single injection may consist of about six ounces of this liquid, containing about fifteen minims of oil of turpentine. We may suggest that the favorable action of the drug is perhaps not altogether due to its antiseptic properties.

CONGENITAL PROTRUSIONS OF THE BRAIN AND MENINGES.

Billroth divided all cases into two principal groups, namely, exencephaly and cephalocele, the first being the result arising from a general error in the development of the skull, while the latter is due to a partial or local developmental failure. In exencephaly there is an extensive gap in the vault and the remainder of the skull is microcephalic, the brain protruding in varying degrees; although feebly developed as a whole, the ventricular spaces are generally distended with fluid. In cephalocele the opening in the skull is circumscribed and the sutures are generally widely separated, although in some rare cases a microcephalic condition is present. The brain is more or less normal, although occasionally the ventricles are distended with fluid. That cephaloceles are not confined to man is proved by several recorded instances of a similar condition in lower animals. Norsa Gurrieri has described a case of encephalocele in the embryo of *Mus decumanus vel albinus*. He points out that the developmental error involves the bones of either cartilaginous or membranous origin, and that the primary cause is the atrophic condition of the bone, while the ectopia of the brain is a secondary result. Other congenital defects are frequently present, especially spina bifida.

Upon careful microscopical examination of the tumors removed by operation, or post mortem, Lyssenkow found scattered nerve cells, fat cells, fibrous tissue, striated muscle, and vessels, representing, therefore, the products of the ectoderm and of the mesoderm. He also observed that there was often an intimate union between the cephalocele itself and the overlying integument, and in consequence of these findings he formu-

lated the theory that the majority of cephaloceles were in reality cephalomata, or true teratoid growths. He further added that cephaloceles resulted from an incomplete cutting off of the neural epiblastic tube in the head region of the embryo, accompanied by an irregular development of the intervening mesoblast. The defect arises in the early stages of embryonal life, not later than the second or third week. In more embryological terms, the theory advanced states that a cephalocele is the result of an incomplete cutting off of the neural canal in the head region of the embryo from the overlying epiblast, with consequent fusion of the primary neural tube with the primordial mesoblastic membranous cranium, and with the overlying epiblastic surface layer, from which the epidermal portion of the scalp is developed. In consequence of the localized fusion between the primordial membranous cranium and the epidermal coat, the outer dermic coat, from which the membranous skull is formed, fails to develop. Bony defects therefore exist, and through them the brain matter protrudes, the projecting portion frequently being adherent to the skin and containing not only epiblastic elements, but also mesoblastic tissue from irregular occlusion of the mesoblast, as is shown by the presence of striated muscle and so forth.

This teratological explanation of Lyssenkow's accounts more satisfactorily for the cephaloceles which are met with in the nasofrontal region than for those in other situations. The tumors occupy the middle line from the nasal frontal region in front to the occiput and foramen magnum behind. In the nasal frontal region only is there any exception to this rule, the defect being situated between the nasal process of the frontal bone and the nasal bones; in other words, the nasofrontal variety, or, on the inner side of the nose, the nasoorbital, or beneath the nasal bones, the nasoethmoidal type. The tumor may also project through a deficiency in the cartilaginous base, either through the cribriform plate of the ethmoid or between the presphenoid and the basisphenoid, or between the basiocciput and the basisphenoid, the hernial protrusion forming a polypoid projection into the nose or into the nasopharynx.

Cephaloceles vary greatly in size, and, although in the frontal region they are usually small, they not infrequently attain a size equal to that of the remainder of the child's head when they develop in the occipital region. In a case observed in St. Bartholomew's Hospital (Rawling, *St. Bartholomew's Hospital Reports*, 1904) the cephalocele was placed over the anterior fontanelle, and hung downward over the left temporal and frontal regions. The baby was but twelve days old, and yet the tumor was larger than the rest of the head. The skull was, as a whole, microcephalic; fluctuation was obtained in the tumor, but there was no pulsation. The overlying skin was adherent, thinned, and inflamed. In this case an attempt was made to reduce the swelling in size and to protect and improve the condition of the overlying integument. These results being obtained, the patient was removed, and no further history was obtainable.

This same writer points out that it is frequently, almost usually, impossible to determine whether the tumor contains brain matter or not, since mere fluctuation and translucency are both deceptive, and several cases are recorded in which an operation was performed under the impression that the case was a pure meningocele, and in which brain matter was found to form the base of the tumor. When the tumor is large, when the skin is adherent, when no pedicle is present, when fluctuation and pulsation are absent, when the tumor is of firm consistence, and when symptoms of brain irritation are present, brain matter is almost certain to take a large share in the formation of the tumor. On the other hand, it is not unusual to find that the brain projects markedly outward without leading to any symptoms of irritation; fluctuation and translucency are also not reliable signs, since the brain substance may either occupy the base of the tumor or be so thinned by ventricular distention that a mere shell of brain matter lies under the scalp covering. Undoubtedly, therefore, as Rawling points out, the great majority of cephaloceles contain either pure brain matter or the mixed epiblastic and mesoblastic elements described by Lyssenkow. Complete reduction of the tumor, even when small, can rarely be accomplished; pulsa-

tion is usually absent, but an increase in size during straining can generally be detected.

Some other interesting points are illustrated by the following cases: Ssamoylenko reports two cases (*Beiträge zur klinische Chirurgie*, xl, 3), in the first of which the child, one day old, presented a tumor of the frontonasal variety. An operation was performed, and for ten days all went well. On the eleventh day symptoms of meningitis developed, and death resulted. The post mortem showed the anterior fontanelle small, the ventricles distended, and the basal part of the brain the seat of a purulent meningitis. There was a small hole between the frontal and nasal bones, through which a tubular prolongation of dura and of brain projected. An examination of the parts removed showed that the tumor consisted of the following layers from without inward: Skin, dura, arachnoid, pia, and glial fibres. The second case was that of a boy, one day old, the brother of the other patient, born seven years later, five sound children intervening. The tumor was also of the nasofrontal variety, but consisted of two distinct parts—the one reducible, fluctuating, and translucent, the other firm, irreducible, and containing brain matter. No bad symptoms resulted on attempts at reduction, and no treatment was adopted.

A patient with occipital cephalocele was admitted into St. Bartholomew's Hospital (Rawling, *loc. cit.*) in 1896. The child was three months old, and presented a tumor of the size of an orange, which was situated between the external occipital protuberance and the base of the neck. The mass was pedunculated, the stalk being of about the size of a four shilling piece in circumference. It was soft, translucent, and irreducible and swelled upon straining. An attempt at removal was carried out, and after the outermost layers were incised, three ounces of cerebrospinal fluid escaped. A second tumor was then found occupying the base of the projecting mass. This was also punctured, and more fluid escaped. Both sacs were cut away, and the wound was stitched up. Death occurred two days later, preceded by convulsions, retraction of the head, and pyrexia. The post mortem showed that the fontanelles and sutures were wide open, the anterior fontanelle

being four inches from side to side, and two and a half from before backward, and the bones of the vault markedly thinned. In the subdural space there was a quantity of free fluid, but there were no signs pointing to a meningeal infection beyond the fact that the pia mater was oedematous. The brain itself was soft and diffuent, the convolutions were flattened, and the ventricles were distended. There was a broad gap in the occipital bone, extending from the occipital protuberance into the foramen magnum, and in this region the cerebellum bulged outward. The case is of special interest as it illustrated two points on which great stress should be laid; that in large cephaloceles brain matter is almost invariably present, and that the occipital cephaloceles (below the external occipital protuberance) nearly always project through a median cleft, which extends into the foramen magnum.

An interesting case of basal hernia has been recorded by von Mayer (*Beiträge zur klinische Chirurgie*, vii) in a child three days old. The growth, projecting into the right nostril, was covered with mucous membrane, transparent, exuding serum, encrusted with scabs, pedunculated, and resembling in many respects an ordinary nasal polypus. There was no increase in size on straining. The possibilities were fully recognized, and all necessary precautions were taken. The right half of the nose was turned back as a flap, the tumor ligated and removed, and the cavity packed with gauze. In spite of all antiseptic precautions, death occurred six weeks later, though no symptoms of meningeal infection became evident. The post mortem revealed an oval hole in the left half of the cribriform plate of the ethmoid, through which the dura mater projected and to the edges of which the membrane was adherent. The pedicle of the polypoid outgrowth contained ganglion cells and nerve fibres, while the part removed showed, from without inward, mucous membrane, dura mater, arachnoid, pia, and glial tissue.

As to the operative treatment, von Bergmann divides the cases into two principal groups: The first class comprises "inoperable" cases, this feature being made evident by association with premature synostosis and microcephaly, hydro-

cephalus, and marked deformity, or when the tumor is situated below the external occipital protuberance. The "operable" class is represented in cases with limited protrusion and none of the above mentioned defects. As pointed out by Rawling, this practical classification excludes the great majority of cephaloceles from any radical surgical interference, and the cases that remain are but few in number, and are almost entirely limited to the nasofrontal variety. Even in this class any radical operation is carried out under great disadvantages, since the difficulty of keeping the area aseptic is sometimes insuperable. A perusal, moreover, of the recorded cases in which operative treatment has been adopted shows a very high mortality, and though the patient may recover from the operation, the late results are still more unsatisfactory. On the other hand, it must be borne in mind that all palliative measures fail to produce any benefit except in the mildest of cases, and that nearly all the patients who are not surgically treated die at an early age. Risks, therefore, must be taken if a successful result is to be attained.

In order to fill up the opening in the skull, Lyssenkow advised an osteoplastic operation, the flap being turned down from the skull above the gap, consisting practically of the external table only. The periosteal surface becomes internal when the flap is in position, the fragment of bone being suspended by the continuity of the periosteum. He reports seventy-two cases thus treated, with thirty-seven recoveries from the actual operation. König and von Bergmann are opposed to the osteoplastic method on the grounds that the extreme thinness of the skull does not usually allow of the splitting off of the external table, and that even when this method is feasible, the fragment generally necroses. Transplantation of animal bone and silver and celluloid plates have all been employed with no great amount of success. Ssmoylenko proposes paraffin or vaseline injections as a means of filling up the gap in the nasofrontal variety of cephalocele. If no radical treatment is adopted, the tumor, in the majority of cases, tends to increase in size, and the opposite half of the brain lags behind in its rate of growth, owing to the

diminished resistance offered to the brain in the region of the gap. The edges of the gap become thinned and everted from pressure, and the later any surgical treatment is adopted the greater are the local disadvantages. From an operative point of view, however, von Bergmann's classification affords a sound basis on which to act, and an open operation is preferable to mere aspiration in those cases where the gap is small and where the general conditions are favorable.

CHARLES GREENE CUMSTON.

AGAIN THE ALLEGED LABORATORY CREATION OF LIFE.

As we go to press accounts are received of certain experiments by Professor Burke, of the University of Cambridge, in which exposure of a gelatin culture medium, supposed to be sterile, to the action of radium has resulted in the appearance of minute bodies which may or may not be living organisms. Most judiciously, Professor Burke does not commit himself as to their nature, though he maintains that they are different from anything seen before, and apparently inclines to the view that they are bacteria, though admitting that they are soluble in warm water. One of his colleagues, Professor Woodhead, is reported as disposed to look upon them as crystals. Whatever further investigation may prove them to be, we think it safe to assume that they are not living organisms called into being by radium or any chemical or physical agent, much as the wondermongers of the press may itch to establish such an origin for them.

DEATH AFTER A PROTECTIVE INOCULATION.

The recent occurrence in New York of a death shortly after the prophylactic injection of diphtheria antitoxine—undoubtedly a pure coincidence, as Health Commissioner Darlington has suggested—should be looked upon as in no way discouraging our use of antitoxine. No protective measure directed against a specific disease will ever enable us to guarantee longevity or even promise the subject exemption from speedy death from one cause or another.

FOURTH OF JULY TETANUS.

It is none too early to remind physicians in general to exhort heads of families to keep the deadly toy pistol out of the hands of the youngsters. It is now so well known to be a prolific source of tetanus that any omission to caution people against its use is nothing short of reprehensible.

News Items.

NEW YORK.

Changes of Address.—Dr. J. Bergen Ogden, from 419 Boylston Street, Boston, to 1 Madison Avenue, New York; Dr. J. N. Teeter, from Utica, N. Y., to 169 Washington Park, Brooklyn, N. Y.

Infectious Diseases in New York:

We are indebted to the Bureau of Records of the Health Department for the following statement of new cases and deaths reported for the two weeks ending June 17, 1905:

	June 17.		June 10.	
	Cases.	Deaths.	Cases.	Deaths.
Measles	746	31	770	18
Diphtheria and croup	281	31	322	30
Scarlet fever	142	5	162	13
Smallpox	..	..	1	..
Chickenpox	108	..	120	..
Tuberculosis	373	162	339	167
Typhoid fever	45	13	49	10
Cerebrospinal meningitis	68	42	52	57
	1,763	284	1,805	295

Personal.—In our issue for June 17th, on page 1205, the name of the resident physician of the Willard Parker Hospital was accidentally printed as Lynch. To many of our readers it will be needless to point out that Dr. Louis Fischer desired to express his thanks to Dr. Henry L. Lynah.

The Late Dr. John H. Hinton.—At a stated meeting of the Medical Association of the Greater City of New York, held June 12, 1905, the following resolutions were adopted:

Resolved, That by the death of Dr. John H. Hinton this association has lost a distinguished and honored member.

Resolved, That we extend to the bereaved family our profound sympathy for them, in this, the time of their sorrow. (Signed) R. E. Van Giesen, chairman; P. Brynberg Porter, J. Blake White, committee.

Appointments at St. Vincent's Hospital.—At a meeting of the medical board of St. Vincent's Hospital, held June 13, 1905, the following appointments and promotions were made: Dr. Edward L. Keyes, Jr., visiting surgeon; Dr. Charles F. Fitzgerald, assistant visiting surgeon; Dr. William C. Lusk, assistant visiting surgeon; Dr. William M. Ford, acting assistant visiting surgeon; Dr. John J. Morrissey, assistant visiting physician; Dr. Peter Murray, assistant visiting physician.

PHILADELPHIA.

The Examinations of the Pennsylvania State Board of Medical Examiners will be held in Philadelphia on June 26th, 27th, 28th, and 29th.

Marriages.—Dr. George A. Ulrich and Miss Hester D. Ralston were married on June 10th.

Dr. Morris H. Lindall and Miss Elizabeth M. Hall were married on June 10th.

Charitable Donations.—Dr. and Mrs. George Woodward, Randal Morgan, and Stephen Greene have contributed \$5,000 each to the Germantown Hospital.

Held for Criminal Malpractice.—The coroner held Dr. Horace Ladd, of 1524 Arch Street, and Mrs. Mary Preston, of 1202 North Hutchinson Street, for appearance at the inquest on the body of Mary Diegan, who was certified to have died of acute peritonitis with sudden heart failure.

Scientific Society Meetings for the Week Ending July 1st.—Tuesday, June 27th, Northwest Medical Society; Philadelphia Neurological Society. Wednesday, June 28th, Philadelphia County Medical Society. Friday, June 30th, South Branch, Philadelphia County Medical Society.

Accident to Ambulance.—While responding to a hurry call on June 12th the ambulance of the Chester Hospital, at Chester, Pa., collided with a large wagon and was overturned. The driver of the ambulance was instantly killed and the resident physician of the hospital, Dr. Henry Homer, was seriously injured.

The Prizes Awarded in the Department of Veterinary Medicine of the University of Pennsylvania are: The J. B. Lippincott Prize of \$100, awarded to the member of the graduating class, who, in the three years spent in the veterinary department of the university, attains the highest general average in examinations; to Ezra Strickland Deubler. A prize of an écarleur, offered by a friend of the department to the member of the second year class who passes the best examinations in veterinary anatomy; to Stephen Lockett.

The Health of the City.—During the week ending June 10, 1905, the following cases of transmissible diseases were reported to the Bureau of Health:

	Cases.	Deaths.
Malarial fever	2	0
Typhoid fever	134	11
Scarlet fever	26	1
Chickenpox	53	0
Diphtheria	69	8
Cerebrospinal meningitis	2	0
Measles	83	2
Whooping cough	32	2
Tuberculosis of the lungs	35	53
Pneumonia	27	23
Puerperal fever	1	0
Tetanus	1	0

The following deaths from other transmissible diseases were reported: Tuberculosis, other than tuberculosis of the lungs, 9; dysentery, 1; diarrhœa and enteritis under ten years, 25. The total mortality was 422, in an estimated population of 1,438,318, corresponding to an annual death rate of 15.26 per 1,000 population. The total infant mortality was 91; under one year, 73; between one and two years, 18. There were 24 still births, 9 males and 15 females. On June 6th the thermometer reached a maximum of 90°, with a relative humidity from 72 to 84. A thunderstorm in the afternoon caused a fall of 20° in the temperature and the remainder of the week was very comfortable. There was a thunderstorm on the 7th also. The total precipitation for the week was 0.53 inch.

Wills Hospital Staff.—At the meeting of the Board of City Trusts, held June 14th, Dr. McCluney Radcliffe was elected executive officer of the Wills Eye Hospital for one year, beginning July 1st. Dr. Harold G. Goldberg was elected pathologist, and Dr. William G. Schlindwein was elected resident surgeon for one year.

The Quarterly Meeting of the Medical Club was held in the Hotel Walton on June 16th. The medical publishers were the guests of the club.

Representatives of the firms of P. Blakiston's Sons Company, J. B. Lippincott Company, Lea Brothers and Company, O. B. Saunders and Company, and E. B. Treat and Company were present.

The State Board of Health Appointed.—Governor Pennypacker has appointed Dr. Samuel T. Davis, of Lancaster; Dr. Leonard Pearson, of Philadelphia; Dr. Adolph Koenig, of Pittsburgh; Dr. B. H. Warren, of West Chester; and Dr. Lee Masterson, of Johnstown, members of the State Board of Health as advisers to the Commissioner of Health, Dr. Samuel G. Dixon, whose appointment we recently noticed.

A Reception to the Class of Nurses, recently graduated from the Samaritan Hospital, was given by the board of women managers on the evening of June 16th. The commencement exercises were held on the evening of June 15th, at which time Miss Margaret J. Maloney, Miss Jean Bricker, Miss Fannie Mathews, Miss Kathryn Nilan, Miss Una Bardsley, Miss Edna Moore, Miss Charlotte Darlington, Miss Maud A. Hayes, Miss Wynnie Biggard, and Miss Emily Turville received diplomas. Dr. Wilmer Krusen delivered the address.

The Annual Meeting of the Priestly Club was held in the Harrison Laboratory of the University of Pennsylvania on the evening of June 10th. It was urged at that time that an endowment fund be established for a chair of chemical engineering. Mr. William Bower offered to give \$200 yearly for the purpose. The Priestly Club prize was awarded to John Morris Weiss. The following officers were elected: President, Dr. George Tyson; vice-president, Dr. Howard Graham; treasurer, Dr. James Gillinder; secretary, Dr. T. P. McCutcheon; librarian, Dr. B. L. Wallace; executive committee, Dr. William Rowland, Dr. J. Merritt Matthews, Dr. L. P. Morgan, and Dr. William Bowers.

Commissioner of Health of Pennsylvania.—The announcement was made on June 7th that Governor Pennypacker had appointed Dr. Samuel G. Dixon, president of the Academy of Natural Sciences, Commissioner of Health of Pennsylvania, at a salary of \$10,000 per annum. In a newspaper interview Dr. Dixon is quoted as follows:

"Prevention and protection are the two sides of sanitation, and I need not say more at this time, perhaps, than to point out that I shall begin at once to create the organization necessary to carry the law into effect, that I may secure cooperation, and not antagonism, from corporations and individuals.

"We need time and patience to accomplish anything; but, with this understood, I hope that we can make Pennsylvania a model State from the point of view of public health. I appreciate the honor of the selection, the encouragements I have already received, the proffers of cooperation on the part of my scientific and professional friends, and the thing to do now is to get to work."

Dr. Dixon was born on March 23, 1851. He studied law and was admitted to the bar in 1877. In 1886 he graduated from the medical department of the University of Pennsylvania. After

a year or two spent in study abroad, Dr. Dixon returned to Philadelphia and was appointed professor of hygiene in the University of Pennsylvania, and while holding that chair organized the Auxiliary Department of Medicine, which has since been abandoned. In 1889 Dr. Dixon resigned from the University of Pennsylvania. In 1891 he was made a curator in the Academy of Natural Sciences; in 1892 an executive curator, and in 1896 president.

Personal.—Dr. William S. Wadsworth was operated upon on June 15th for appendicular inflammation at the German Hospital.

Dr. John H. Musser has been named as one of a representative group of citizens to advise with the mayor of the city in his attempt to place the government of the city on a business basis.

Deaths.—Dr. David Dennison Stewart died on June 13th in spite of an operation for excision of the appendix. Dr. Stewart was 46 years of age. He graduated from Jefferson Medical College in 1878. He was a fellow of the College of Physicians, a member of the Philadelphia County Medical Society, and of the Medical Society of the State of Pennsylvania. At the time of his death he was consulting physician to the Kensington Hospital for the Diseases of Women.

Dr. S. S. Finkbeiner died at Parkerford, Pa., on June 11th. Dr. Finkbeiner graduated from Jefferson Medical College in 1865.

Commencement at the University of Pennsylvania.—Exercises incident to commencement at the University of Pennsylvania began on June 8th. The baccalaureate sermon was delivered on June 11th. The public commencement exercises were held on June 14th, at which degrees were awarded in all departments. The Reverend George Harris, D. D., LL. D., president of Amherst College, delivered the oration. The degree of Doctor of Medicine was awarded to the following:

Matthew Howard Ames, Harry Stanley Bachman, Walter Kreider Baer, Henry John Bartle, Jr., William Lawson Berst, Ernest Sydney Bisbee, Egil Boeckmann, Peter Boyesen, Samuel Bradbury, third, Erick von Buddenbrock, William Michael Bunce, Charles Winfield Buvinger, Ethan Allen Campbell, John Moore Campbell, Harry Schwartz Crouse, James Gerald Cullen, James Henry Culpepper, Albert Burrows Davis, Charles Walter Delaney, William Thomas Dempsey, Frank Dake Dickson, Henry Dintenfuss, Eldridge Lyon Eliason, Thomas Evans, Jr., Charles Mackall Fisher, Oscar Edwin Fox, Fred Leon Gage, Charles Herbert Gerhard, Nate Ginsburg, Arthur Bruce Gill, Clarence Hamilton Gray, William Henry Greiss, Don Carlos Guffey, William Frank Gullfoyle, Jr., George Donald Guthrie, John Andrew Hardenbergh, Walter Samuel Hargett, Oscar Freer Hills, Harry Clyde Hoffman, Charles Jack Hunt, Samuel Harvey Iams, Frank Stewart Inksetter, Moses Jacob, Milton Boyd Katzenstein, Walter Elmo Kelton, John William Kirschner, Orion Frank Konantz, Charles Alpheus Lauffer, George Malcolm Laws, John Leedom, Presley McCance Lloyd, Oscar Lotz, Tom Odum Luckett, William Marshall, Jr., Robert Francis Mathews, Jr., John Weigle Mehring, Thomas Elwood Mendenhall, Henry Martyn Metcalf, Hubert Livingstone Miller, Albert William Moore, Joseph Leslie Moore, William Frederic Moore, Stirling Walker Moorhead, Timothy Joseph Moran, David Blair McIntire, Daniel Charles McLaughlin, Charles William Naulty, Jr., Percival Nicholson, Thomas Aloysius O'Brien, David Stanislaus O'Donnell, Alexander Hay O'Neal, Samuel Torrey Orton, Hubley Raborg Owen, Ar-

thur Hilton Paine, Robert Lee Payne, Jr., Arnaldo de Moraes Pedroso, Ferdinand Mitchell Perrow, George Morris Piersol, Lester Lovett Powell, John Williamson Price, Jr., Frederick Prime, Jr., Mahlon Richardson Raby, Edward Urbane Reed, John Jacob Repp, Dennett LeRoy Richardson, Willis Read Roberts, Jr., Harold Eugene Robertson, James Coburn Rogers, Harry Abraham Schatz, Howard Gustav Schleiter, Joseph Schenberg, Herbert John Schmyer, William Magill Schultz, George Meade Settle, Robert Vance Stewart, Marvin Price Stone, John Frank Streeter, Henry Hurlburt Tomlin, Norris Wistar Vaux, Charles William West, Edgar Lee West, Leslie Marshall Westfall, Edward Clendenning White, Otto George Wiedman, Edward Mercur Williams, Robert Edward Williams, Fred Bailey Wilson, Tom Bush Wofford, William Wellington Woodward.

GENERAL.

Richmond, Va., Academy of Medicine and Surgery.—The subject for discussion at the June 27th meeting of this body is The Menopause, which will be opened by Dr. W. L. Peple and Dr. J. N. Upshur.

Miami Medical College, of Cincinnati, O., has graduated the following in medicine:

Theodore Bange, Mora Simeon Bulla, George Wylie Cline, Louis M. Cusher, David Judkins Dickson, Sherwood P. Garrison, Raymon E. Gaston, George A. Haveman, John Wesley Hutchens, John Walter Irwin, William S. Kautz, George Goodhue Kineon, Michael Louis Landman, Michael A. O'Hare, Jacob C. Poling, William Walter Sauer, Miriam Schaar, Thomas P. Scott, A. B., Frederick J. Smith, Ralph Henry Smith, Martin Harley Urner, A. B., Charles Jefferson Woods.

Of Interest to Navy Medical Officers.—In a recent decision, says the *Army and Navy Medical Journal*, for June 17, 1905, upon the pay to which Medical Director Farwell, United States Navy, retired, was entitled during the period when he was on active duty on shore under the provision of the Act of June 7, 1900, the comptroller of the treasury holds that the medical director "is entitled while on active shore duty to old navy pay at the rate of \$4,000 per annum, provided by Section 1556, Revised Statutes."

American Laryngological, Rhinological, and Otological Society.—At the eleventh annual meeting of this society, held in Boston, Mass., June 5, 6, and 7, 1905, the following officers were elected for the ensuing year: President, Dr. James E. Logan, of Kansas City, Mo.; vice-presidents, Dr. Thomas H. Halsted, of Syracuse; Dr. William L. Ballenger, of Chicago; Dr. H. Bert Ellis, of Los Angeles., and Dr. Henry L. Myers, of Norfolk; secretary, Dr. Wendell C. Phillips, of New York; treasurer, Dr. Ewing W. Day, of Pittsburgh; council, Dr. Frederic C. Cobb, of Boston; Dr. James F. McKernon, of New York, and Dr. H. W. Loeb, of St. Louis.

North Carolina State Board of Medical Examiners.—The forty-third annual session of the North Carolina State Medical Examining Board was held in Greensboro, N. C., May 17th to 25th, inclusive. One hundred and thirty-three graduated physicians were examined for license. Of this number one withdrew, forty were rejected, and ninety-three were granted license. The board submitted a resolution to the State Medical Society reciting the fact that in their forty-two years' ex-

perience almost all of the failures before the board of examiners came from men who had deficient preliminary education and urged the importance of a proper preliminary education prior to entering upon the study of medicine. The State society unanimously approved of this action.

The Gordon Dinner in Portland, Maine.—One of the most pleasing incidents in the history of the profession in Maine occurred on June 6th in the beautiful casino at Riverton, where a dinner was given by his professional friends, both in Portland and elsewhere, to Dr. Seth C. Gordon, of Portland, to commemorate his fiftieth year of medical practice. The attendance was representative of the country. Old friends from all parts of the United States were either present in person or sent personal letters to congratulate Dr. Gordon upon his long and unusual term of service. Not the least pleasant feature of the dinner was the presentation to him of an exquisite silver service.

Statement of Mortality in Chicago for the Week Ending June 17, 1905, compared with the preceding week and with the corresponding week of 1904. Death rates computed on United States Census Bureau's midyear populations—1,990,750 for 1905 and of 1,932,315 for 1904:

	June 17, 1905.	June 10, 1905.	June 18, 1904.
Annual death rate per 1,000.....	12.01	13.46	10.28
Total deaths, all causes.....	458	514	380
By sexes.....			
Males.....	256	307	212
Females.....	203	207	168
By ages.....			
Under 1 year.....	79	90	57
Between 1 and 5 years.....	60	44	27
Over 60 years.....	87	108	86
Important causes of death.....			
Acute intestinal diseases.....	30	18	24
Apoplexy.....	14	19	15
Bright's disease.....	38	46	37
Bronchitis.....	16	7	70
Consumption.....	60	70	51
Cancer.....	22	19	26
Convulsions.....	9	9	10
Diphtheria.....	8	4	4
Heart disease.....	34	48	30
Measles.....	4	12	1
Nervous diseases.....	15	12	13
Pneumonia.....	55	73	28
Scarlet fever.....	1	1	0
Smallpox.....	3	1	0
Suicide.....	2	10	6
Sunstroke.....	1	1	0
Typhoid fever.....	4	8	3
Violence other than suicide.....	36	28	24
Whooping cough.....	9	8	4
All other causes.....	97	120	93

While the June, 1905, health rate is not up to the record of June, 1904, the improvement during the week—measured by the mortality returns—will bring it higher than the average of the decade. For the elapsed seventeen days the rate is 12.73; for the week it is 12.01 and the average of the decade is 14.00. June, 1904, is the record month of lowest mortality—the rate being 11.02 per 1,000 of the population. Among the important causes of death showing decrease the most notable are pneumonia, 18; consumption, 10; heart disease, 12, Bright's disease and measles, 8 each, and typhoid fever, 4. On the other hand, the acute intestinal diseases show an increase of 12; bronchitis of 9; and diphtheria of 4. Only two suicides were reported during the week—the smallest number in any one week for several years—the average weekly number during the previous ten years being 7.5.

Pith of Current Literature

LYON MEDICAL.

May 21, 1905.

Cerebral Syphilis and Injections of Hermophenyl,

By ROQUE and CORNELOUP.

Cerebral Syphilis.—Roque and Corneloup report these four cases. In case 1 the patient had suffered for three years from localized headache recurring at night, and for three weeks from attacks of Jacksonian epilepsy. Thirteen injections of hermophenyl, a total amount of 1.52 gramme, resulted in a complete cure. In case 2 transitory right hemiplegia with great exaggeration of the reflexes and persistent aphasia was cured by 1.52 gramme of hermophenyl administered in thirteen injections. Case 3 was one of general paralysis, which was greatly improved by the same treatment. In case 4 there was a history of hysteria and of syphilis. The patient had a cerebellar tumor accompanied by attacks of Jacksonian epilepsy, with a tendency to walk backward and to the right, and vertigo. No benefit was obtained from injections of hermophenyl. Autopsy revealed a cerebellar tumor as large as an egg, which arose from the meninges and pressed on the right hemisphere. It was cystic and did not appear to be of a syphilitic nature.

REVUE DE MEDECINE.

May, 1905.

1. Youthful Rigidity, By NAGEOTTE WILBOUCHEVITCH.
2. Fungoid Mycosis with Deep and Multiple Ulcerations, Treated and Cured by Soluble Toxines of the Streptococcus of Erysipelas, By MARTIN-ROUX.
3. Delayed Apoplexy of Traumatic Origin. Its Importance from a Medicolegal Standpoint, By MARIE and CROUZON.
4. Contribution to the Study of the Origin of the Pigment in Bronzed Diabetes, and of the Pathogenesis of this Disease, By MARGAIN.

1. **Youthful Rigidity.**—Nageotte Wilbouchévitch gives many illustrations of this condition which puts a child in a vicious circle. The insufficient motion, the condition of chronic asphyxia when the stiffness appertains to the thoracic cavity have a profound effect upon the circulation, upon the entire organic life, and so upon the nutrition of the nervous system. The bad general condition, and the intellectual torpor tend to make such children inactive, and favor the exaggeration of the rigidity. This condition calls for mechanical treatment for passive and active exercise and for massage. Improvement usually takes place slowly, and calls for patience and perseverance. With girls it will be necessary to overcome costal respiration by diaphragmatic. The improvement in the general condition and the intellectual development progress *pari passu* with returning freedom of motion. When their movements become free and extensive, they become wide awake at the same time.

2. **Fungoid Mycosis Treated and Cured by Soluble Toxines of the Streptococcus of Erysipelas.**—Martin-Roux affirms that of the three malignant diseases of the skin fungoid mycosis, sarcoma, and cancer, the first has proved quite sus-

ceptible to treatment with the toxines of the streptococcus of erysipelas. Should subsequent experience confirm that which has already been observed, it will be proper to regard this as the specific treatment for that disease. The living organism should not be used in this treatment, nor should its virulence be increased by combination with other microbes. Its soluble toxine, filtered and heated to 110° to 120°, will be sufficient. It is not even necessary that there should be violent febrile reaction with an attack of cutaneous pseudoerysipelas. Should there be a recurrence of the disease the treatment must be repeated. Sarcoma has been treated successfully by this means in two or three cases. Cancer has never been cured whether the solution was obtained from the living or the dead streptococcus. The author concludes that it is quite probable that further beneficial results will be obtained with the streptococcus of erysipelas.

3. Delayed Apoplexy of Traumatic Origin.—

Marie and Crouzon believe that delayed traumatic apoplexy is due to a cerebral lesion, often hæmorrhagic, and occurring in one who is predisposed to vascular lesions. The idea of delayed cerebral injuries consecutive to traumatism is of great importance from a medicolegal standpoint, and especially with reference to the accidents which occur when men are occupied in their work. A physician who may be called to examine a case of this character should remember that nervous diseases which develop slowly after a traumatism has been received are not always functional; they may be due to an organic lesion, and therefore warrant a prognosis which is grave, both as to life and as to a resumption of occupation. One should endeavor to ascertain whether the nervous disease is due to traumatism alone, or in part at any rate to the influence of a hereditary tendency.

REVUE DE CHIRURGIE.

May, 1905.

1. Tuberculosis and Tuberculous Stenosis of the Pylorus, By RICARD and CHEVRIER.
2. The Surgical Treatment of Hydatid Cysts of the Abdomen, By MABIT.
3. Functional Impotence Following Injuries to the Joints, By MALLY and RICHON.
4. The Surgery of the Heart, By GUIBAL.
5. Tuberculosis of the Coccyx, By CAUBET.

3. **Functional Impotence Following Injuries to the Joints.**—Mally and Richon offer the following conclusions: 1. In every case of functional impotence consecutive to a traumatism of the joints, it is necessary to remember that spinal disease may be associated with the disease of the joints, reflex amyotrophy being the manifestation which is the most apparent and the best known; 2, to the well known symptoms of reflex atrophy, including atrophy, paresis, spasmodic phenomena, diminution of galvanic and faradaic excitability without the reaction of degeneration, we must add diminution of electrical resistance in comparison with the unaffected side; 3, reflex amyotrophy is usually fatal in its results when an effusion of the joints is developed. All degrees of involve-

ment are possible, from simple paresis to complete paralysis; 4, pathological anatomy as well as experimentation have demonstrated that the principal medullary lesion consists in a diminution of the large motor cells in the anterior horns. In the nerves and muscles, in the midst of healthy elements there may be degenerated sensory nerve cords pertaining to the joints, degenerated motor fibres, atrophied muscular fibres, forming the lesions of the reflex arc, and sustaining the theory of Vulpian and Charcot. Centripetal excitation referred to the joints which may change the motor cells of the anterior horns may also change the other trophic centres which preside over the nutrition of the other tissues or circumarticular organs. The medullary lesions are in two different forms or degrees; 5, the idea of reflex amyotrophy of articular origin should hold an important place in general surgical pathology, for it explains the pathogenesis of a great number of joint diseases; 6, there is no necessary relation between the intensity of the articular affection and the gravity of the reflex amyotrophy which it causes, but the more the articular irritation is prolonged the more incurable are the medullary lesions. Reflex amyotrophy is always more severe in its significance for the lower extremity. The more curable the articular lesion, the more curable the reflex amyotrophy. Should the former become chronic the latter will be incurable; 7, electrical exploration enables one to determine the prognosis of reflex amyotrophy. It becomes the more grave as the galvanic excitability is diminished, comparing it with the unaffected side; 8, the benign form of reflex amyotrophy may be treated by faradism or static electricity. Should the spasmodic phenomena become prominent localized faradization would be injurious. Static electricity in its sedative form would be more appropriate. In the incurable forms static electricity is useful to relieve the spasmodic and painful symptoms. Such symptoms contraindicate all treatment which may be violent or forcible. The spasmodic phenomena, including exaggerated tendon reflexes, exaggerated mechanical excitability of the muscles, rapid fatigue with contractures, form the practical guide to the proper direction of treatment.

BOSTON MEDICAL AND SURGICAL JOURNAL

June 15, 1905.

1. An Experimental Study of the Accuracy of Modern Clinical Methods for the Diagnosis of Disorders of the Stomach (*To be continued*),
By HENRY F. HEWES.
2. Individual Factors in Hygiene,
By R. C. CABOT and P. K. BROWN.
3. The Effects of Tobacco Upon the Throat,
By S. W. LANGMAID.
4. Studies on Epilepsy.
(a) Treatment of Status Epilepticus,
By ARTHUR MORTON.
(b) Reflexes in Epilepsy,
By ARTHUR MORTON.
(c) Exhaustion Paralysis in Epilepsy,
By MORGAN B. HODSKINS.
(d) Report on the Hypochlorization Method of the Treatment of Epilepsy,
By ARTHUR MORTON.
(e) Lumbar Puncture in Status Epilepticus,
By MORGAN HODSKINS and ARTHUR MORTON.

2. Individual Factors in Hygiene.—Cabot and Brown assert that it is not possible to formulate rules of hygiene which will be valid for all. We can say that a man must eat something and sleep sometimes, but if we try to be more definite than this we find ourselves on very uncertain ground. The reason for this is that every individual has his own ideals regarding living. The best we can do is to formulate, or rather collect, a number of ways of living that have been found satisfactory by groups of people of a certain build, a certain ideal of life, a certain inheritance, and use them as the types of life that should be led by similar individuals. The authors purpose to collect the statistics necessary for determining some of these typical modes of existence.

3. Effects of Tobacco.—Langmaid concludes that tobacco smoking is not only harmful to the throat as a direct irritant, but that it produces vasomotor disturbances of the pharyngeal mucous membrane by its poisonous effects upon the nervous system.

4. Epilepsy.—Morton considers the treatment of status epilepticus (a) by means of sodium bromide hypodermically and by lumbar puncture. The salt should be used of the strength of thirty grains to the ounce of water. Six ounces of this solution may be injected at one time if it is introduced just below the angle of the scapula. In other localities large injections may be followed by abscess. As a prophylactic against the status the injections are best given as follows: ". . . if certain patients, who are apt to have a series of convulsions or to develop status, have two convulsions in succession they shall at once receive ten hypodermics, twenty minims each, of the sterile sodium bromide solution. In this way the patient receives about 12 grains of the salt early in the attack. If the patient continues to have convulsions, ten of the small hypodermics are given after each convulsion until the patient has received forty injections with the small syringe. These injections may be given in any part of the body for, so far as we have been able to observe, they never give any trouble. This plan of treatment we feel sure has warded off many attacks of status which would have developed if we had followed the old plan of giving drugs by the mouth." The author has employed lumbar puncture in seven cases with varying results. He believes that the procedure is of value in those cases that have increased intracranial pressure. (b) Reflexes. The plantar reflex in most cases was found to be absent or not active directly after the tonic stage, probably due to the unconscious condition of the patient. In the state between the convulsions this reflex is often quite active. The activity of the knee jerk depends upon the degree of exhaustion or irritation produced by a given convulsion in the cortical motor cells. The greater the exhaustion, the less active the knee jerk. (c) Hodskins reports four cases of exhaustion paralysis following epilepsy. (d) Salt poor diet. Morton bases his conclusions on experiments performed on about one hundred and twenty-four patients. These conclusions are: The hypochlorization method controls the convulsions, requiring only about one half the amount of

bromide usually given. It has little or no effect on the general nutrition of the patient. It is apt to cause constipation. It does not furnish enough salt to satisfy the patients' craving. It may be used with success with intelligent patients. It is practically useless in the middle grade of epileptics, as they have neither the desire nor the will power to carry it out properly. A modified salt poor diet, in which about equal parts of sodium chloride and sodium bromide are used in the food may be used to advantage with idiotic and demented patients if their diet can be controlled absolutely. Bromism is comparatively rare. (e) This is a report of the seven cases of lumbar puncture referred to in (a).

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

June 17, 1905.

1. The Treatment of Pulmonary Tuberculosis,
By GEORGE WILLIAM NORRIS.
2. Case of Exophthalmic Goitre with Unusual Associated Symptoms. Discussion of the Clinical Problems Suggested Thereby,
By ARTHUR R. ELLIOTT.
3. The Normal and Pathological Histology of the Aortic and Mitral Valves,
By JOHN HOMANS and J. BURRAGE.
4. Gastroenterostomy,
By WILLIAM H. WATHEN.
5. The Surgical Importance of the Cervical Rib,
By CARL BECK.
6. Bloodless Reposition of the Congenitally Dislocated Hip Joint *versus* Arthrotomy. Statistics of Thirty-four Cases Operated in by Dr. Lorenz During His Visit to the United States in 1902,
By FREDERICK MUELLER.
7. Intestinal Peristalsis. Action of Different Agents on It,
By ISAAC OTT and JOSEPH F. ULMAN.
8. The Essentials of Treatment of Acute Inflammation of the Middle Ear,
By A. E. BULSON, JR.
9. Turning in Organic Hemiplegia,
By RALPH PEMBERTON.
10. The Prevention Shock and Hemorrhage in Surgical Practice,
By GEORGE W. CRILE.
11. Immunity. Chapter XVII.

1. **Tuberculosis.**—Norris asserts that the basis of the successful treatment of tuberculosis is: First, a constant and unlimited amount of fresh air and sunlight; second, the proper quantity and quality of food, taken at the right time; third, a regulation of the expenditure of bodily energy; anabolism and catabolism being so regulated that the balance sheet shall always show a credit in favor of the former. He gives in detail his methods for treating the most common symptoms of the disease, such as fever, night sweats, hæmoptysis, pain, insomnia, and heart weakness. There is nothing new in the methods he advocates.

2. **Exophthalmic Goitre.**—Elliott reports in detail the history of a patient who suffered from exophthalmic goitre, diabetes, Bright's disease, mitral disease, and retinitis. He attempts to determine what relationship, if any, existed between the different morbid conditions.

3. **The Aortic and Mitral Valves.**—Homans and Burrage have studied the heart valves obtained from forty-two autopsies. They report

their work under three heads: (1) Normal structure of valves and normal variations of structure with age. (2) Degenerative lesions. (3) Acute infections in relation to degenerative lesions. The third part of their paper is of the most practical utility. They thus summarize it: "We can only conclude from our observations on acute infections in degenerate and thickened valves that mucoid and fatty degenerations do not apparently predispose to infection; that 'benign thickenings' do not predispose to infection, though it is hard in the case of the mitral valve to tell whether a thickening is benign or due to repeated acute attacks; that the thickenings in mitral valves when infected are better repaired than in those of aortic valves; and that acute toxæmias do not cause degenerations (at least none that we can recognize) predisposing to infection."

4. **Gastroenterostomy.**—Wathen reviews the general subject of gastroenterostomy. He gives also the latest opinions on the subject, obtained by special correspondence, held by Robson, Czerny, von Mikulicz, Moynihan, Kocher, Murphy, Mayo, Ochsner, Park, and Deaver. From all the evidence thus gathered the author concludes: (1) Some cases of acute and subacute gastric and duodenal ulcer, and many cases of chronic and duodenal ulcer should be treated by efficient stomach drainage into the duodenum or jejunum. (2) Drainage by pyloric divulsion, and by pyloroplasty with its modifications, has not been successful, and these methods are now practically obsolete. (3) Gastroduodenostomy, as modified by Kocher and Finney, may give efficient drainage in many cases, but it should be limited to such patients as cannot be operated on by a posterior retrocolic gastroenterostomy with the anastomosis near the duodenojejunal flexure. (4) Anterior anticolc gastroenterostomy should not be an operation of election, but an operation of expediency and necessity, to give temporary relief, or to meet special abnormal conditions that may contraindicate the posterior attachment. (5) The ideal operation of election must be the posterior retrocolic attachment near the beginning of the jejunum, and at the bottom of the stomach in the pyloric end, thus eliminating the loop. (6) This gives the most efficient drainage, prevents the vicious circle and regurgitant vomiting, leaves stomach and intestine in nearly normal relation, and is followed by better immediate and ultimate results. (7) The intestinal incision should be made longitudinally and not less than two inches long, and the stomach incision of corresponding length, preferably in the oblique direction. An elliptical strip of mucosa should be excised from both stomach and intestinal incision. (8) The anastomosis is best made with a continuous suture (Pagenstecher or silk), using a full curved round-pointed needle. The suture should be applied in double layers, the inner to include all the visceral layers, and unite the cut edges of the opening; the outer, one fifth inch away, to include the serous and subserous layers. (9) Enterenterostomy, or closure by suture constriction or resection of the proximal jejunum or the pylorus is contrain-

dicated. It commits an unnecessary traumatism and leaves a deformity that may cause immediate and subsequent bad results.

7. Turning in Hemiplegia.—Pemberton has examined 36 patients suffering from organic hemiplegia in order to test the assertion of Kidd that in 99 per cent. of cases of hemiplegia: "If a patient in walking turns round to the affected side or more affected side, an organic lesion is present. If he turns to the sound or less affected side the case may be one of either functional or organic affection; a cursory examination will determine which." The author found that only 67 per cent. of the whole number turned to the affected side, 16 per cent. turned to the sound side, and 16 per cent. turned indifferently to either side; a difference of over 30 per cent. from Kidd's figures. If it can be shown that a functional hemiplegic ever turns to the affected side, and observations are perhaps needed to that end, the value of Kidd's deductions is much lessened. While the above findings do not disprove his conclusions, that a man who turns to the affected side is organically diseased, they make that fact applicable as a test to fewer cases, and consequently leave a larger proportion open to other means of diagnosis.

10. Shock.—Cushing concludes: Every tissue and organ has a more or less individual shock producing value and must be individually considered. The amount of shock produced by a given trauma varies according to the amount and special quality of nerve supply involved and the number and intensity of the afferent impulses originated by the injury or operation. Cocaine or eucaine may wholly "block" these shock producing impulses. When one or more of the accessory causes of shock are present the highest possible tax is laid on the surgical judgment of the operator. A precise technics, offering a minimum of exposure and trauma, grafted on a comprehensive grasp of all the factors entering into the operative consideration, are the ideals for which we must strive.

MEDICAL NEWS.

June 17, 1905.

1. The Value of Lumbar Puncture: With Particular Reference to the Diagnosis of Tuberculous Meningitis,
By EUGENE P. BERNSTEIN.
2. The Bacterial and Cellular Examination of the Spinal Fluid in Fifty Cases of Cerebrospinal Meningitis,
By T. W. HASTINGS.
3. Report on Gallbladder Surgery, with Especial Reference to Early Diagnosis and Early Operative Interference in Cholecystectomies, with a Brief Summary of Twenty-eight Cases, Including Six Cholecystectomies (*To be continued*),
By FRANK MARTIN.
4. Adulteration and Substitution,
By GEORGE C. DIEKMANN.
5. Colds, and the Prevention of Colds,
By NEWTON JAMES.
6. The Carbohydrate Reactions of the Paratyphoid or Paracolon Group (Preliminary Communication),
By W. W. FORD.

1. Lumbar Puncture.—Bernstein's paper is based on the examination of 265 specimens of

cerebrospinal fluid. The results are tabulated. There were: (1) Forty-six non-inflammatory fluids. (2) Forty tuberculous fluids. (3) Eighty-four fluids containing the meningococcus. (4) Nine containing streptococci. (5) Three containing pneumococci. It is not feasible to condense such a mass of specific information as the author reports. We note only that he was able to recover the tubercle bacillus in 38 of the 40 cases of tuberculous meningitis. In some of the cases it was necessary to search for several hours before the bacillus was found. The author holds that it has been proved that, rarely, patients suffering from tuberculous meningitis get well.

2. The Spinal Fluid.—Hastings gives in detail the results he obtained from the examination of the spinal fluid in fifty cases of cerebrospinal meningitis. These examinations emphasize the importance of the examination of the spinal fluid in order to differentiate meningismus from true meningitis, and serous from purulent meningitis; the importance of a careful method of examination for cells and bacilli in the tuberculous cases; the value of cytodagnosis in the study of spinal fluids; the similar changes produced in the spinal fluid by the meningococcus and the pneumococcus infections; the readiness with which the diagnosis of epidemic cerebrospinal meningitis may be made with good technics from freshly drawn spinal fluid.

4. Adulteration and Substitution.—Diekmann presents statistics which go to prove that the practice of adulteration and substitution, by retail pharmacists in New York city, is very infrequent.

5. Colds.—James asserts that the majority of colds could be prevented by the sufferers keeping in the open air as much as possible, by their discarding wool next to the skin, and by keeping the nose and throat in a healthy condition. How to do all this is explained in detail.

MEDICAL RECORD.

June 17, 1905.

1. The Carbon Factor in Gout: "Hyperpyræmia,"
By FRANCIS HARE.
2. Removal of the Lens in Myopia,
By JUSTIN L. BARNES.
3. Rectal Injections of Large Doses of Sodium Salicylate in Cerebrospinal Meningitis,
By A. SEIBERT.
4. The Medical Phases of the Immigration Legislation,
By VICTOR G. HEISER.
5. Masturbation in Childhood,
By AUGUST ADRIAN STRASSER.
6. Saw Palmetto,
By I. L. VAN ZANDT.

1. Gout.—Hare believes that acute articular gout is due to the accumulation in the blood of an excess of "carbonaceous" materials. To this supersaturation of the blood with carbonaceous material the author gives the name hyperpyræmia. This hyperpyræmia leads to an accumulation of uric acid in the blood. The author's theory may therefore be regarded as an attempt to explain how "free" uric acid gets into the blood.

2. Removal of the Lens.—Barnes asserts that removal of the lens is a justifiable operation in

certain well selected cases of myopia. He reports in detail one case in which vision was increased about two and one half times by the procedure he advocates. The Fukala operation is, generally speaking, the operation of choice. The author reviews the history of this method of treatment and discusses its justifications, indications, contraindications, and technics.

3. **Cerebrospinal Meningitis.**—Seibert reports five cases of cerebrospinal meningitis in which recovery took place in consequence, he believes, of the patients receiving large doses of sodium salicylate per rectum. These five cases constitute practically his total experience with this method of treatment. It is essential that large doses of the drug be given. Thus a child of 22 months received 150 grains of sodium salicylate in sixty hours. Fifteen grains, dissolved in a tablespoonful of warm water, should be given at a dose.

6. **Saw Palmetto.**—Van Zandt has had good results from the administration of saw palmetto in inflammatory conditions of the bladder, prostate, throat, and tonsils. He employs a drachm of the fluid extract four times a day.

AMERICAN MEDICINE.

June 17, 1905.

1. The Relations of Public Health Science to Other Sciences, By WILLIAM T. SEDGWICK.
2. Knee Injuries, and How to Manage Them, By DE FOREST WILLARD.
3. Tropical Anæmia, By M. J. ROSENAU.
4. The Present Status of Röntgen Ray Therapy in Dermatology, By JULIUS HIRAM COMROE.
5. Encephalitis and Other Nervous Affections Complicating Scarlatina, By JOHN H. W. RHEIN.
6. The Progress of the Sanatorium Movement in America, By WILLIAM H. BALDWIN.

2. **Knee Injuries.**—Willard gives the following advice regarding the treatment of some of the so called lesser knee injuries: (1) Apparently slight injuries of the knee often prove more lasting and annoying than those of a more positive nature, as fracture or dislocation. (2) Every injury of the knee should receive careful examination, since laceration of ligaments or of circumarticular tissues, or displacement of semilunar cartilages, or of loose bodies, may have occurred. Obscure fractures, also, are not uncommon. (3) Every injured knee requires rest during its acute inflammatory stage; rest in bed, fixed dressings, and crutches are needful. Heat and cold are two powerful agents in aborting a threatened inflammation. (4) Adhesive plaster strapping is of great value in securing partial restraint of a knee and in producing absorption of effusion. Restricting apparatus should be used with discrimination. (5) Blood clots in the joints should be removed by incision and flushings. (6) Effusions, if large, should be removed by aspiration, or incision followed by weak iodine injection. (7) Displaced semilunar cartilages should be stitched in position, or removed. Loose cartilaginous bodies should be removed. (8) Motion is the normal condition of

joints, consequently massage and voluntary motions should be instituted as soon as the inflammatory stage has passed. Neglect of this precaution may result in a neuromimetic patient and a chronic cripple. (9) Sensitive neurotic knees should not be mistaken for diseased ones. (10) Complete primary rest during the inflammatory stage, followed by massage, voluntary and involuntary movements, gymnastic exercises, hot air treatment, hot and cold douchings, etc., are the best means at our command for preventing ankylosis. (11) Should ankylosis follow, forcible straightenings, tenotomies, osteotomies, etc., may be required.

3. **Tropical Anæmia.**—Rosenau devotes his paper to the two great causes of tropical anæmia, malaria and uncinariasis. The malaria of the tropics is the æstivoautumnal fever. This type of malaria is controlled by quinine only to a limited extent. Hence the problem is to limit the disease rather than to cure it. Uncinariasis may be acquired either through the mouth or through the skin. In either case the worm finally settles in the small intestine. Thymol is practically specific in its action against the parasite.

5. **Nervous Affections Complicating Scarlatina.**—Rhein reports the case of a child of nine years who died of scarlatina. During life there were no symptoms of meningitis or brain irritation, yet at autopsy was found evidence of beginning pachymeningitis and encephalitis. The most common complications of scarlatina on the part of the nervous system are hemiplegia and peripheral neuritis. More rarely this disease may be followed by paraplegia, optic neuritis, amaurosis, tetany, pseudoataxia, neuralgia, epilepsy, disseminated sclerosis, Friedreich's ataxia, hysteria, chorea, hydrocephalus, meningitis, and disordered mental states. With the exception of hemiplegia, and imbecility, the prognosis is good, if we exclude rare organic cases, such as Friedreich's ataxia, disseminated sclerosis, and epilepsy. The pathological findings consist of thrombosis, embolism, small cerebral hæmorrhage, rarely abscess of the brain, congestion of the brain, and meningitis, and finally meningitis and encephalitis.

MEDICINE

May, 1905.

1. The History of Panama and the Panama Canal, By EGBERT.
2. The Isthmian Canal Zone, By MCFARLAND.
3. Medical Conditions of the Isthmus of Panama with Other Notes, By CURTIN.
4. How Can the Physician Profit by Preventive Medicine? By TAYLOR.
5. Accouchement Forcé, By BOYD.
6. Civil Malpractice, By TOBIAS.
7. An Orbital Tumor of Ten Years' Standing, By LEENHEER.

5. **Accouchement Forcé.**—Boyd draws the following conclusions: 1, each case must be a study in itself; 2, forced delivery, by whatever method, must be considered a major operation

and should be performed by one trained in obstetric surgery; 3, manual dilatation is successful in the majority of cases. The trained hand can best estimate the amount of continuous pressure necessary for dilatation; 4, in a few cases in which the cervix is long and unobliterated it will be necessary to use Dührssen's Cæsarean section; 5, as a method of checking hæmorrhage rapidly or in cases in which delay is accompanied with exhaustion if the delivery were accomplished *per vias naturales*, it would be well to consider the conservative Cæsarean section.

LANCET

June 3, 1905.

1. Discours sur les Conditions Générales des Etudes Médicales et de l'Assistance Publique à Paris, à propos du Voyage des Médecins Britanniques,
By Dr. LUCAS-CHAMPIONNIÈRE.
2. Laryngeal Paralysis and Their Diagnostic Value,
By H. BARWELL.
3. The Conditions Affecting the Development of Flagellated Organisms from Leishman Bodies and Their Bearing on the Probable Mode of Infection,
By L. ROGERS.
4. A Case of Widespread Ulceration of Skin and Connective Tissue,
By W. B. WATSON.
5. The Operation of Jejunostomy with a Description of a New Method,
By A. W. MAYO-ROBSON.
6. The Second Dentition: Its Medical Aspects,
By H. ARMSTRONG.
7. Typhoid Fever and Pregnancy, with Special Reference to Fœtal Infection,
By H. T. HICKS and H. FRENCH.
8. The Action of Yeast in Tuberculosis and Its Influence on the Opsonic Index,
By W. R. HUGGARD and E. C. MORLAND.
9. A Note on the Treatment of the Toxæmic Symptoms in Scarlet Fever,
By A. K. GORDON.
10. Innominate Aneurysm: Simultaneous Ligation of Right Carotid and Subclavian Arteries: Recovery,
By H. N. DUNN.
11. Coexistence of Cystic Mesometrium and Tubal Pregnancy,
By F. J. S. HEANEY.
12. Sanitation and the Panama Canal: The Solution of Certain Climatic and Hygienic Problems,
By J. G. LEIGH.

2. **Laryngeal Paralysis.**—Barwell states that in a knowledge of the appearance and of the causes of laryngeal paralysis we have an important aid to diagnosis in many obscure cases. Many laryngeal palsies give rise to no symptoms whatever, and cannot be diagnosed or even suspected without the use of the laryngoscope. In the common form—abductor paralysis—there need be no disturbance of vocalization. When abductor paralysis has occurred the affected cord lies in the middle line; during phonation the sound cord adducts to meet it and the larynx appears normal. But on inspiration the affected cord remains stationary, while the sound one is drawn outwards and backwards. The voice is not altered, but there is some dyspnoea on active exertion; in children this may be so severe as to necessitate tracheotomy. In bilateral paralysis the cords are drawn closer together on inspira-

tion, and dyspnoea is a marked symptom. It is inspiratory and is accompanied by stridor. As severe paroxysmal exacerbations may occur at any time and prove fatal, tracheotomy should always be done as a precautionary measure. Phonation is good, but has a breathless character. The lesion causing the paralysis may be situated (1) in the medulla; (2) at the base of the brain; (3) in the vagus; or (4) in the recurrent laryngeal nerve. In the first two classes neighboring nuclei are prone to be affected as well, so that there is usually concomitant paralysis of the soft palate, uvula, and pharynx. Persistent frequency of the pulse is an important sign of bulbar disease. Bulbar paralysis are frequently bilateral, tabes dorsalis being the commonest cause of such paralysis. Syphilitic nuclear disease, gummata at the base of the brain, and syphilitic pachymeningitis are also common causes of abductor paralysis. Disseminated sclerosis seldom produces paralysis. Of peripheral causes neuritis is a frequent factor; it may be toxic (lead, alcohol, or arsenic), or infective (diphtheria, typhoid, influenza, etc.). Paralysis from involvement of the vagus (3) is usually due to compression of the nerve, from, (a) aneurysm; (b) enlarged glands, usually tuberculous; and (c) cancer of the œsophagus. Rarer causes are mediastinal growths, pulmonary tuberculosis, goitre, etc. Aneurysm is the most frequent of all causes of laryngeal palsy, being the most often occurring. In addition there may be glottic spasm, and the peculiar "brassy" cough, which later becomes wheezing in character. Left vocal cord paralysis may be the earliest sign of aneurysm. Tuberculosis causes paralysis either by pressure of bronchial or tracheal glands, or by involvement of the nerve in a tuberculous infiltration at the apex of the lung. The association of laryngeal palsy with a thyroid tumor, though suspicious, is no conclusive proof of malignancy. Adductor palsies always affect the phonatory function. They are usually bilateral and are not due to organic disease of the nerve path, but either to a neurosis (functional aphonia) or to local disease, such as laryngitis. Functional aphonia is a common manifestation of hysteria, but anything which makes the effort of phonation more difficult than usual (such as debility, thickening of the cords, or laryngeal catarrh), predisposes to this affection. It occurs in men as well as women; the onset is sudden, and so is the recovery. Paralysis is very seldom complete, and unilateral adductor paralysis is extremely rare. It is due to local interference with the muscles and in a few instances to toxic causes.

3. **Leishman Bodies.**—Rogers has previously described the development of flagellated organisms from Leishman bodies—the organisms found in cases of cachexial splenic fever. His experiments show that the best medium for the development of these flagellated organisms is acidified citrated blood. Now such an acid medium is supplied in the stomachs of many blood sucking insects, so that the most likely mode of infection is through the means of some such bit-

ing insect. While the parasite is never found in the peripheral circulation, yet it is frequently present in papules in the skin, especially on the thighs and other parts open to the attacks of fleas and bedbugs, but not to mosquitoes. So that the communicability of endemic cachexial fever should be recognized, and any infected and uninfected persons prevented from sleeping in the same bed or in beds placed side by side. This precaution is especially desirable in the case of children who are very prone to the disease and in whom it is very fatal.

5. **Jejunostomy.**—Robson in describing a new method of jejunostomy, states that the indications for the operation are extensive cancer of the stomach too advanced for gastrectomy, and general simple cicatricial contraction of the stomach, due to the swallowing of caustic fluids. The bowel must be so placed as to permit the passage onward of the bile and pancreatic fluid poured into the intestine above the artificial fistula, and to allow of food being introduced through the fistula without fear of regurgitation. The author's operation consists in taking a loop of the beginning of the jejunum just sufficiently long to reach the surface without tension; the two arms of the loop are short circuited, about three or four inches from the surface. The short circuiting being done either by means of sutures around a decalcified bone bobbin, or by sutures alone. A small incision is then made into the top of the loop just large enough to admit a number twelve Jaques catheter, which is inserted and passed for three inches down the distal arm of the loop; this is fixed to the margin of the incision in the gut by means of sutures. The top of the loop is fixed to the skin by one or two stitches, and the wound is closed. The patient can then be fed at once with peptonized milk and brandy. If necessary the short circuiting may be omitted. The operation of jejunostomy, which has a mortality of ten to twenty per cent., would be very seldom called for if the early diagnosis of gastric cancer was insisted on. In patients at or after middle age, the occurrence of gastric pain and vomiting, with loss of weight and energy, and anemia, the possibility of cancer should be recognized. If no improvement takes place in two or three weeks, an exploratory operation is more than justified.

6. **Second Dentition.**—Armstrong calls attention to the importance of a sound second dentition to the general health, and, *vice versa*, the necessity of good health in the insurance of a sound dentition. The influence of rickets as a retarder of dentition is well known, and also that of cretinism. Hereditary syphilis is said to accelerate the advent of the teeth; this while true as regards the first is very doubtful as regards the second dentition. Acute disease, such as the exanthematous fevers, may leave permanent results in the enamel with a disastrous sequel in the history of the teeth. Such "honeycombed" teeth invariably become the subjects of early decay. Retronasal adenoids interfere with dentition by altering the shape of the arch of the pal-

ate, and causing crowding of the teeth. The same is true of thumb and lip sucking, which forces out the upper alveolus. The diseases actually due to the second dentition are few in number—among them may be mentioned stomatitis and oral sepsis. The influence of dentition upon concurrent general disease is manifested chiefly in the neuroses—*e. g.*, in epilepsy, where at times dentition initiates the onset, and at others increases the frequency of the fits.

7. **Typhoid in the Fœtus.**—Hicks and French report a case of typhoid fever occurring in a pregnant woman aged twenty-four years. She was seven and a half months pregnant, and on the eighth day of the disease was delivered of a live fœtus, which died an hour later. The mother died on the twenty-fourth day of the disease. The mother's blood at the time of labor gave a positive Widal reaction, but the fœtal serum reaction was negative. The authors have studied the literature of the subject with the following result: In half the cases of typhoid during pregnancy, the bacilli have passed into the fœtal blood. In such cases they were probably circulating freely in the mother's blood. The duration of the typhoid fever seems to be an important factor in determining infection of the fœtus, and the question is raised whether in such cases early labor should not be induced as early as possible in order to prevent infection of the child. That the typhoid agglutinin does occur in the serum of a fœtus born of a mother suffering from typhoid fever, seems to be well established, but the evidence is slender that the typhoid serum reaction can occur in the fœtus in which no bacilli have been found. If so, either the fœtus receives its agglutinins directly from the mother, or its own tissues react to the maternal poisons. Typhoid fever occurring during pregnancy does not affect the prognosis or alter the course of the disease, but its effect on the pregnancy is bad. In most cases abortion or premature labor takes place.

8. **Yeast in Tuberculosis.**—Huggard and Morland record the results of their observations on the effect of yeast taken internally in tuberculosis. The yeast is supposed to act by means of its nuclein causing a leucocytosis, and further because nuclein is bactericidal. In almost every case some improvement was noted. In five cases tubercle bacilli disappeared from the sputum and the disease was seemingly arrested. In seven cases marked improvement took place. In eleven cases of medium severity and doubtful prognosis, all but one showed improvement. Twelve advanced cases of bad prognosis appeared to be benefited, at least for a time. A steady rise in the opsonic index was noted in 21 out of 25 cases in which it was examined for. This index shows the degree to which the serum of a person's blood prepares tubercle bacilli for being taken up and digested by normal white blood corpuscles. The yeast employed was of several different kinds, the dose being two or three grammes taken once a day in cold or tepid milk or water. Some patients noticed no influence;

others felt a sense of well being, while a few had a feeling of exhilaration. It did not appear to have any influence on the temperature of febrile patients.

9. Scarlet Fever.—Gordon divides cases of scarlet fever into three types: 1. The simple variety, where the attack presents no special distinguishing features and is not at any time severe. Little treatment is needed, except the preservation of a sepsis. 2. In scarlatina anginosa the patient may have an intense faucial inflammation which is progressive. There is deep ulceration and sloughing, with absorption and the production of a general septicæmia. Otorrhœa almost certainly follows, and late nephritis is not uncommon. 3. In the toxæmic type, the patient receives a large dose of the scarlatinal poison at the onset. Death may occur in twenty-four hours before the rash appears. The patient is comatose, cyanosed, and evidently intoxicated. In the treatment of these cases the author has been using a polyvalent antistreptococcic serum, derived from injections of various strains of streptococci. It is very improbable that the phenomena of scarlet fever are due to a pure infection with any organism. Streptococci in mixed culture are always found. In fifty-five cases of toxic scarlatina in which it was used, death took place in thirteen—a mortality of 23 per cent. The general scarlatinal mortality of the hospital was reduced from 6.1 to 3.1 per cent. Large doses of 50 to 100 cubic centimetres were used, and no ill effects were observed other than a transient erythema.

GLASGOW MEDICAL JOURNAL

May, 1905.

1. Acute Fatal Pneumococcic Pleurisy, Resembling Clinically Acute Lobar Pneumonia, with Remarks Upon the Relationship of Pneumonia to the Pneumococcus, By STEVEN.
2. Case of Cerebrospinal Meningitis Following Scarlet Fever, By McKENZIE.
3. Thickening of the Ribs in Chronic Empyema, By EDINGTON.
4. Case of Traumatic Stretching of the Lower Cervical Nerve Roots, with Remarks on Some Allied Conditions, Including the Mechanism of Their Production, By MORT.

1. Acute Fatal Pneumococcic Pleurisy.—Steven reached the following conclusions: 1, An acute, rapidly fatal pleurisy with effusion, originating spontaneously or idiopathically, may run a clinical course not to be distinguished from that of a severe acute lobar pneumonia; 2, the virulence of Fränkel's pneumococcus may occasionally expend itself upon the pleura rather than upon the parenchyma of the lung itself.

2. Cerebrospinal Meningitis Following Scarlet Fever.—McKenzie states that meningitis is a rare complication of scarlet fever. Henoch is quoted as saying that the marked cerebral symptoms which are found in severe cases of scarlet fever apparently do not depend upon meningitis. The usual pathological findings are hyperæmia

or œdema of the pia mater and of the brain substance similar to that which occurs under other conditions. The symptoms are usually due to vascular engorgement, resulting from the lowering of the heart's energy, which may also lead to thrombosis of the sinuses, but they are never due to regular inflammatory products. Meningitis may occur as the result of scarlet fever, but its clinical symptoms would be hard to differentiate from those of malignity. In the author's case in addition to well marked meningeal symptoms, there was an intense restlessness resembling that which is characteristic of anginose and malignant scarlet fever. The infective agent doubtless was the streptococcus pyogenes and the source of infection was probably the throat. The infection may have been carried to the cerebrospinal membranes by the lymphatics of the neck or by the blood. The meningitis in this case complicated a second attack of scarlet fever.

4. Case of Traumatic Stretching of the Lower Cervical Nerve Roots.—Mort's summing up of his statements are as follows: 1, The trauma, according to the statement of the patient, was not due to a previously existing neuritis, or to the usual causes of brachial neuritis, alcohol, syphilis, or intrathoracic neoplasm. There were no motor symptoms; 2, the symptoms were limited to the upper limbs, and the cause was probably to be found in the posterior nerve roots at their origin; 3, the precise location was the fifth or sixth nerve root, and this was stretched by the sudden forcible flexion of the spinal column at the moment of injury.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Thirtieth Annual Meeting, Held at Niagara Falls, N. Y., May 25, 26, and 27, 1905.

The President, Dr. E. C. DUDLEY, of Chicago, in the chair.

The Address of Welcome was made by Dr. WOLF, of Niagara Falls, and the response by Dr. ELY VAN DE WARKER, of Syracuse.

Accidental Rupture of the Non-Parturient Uterus.—Dr. G. W. JARMAN, of New York, said in this paper that he wished to include in his category those uteri also which had been perforated. The condition was not a rare one, and it was perfectly obvious that many cases were never reported. It resulted most frequently after dilatation, curettage, and the use of the uterine sound. In connection with cancer and other diseases which affected the integrity of the tissues of the organ, perforation and rupture frequently occurred. He narrated five cases of women having reached the fourth month of pregnancy. Abdominal section was done in each case, and one case was fatal from sepsis. Abdominal section with drainage through the vagina was usually indicated, the abdomen being irrigated with sterile water. These and similar cases admonished us as to the need of greater care in the

use of the dilator, the curette, and the sound. If the patients were operated upon early and the lesion was not too extensive, there was very little mortality, either from the accident or from the operation for its relief.

Dr. A. P. DUDLEY, of New York, reported that he had had experience with accidents of this character.

Dr. H. J. BOLDT, of New York, thought the abdomen should be opened after this accident if infection had resulted; otherwise it was better to do nothing. Curettage was frequently accompanied by perforation, but with few or no resulting symptoms.

Dr. F. HENROTIN, of Chicago, had seen five cases of this accident, but did not consider that it was attended with serious results as a rule.

Dr. A. F. CURRIER, of Mt. Vernon, N. Y., had seen a number of cases in his own practice and that of others. He could not recall a case which had resulted fatally. One must be prepared to consider the operation of hysterectomy as an alternative measure in certain of the severer cases with sepsis and those in which the uterine tissues were in a more or less disintegrated condition. Removal of the focus of infection and drainage through the vagina would save some lives which would otherwise be lost.

Dr. A. LAPHORN SMITH, of Montreal, did not believe that rupture or perforation could occur as a rule except as a result of violence or carelessness.

Dr. CLEMENT CLEVELAND, of New York, believed that one should distinguish between the dull and the sharp curette in considering the question. He had observed the accident with the sharp, but not with the dull curette. He especially objected to the sharp curette being so frequently used by the general practitioner, and believed that this and other gynecological operations which belonged to the expert should not be performed by others. The dull curette was by far the safer instrument except in the hands of experts. The sharp curette should not be used by the general practitioner.

Dr. W. H. MOSELY, of Baltimore, called attention to the fact that rupture or perforation occurred below the os internum in many of the accidents of this character. He approved of the use of the dull curette for purposes of diagnosis, but the sharp one was better if tissue was to be removed. There was frequently more danger in the use of the dull than in that of the sharp curette.

Dr. W. H. WATHEN, of Louisville, thought there was no field for the use of the dull curette by the expert for the removal of loose tissues. A skilled operator should never perforate the uterus. He urged that the still dilators should seldom be used for any purpose, their field of absolute usefulness being very limited.

Dr. ELY VAN DE WARKER, of Syracuse, attributed the risk of rupture of the uterus to two elements: one, the operator, being a variable quantity, and the other, the instrument, being permanent and dangerous. He agreed that dilators were used too frequently. Injury might come

from the work of the expert as well as the inexperienced and inexperienced, but the former would know how to meet the emergency, while the latter would not.

Dr. S. C. GORDON, of Portland, Me., concurred in the view that the uterus should be removed if the injury was a serious one, and that nothing should be done if the lesion was not extensive.

Dr. P. A. HARRIS, of Paterson, N. J., reminded the society that many cases of so called dilatation were divisions, tearing, and rupture, following unskillful treatment or unfavorable conditions in the tissues of the patient.

Dr. T. A. REAMY, of Cincinnati, believed that he had perforated the uterus even when exercising extreme care. He had seen no serious results in a number of cases which had fallen to his experience.

Dr. JARMAN expressed the belief that after almost any accident of this nature, whether severe or mild, an incision should be made in the vaginal vault, and gauze or a tube introduced for drainage. It must not be forgotten that the uterus could be perforated as well with the dull as with the sharp curette. He agreed that the uterus should be removed if the conditions were severe enough to warrant it.

Retroversio Uteri; a New Operation for Its Radical Cure.—Dr. A. W. JOHNSTONE, of Cincinnati, read a paper in which he said that he regarded the first step in either retroversion or prolapse as due to a stretching of the uterosacral ligaments. The round ligaments did not support the uterus; they merely fulfilled the functions of guy ropes to steady it. These views were confirmed by the study of the anatomy of the uterus in the higher mammalia, in which it was quite evident that the uterosacral ligaments held the cervix in position, the cervix and body joining at an obtuse angle. The anatomy of the uterus and its surroundings showed the faultiness of the operations on the round ligaments, likewise of the operations which attached the uterus to the abdominal wall, and also those in which the uterine body was attached to the vagina. Loss of tone in the uterosacral ligaments, due to a low grade of infection extending to them from the uterus or other contiguous structures, or in some cases to violence, was followed by their stretching, and then prolapse and retroversion resulted. This explanation of the mechanics of the subject justified the use of the pessary and showed why and how pessaries were often useful. The operation which was suggested consisted in making a two inch longitudinal incision through the vaginal vault, parallel with the long axis of the vaginal portion of the cervix, introducing the finger and bringing forward each uterosacral ligament in succession, and taking a loop in each with silk sutures. A transverse incision should not be made, as it would probably result in cutting through the ligaments at their attachment. This operation held the uterus permanently in its normal position unless the tissues should again become shortened and again should stretch.

(To be continued.)

Official News.

United States Public Health and Marine Hospital Health Reports:

The following cases of smallpox, yellow fever, cholera, and plague, have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the period from June 10 to June 10, 1905:

Smallpox—United States.

Places.	Date.	Cases.	Deaths.
Dist. of Columbia—Washington	June 3-10	2	1
Florida—Jacksonville	June 3-10	1	2
Illinois—Danville	June 1-8	5	1
Indiana—South Bend	June 3-10	16	2
Louisiana—New Orleans	June 3-10	16	1
Massachusetts—Lowell	June 3-10	1	1
Michigan—Detroit	June 8-10	2	2
Michigan—Grand Rapids	June 3-10	4	1
Missouri—St. Joseph	June 3-10	5	1
Missouri—St. Louis	June 3-10	3	1
Nebraska—Omaha	June 3-10	1	1
New York—New York	June 3-10	1	1
Pennsylvania—Lebanon	June 3-10	1	1
Pennsylvania—York	June 3-10	3	3
South Carolina—Charleston	May 20-27	1	1
South Carolina—Charleston	June 3-10	1	1
Tennessee—Memphis	June 3-10	3	3
Wisconsin—La Crosse	May 26-June 10	2	2
Wisconsin—Milwaukee	May 26-June 3	5	5

Smallpox—Foreign.

Brazil—Rio de Janeiro	Apr. 23-May 7	26	12
Brazil—Santos	Apr. 23-May 7	1	1
Chile—Valparaiso	May 10	15	daily.
China—Shanghai	Apr. 30-May 6	2	2
Ecuador—Guayaquil	May 11-18	1	1
France—Paris	May 20-27	12	1
Great Britain—Birmingham	May 20-27	4	4
Great Britain—Bristol	May 20-27	2	2
Great Britain—Cardiff	May 20-27	1	1
Great Britain—London	May 20-27	16	16
Gt. Britain—Newcastle-on-Tyne	May 20-27	11	11
Great Britain—Southampton	May 20-27	1	imported from South Africa.
Great Britain—South Shields	May 20-27	1	1
Italy—General	May 11-19	40	40
Turkey—Constantinople	May 14-21	2	2

Yellow Fever.

Brazil—Rio de Janeiro	Apr. 23-May 7	96	35
British Honduras—Belize	24-June 1	4	3
Ecuador—Guayaquil	May 11-18	1	1
Guatemala—Livingston	June 10	1	1
Honduras—Puerto Cortez	May 25-29	5	3
Panama—Colon	May 23-May 31	6	6
Panama—Panama	Jan. 1-May 31	70	23

Cholera.

Russian Empire—Ashabad	May 2-4	1	1
Russian Empire—Zarazyn	May 2-4	1	1

Plague.

Africa—East London	Apr. 29-May 6	1	1
Africa—Port Beaufort	Apr. 29-May 6	2	2
Africa—King Williams Town	Apr. 29-May 6	1	1
Africa—Port Elizabeth	Apr. 29-May 6	1	1
Brazil—Rio de Janeiro	Apr. 23-May 7	1	1
Brazil—Sao Paulo	Apr. 16-23	1	1
Egypt—Port Said	Apr. 29-May 6	1	1
Egypt—Tukh	Apr. 29-May 6	4	3
Peru—Callao	Apr. 30-May 10	1	1
Peru—Chiclayo	Apr. 30-May 10	1	1
Peru—Lima	Apr. 30-May 10	2	2
Peru—Mollendo	Apr. 30-May 10	4	4

Public Health and Marine Hospital Service:

List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the Public Health and Marine Hospital Service for the seven days ending June 14, 1905:

ALTREE, G. H., Acting Assistant Surgeon. Granted leave of absence for thirty days from June 10th.

BAILEY, C. W., Acting Assistant Surgeon. Department letter of May 10th, granting Acting Assistant Surgeon Bailey leave of absence for twenty-six days, amended to read ten days from June 5th.

BIERMAN, C. H., Pharmacist. Department letter of May 19, 1905, granting Pharmacist Bierman leave of absence for thirteen days from June 7, 1905, revoked.

BLAIN, A. C., Acting Assistant Surgeon. Granted leave of absence of fourteen days from June 14th.

BLUE, RUPERT, Passed Assistant Surgeon. Granted leave of absence for sixteen days from June 22, 1905.

CARLTON, C. G., Pharmacist. Granted leave of absence for one day from June 9, 1905, under paragraph 210 of the regulations.

CUMMING, H. S., Passed Assistant Surgeon. Detailed for duty on special Revenue Cutter Service board. June 8, 1905. Detailed to represent the Service at meeting of American Medical Association at Portland, Ore., July 11th to 14th.

DREW, A. D., Acting Assistant Surgeon. Granted leave of absence for five days under paragraph 210 of the regulations.

FOSTER, M. H., Passed Assistant Surgeon. Granted leave of absence for one month from June 11th.

FRANCIS, EDWARD, Assistant Surgeon. Granted leave of absence for seven days.

HUNTER, W. R., Acting Assistant Surgeon. Granted leave of absence for ten days from June 11th.

ROSENAU, M. J., Passed Assistant Surgeon. Detailed to represent the Service at meeting of American Medical Association at Portland, Ore., July 11th to 14th.

SIMONSON, G. T., Acting Assistant Surgeon. Granted leave of absence for two days from June 11th.

SPRAGUE, E. K., Passed Assistant Surgeon. Granted leave of absence for one month from June 27th.

SIMPSON, W. G., Passed Assistant Surgeon. Granted leave of absence for five days from July 5th.

WALKLEY, W. S., Acting Assistant Surgeon. Granted leave of absence for two days from June 16th.

WIGHTMAN, W. M., Acting Assistant Surgeon. Granted leave of absence for two days under paragraph 210 of the regulations.

WILSON, R. L., Passed Assistant Surgeon. Granted extension of leave of absence for seven days.

Board Convened.

Board convened to meet at the marine hospital, New Orleans, June 13, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board—Surgeon A. C. SMITH, chairman. Assistant Surgeon F. H. McKEON, recorder.

Army Intelligence:

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the United States Army for the week ending June 17, 1905:

ALLEN, JOHN H., First Lieutenant and Assistant Surgeon. Granted ten days' leave of absence.

BLANCHARD, R. M., First Lieutenant and Assistant Surgeon. Leave of absence extended twenty days.

EWING, CHARLES B., Major and Surgeon. Left Columbus Barracks, Ohio, with recruits, en route to Vancouver Barracks, Washington.

GIBSON, ROBERT J., Major and Surgeon. Having reported at San Francisco, Cal., will proceed to and take station at Fort Logan, Colo.

GILCHRIST, HARRY L., First Lieutenant and Assistant Surgeon. Ordered to report in person on July 17, 1905, to Major William H. Arthur, Surgeon, president of the examining board, Army Medical Museum Building, Washington, D. C., for examination to determine his fitness for advancement to the rank of captain.

GORGAS, WILLIAM C., Colonel and Assistant Surgeon General. Appointed a member of a board of officers to meet at Ancon, Canal Zone, Isthmus of Panama, July 17, 1905, for the examination of medical officers to determine their fitness for promotion or advancement.

KENNEDY, JAMES M., Captain and Assistant Surgeon. Ordered to accompany troops from Benicia Barracks, Cal., to Vancouver Barracks, Wash., returning to station at United States General Hospital, Presidio of San Francisco.

KREBS, LLOYD LE R., First Lieutenant and Assistant Surgeon. Ordered to proceed from San Francisco, Cal., to Vancouver Barracks, Wash., as witness before a G. C. M.

LYSTER, THEO. C., First Lieutenant and Assistant Surgeon. Ordered to report in person to Colonel William C. Gorgas, president of examining board, Ancon, Canal Zone, Isthmus of Panama, for examination to determine his fitness for advancement to rank of captain.

MCCULLOCH, C. C., Jr., Major and Surgeon. Assignment to the Presidio of Monterey, Cal., revoked, and ordered to Fort Meade, S. D.

OWEN, WILLIAM O., Major and Surgeon. Relieved from duty at Fort Logan, Colo., and upon expiration of present sick leave will proceed to and take station at Presidio of Monterey.

PORTER, R. S., First Lieutenant and Assistant Surgeon. Leave of absence extended ten days.

REILLY, JOHN J., First Lieutenant and Assistant Surgeon. Relieved from further duty at Jackson Barracks, La.

REYNOLDS, CHARLES R., First Lieutenant and Assistant Surgeon. Left Army General Hospital, Washington Barracks, D. C., on ten days' leave of absence.

ROBBINS, CHANDLER P., First Lieutenant and Assistant Surgeon. Ordered to report in person on July 17, 1905, to Major William H. Arthur, Surgeon, president of the examining board, Army Medical Museum Building, Washington, D. C., for examination to determine his fitness for advancement to the rank of captain.

SHIMER, IRA, Captain and Assistant Surgeon. Appointed a member of a board of officers to meet at Ancon, Canal Zone, Isthmus of Panama, July 17, 1905, for the examination of medical officers to determine their fitness for promotion or advancement.

STRAUB, PAUL F., Captain and Assistant Surgeon. Appointed a member of a board of officers to meet at Ancon, Canal Zone, Isthmus of Panama, July 17, 1905, for the examination of medical officers to determine their fitness for promotion or advancement.

VAN POOLE, G. McD., First Lieutenant and Assistant Surgeon. Granted thirty days' leave of absence.

WEBBER, HENRY A., Major and Surgeon. Reported for temporary duty at Fort Stevens, Oregon.

The following named medical officers are ordered to report in person on July 17, 1905, to GEORGE H. TORNEY, Lieutenant Colonel and Deputy Surgeon General, at Army General Hospital, Presidio of San Francisco, Cal., for examination to determine their fitness for advancement to the rank of captain:

BISPHAM, WILLIAM N., First Lieutenant and Assistant Surgeon.

GEDDINGS, EDWARD F., First Lieutenant and Assistant Surgeon.

LYSTER, WILLIAM J. L., First Lieutenant and Assistant Surgeon.

PERSONS, ELBERT E., First Lieutenant and Assistant Surgeon.

RUTHERFORD, HENRY H., First Lieutenant and Assistant Surgeon.

WADHAMS, S. H., First Lieutenant and Assistant Surgeon.

Navy Intelligence:

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 17, 1905:

BOGAN, F. M., Passed Assistant Surgeon. Ordered to the Naval Hospital, Yokohama, Japan, for duty.

GUTHRIE, J. A., Surgeon. Discharged from treatment at the Naval Hospital, New York, N. Y., and granted sick leave for three months.

OHNESORG, K., Passed Assistant Surgeon. Detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., June 20th, and ordered home to await orders.

OLSEN, G. M., Assistant Surgeon. Ordered to the Naval Hospital, Philadelphia, Pa.

PRYOR, J. C., Surgeon. Detached from the Museum of Hygiene and Medical School, Washington, D. C., and ordered to duty as a member of the naval and medical examining boards, Washington, D. C.

RODMAN, S. S., Passed Assistant Surgeon. Detached from the *Ranger* and ordered to the *Rainbow*.

SHOOK, F. M., Assistant Surgeon. Ordered to the Naval Hospital, Norfolk, Va.

SUTTON, R. L., Assistant Surgeon. Discharged from treatment at the Naval Hospital, New York, N. Y., and ordered to Washington, D. C., June 22nd, for exam-

ination for retirement and then home to await orders. WILCES, G. L., Assistant Surgeon. Detached from the *Solace* and ordered to the Naval Station, Cavite, P. I.

Births, Marriages, and Deaths.

Born.

TAYLOR.—In Holyoke, Massachusetts, on Sunday, June 4th, to Dr. J. S. Taylor, United States Navy, and Mrs. Taylor, a daughter.

Married.

ACKER—CRANE.—In Detroit, Michigan, on Wednesday, June 7th, Dr. William Fred Acker and Miss Mildred Hoag Crane.

BRENNAN—MCCAHILL.—In Larchmont, N. Y., on Wednesday, June 7th, Dr. James H. Brennan and Miss Julia McCahill.

CARR—SCHEMANN.—In Wyoming, Ohio, on Monday, June 5th, Dr. Alvin H. Carr and Miss Anna H. Schemann.

DOWNES—SWEENEY.—In Philadelphia, on Wednesday, June 7th, Dr. Andrew J. Downes and Miss Nora Sweeney.

FUCHSIUS—ENGELHARDT.—In St. Johnsville, N. Y., on Thursday, June 5th, Dr. John Hancock Fuchsuis and Miss Martha Louise Engelhardt.

GORDON—ISENMAN.—In St. Louis, Missouri, on Thursday, June 8th, Dr. F. M. Gordon and Miss Louise Isenman.

HILL—MINOKA.—In Philadelphia, on Tuesday, June 6th, Mr. Charles A. Hill and Dr. Lillie Rosa Minoka.

KNOX—DICKSON.—In Kingston, Ontario, Canada, on Thursday, June 1st, Dr. William J. Knox and Miss Janet Isabella Dickson.

KORFF—VAN REYEN.—In Washington, D. C., on Monday, June 5th, Baron Serge Alexander Korff, of Russia, and Miss Alletta Van Reypen, daughter of Dr. William K. Van Reypen, United States Navy, retired.

TINDALL—HALL.—In Philadelphia, on Wednesday, June 7th, Dr. Morris H. Tindall and Miss Elizabeth M. Hall.

ULRICH—RALSTON.—In Philadelphia, on Wednesday, June 7th, Dr. George A. Ulrich and Miss Hester D. Ralston.

VOSSLER—JONES.—In Brooklyn, N. Y., on Monday, June 12th, Dr. Theodore L. Vossler and Miss Kathryn Lyle Jones.

Died

AUGSBERGER.—In Brooklyn, N. Y., on Thursday, June 15th, Dr. Max Augsberger, in the forty-fifth year of his age.

CHAMBERS.—In Port Jefferson, N. Y., on Monday, June 12th, Dr. Martin Luther Chambers.

CRENSHAW.—In Mt. Washington, Kentucky, on Wednesday, June 7th, Dr. H. F. Crenshaw.

FOWLER.—In Newburgh, N. Y., on Friday, June 9th, Dr. J. Walker Fowler, in the eighty-sixth year of his age.

GARDNER.—In New York, on Monday, June 12th, Dr. Arthur H. Gardner, in the thirty-eighth year of his age.

HARDY.—In Chipley, Georgia, on Thursday, June 8th, Dr. John C. Hardy.

KNIGHT.—In Santa Cruz, California, on Friday, June 2nd, Dr. Benjamin K. Knight, in the sixty-ninth year of his age.

STEWART.—In Philadelphia, on Tuesday, June 13th, Dr. David Dennison Stewart, in the forty-seventh year of his age.

SUTTON.—In Hyattsville, Maryland, on Sunday, June 11th, Dr. Louis James Sutton, in the seventy-fourth year of his age.

TOMPKINS.—In New York, on Monday, June 5th, Dr. Abraham Westervelt Tompkins.

WILLIAMS.—In Charlottesville, Virginia, on Sunday, June 11th, Dr. J. W. Williams, in the sixty-sixth year of his age.

Miscellany.

The Care of the Eyes.—Whatever promotes general hygiene is beneficial to the eyes, says the *Denver Medical Times*, for June, 1905. One should avoid reading while lying down or when exhausted, and sudden changes from the dark to brilliant light. Unspaced type is injurious. Reading on the cars is bad for the eyes, by reason of the oscillating movements requiring the paper to be held too near, causing overwork of the muscles of accommodation. One should carry the head erect and avoid tight neckwear, which causes passive congestion of the head and eyes. Fox advises bathing the eyes twice daily with cold water up to 40 years; and after 50 with water as hot as possible, followed by the cold. The first symptoms of failing sight are hypersecretion of tears, burning of eyelids, loss of eyelashes, and congestion of the mucosa.

Special care of the vision should be exercised by bookkeepers, typewriters, printers, proofreaders, etchers, and engravers. All those engaged in near work should take short intervals of eye-rest. Fox suggests a thin piece of tin sheeting, colored green, blue, or black, or a neutral tinted blotting pad, to be placed under the glazed page while adding up accounts. A shade over the eyes to protect them from the direct rays of light, is very useful. Neutral (arundel) tinted glasses may be used by persons working under high pressure. If possible, the light should come over the left shoulder, and cross lights are to be avoided. The pure white light of the Welsbach burner and electric bulb lacks diffusive power, and is not good for constant work. A pink or arundel shade should be used around the base. Reflectors cause eye strain. Incandescent burners are generally not removed often enough. Blank walls strain the eyes; green discs on the wall and pastoral scenery give relief.

In the first six months of life we should guard the eyesight most carefully from the direct rays of the sun and from clouds of dust. During infancy and early childhood the predominating refractive anomalies are hypermetropia and astigmatism, alone or combined. In the early school years many of these cases pass from the hypermetropic into the myopic defect "through the turnstile of astigmatism." To prevent amblyopia ex anopsia in a squinting eye, proper glasses should be fitted as soon as the child begins to read. Ocular defects are a common cause of apparent mental dullness in children. Asthenopia, chorea, and migraine may also depend on errors of refraction.

Myopia is a disease of civilization. Proper adjustment of glasses prevents increase of the defect, as well as headaches and other complications. Full correction for near and far vision should be obtained all the time. Frequent re-examination and, if need be, refitting of the patient should be insisted upon. Myopic persons should work only by daylight, with frequent rest to the eyes. Stringent restriction of near work is indicated in high, progressive myopia. To prevent myopia all books, sewing, etc., should

be held at a distance of at least 25 cm. from the eyes, the position of the body should be comfortable, and oblique positions of the head must be avoided. Plenty of sleep and outdoor exercise are of prophylactic consequence.

Although the staphylococcus pyogenes aureus is the predominating organism in acute catarrhal conjunctivitis, the primary cause is the conjunctival hyperæmia, so common in large cities, arising from dust, smoke, bright lights, strong winds, exposure to cold, and reflex ciliary strain. The sanguineous exudate furnishes a favorable nidus for the rapid propagation of the germs normally present in the conjunctival sac.

Workers in iron, steel, and stone should protect their eyes by the use of large spectacles containing plane glasses, unless special lenses are required for ametropia. Snowblindness can be prevented by wearing smoked or tinted glasses, but the continued use of these increases the sensitiveness of the retina and makes asthenopic conditions worse.

The leucorrhœa of pregnant women is infectious in from 20 to 40 per cent. of cases. To prevent ophthalmia neonatorum, the woman's genitals should be bathed and syringed with antiseptic solutions before and during confinement. Trachoma is a strictly contagious disease, occurring generally in those who have no regard for the ordinary principles of cleanliness.

Obstetrical Practice in the Country.—Dr. George Harwood, in the *Charlotte Medical Journal*, for June, 1905, writes on this subject: It must be understood that this article does not proceed from the pen of one who sits in a town office and gives his views upon obstetrics in general based upon a city experience, where nurses, consultants, and up to date armamentaria are within easy reach, but upon a country experience solely, comprising 15 years' practice and a radius of at least 40 miles in a sparsely settled country of about 1,500 families, and an average of from 40 to 50 cases yearly, a sufficient basis on which to found a few facts and ideas.

The country practitioner who has a fair yearly average of obstetrical cases for ten years is the equal of most and superior to some of his city brethren, from the fact that, though he may not see so many cases in the aggregate during the same time, he is thrown upon his own resources entirely in the great majority of his cases, consultants and nurses being few and far between.

The city man may possibly be more of an adept with the special instruments needed in abnormal cases for the reason that it is a well recognized fact that there is a greater average of such abnormal cases in large cities than in the country, due to mode of life and environments of the patients, and again there are generally men in the cities who make obstetrics a specialty, who are always at hand to be consulted in such cases, and from such the city practitioner may have opportunities to become more expert in the use of instruments and more up to date in the procedures in desperate cases; besides which cities have their maternity hospitals to which such cases are frequently moved and the attending physician may

there accustom himself to all procedures undertaken in abnormal cases; on the other hand, the country physician meets with all kinds of cases, and in the great majority without help.

There is no class of cases with which a physician has to deal which require such versatile knowledge, such self reliance, so much firmness, and at the same time gentleness, so much patience at one time and celerity of action at another, such power of encouragement, so much sympathy, so much tact from the moment one is called to attend such cases until they can be safely left, as parturition cases, be they normal or abnormal.

It is here that the country physician is seen at his best or his worst, it is here that his self reliance and experience are shown and where his knowledge and skill come into play.

In nearly every case there are two conditions at stake; firstly, the watching and helping of his patients to a safe conclusion of the act of parturition in all of its stages; and it must be remembered that this does not begin with the first stage of labor nor end with the third stage, but begins as soon as he is engaged and ends only when his patient has reached that state of health in which she was before becoming pregnant; secondly, his reputation hangs on his conduct of each case.

Surrounded as the country physician frequently is by the neighborhood grannies and one or more neighbors of the patient who at some future time may need his services, watched closely and sometimes suspiciously, the least untoward occurrence, especially if such occurrence is not foreseen by him and prepared for, is told and repeated to and by the little world of women around him with disastrous results; he may have made a reputation in labor cases, but one slip made and all is swept away, but slowly to return, if ever.

It is always possible, even in the country, occasionally to test the urine of pregnant patients. Write down and send to your patient such simple rules as bear on the management of the bowels, exercise, and diet, such as will appeal to any sensible patient; later on supply an abdominal supporter if necessary, or cut out and send a pattern of one to be made at home and describe how it should be put on and when; such matters, small though they seem, tend to the safety of the woman and at the same time enhance your reputation for carefulness.

When called to attend your patient do not delay in responding to the call and go in as cleanly attire as possible under the circumstances; a twenty mile ride over a muddy road in the rain is not conducive to a neat and cleanly appearance on the part of the attending physician, but a slight mention of these conditions will set you straight with the family and patient. Probably nothing is so abhorrent to a woman about to be confined as the appearance of a slovenly dressed and grimy handed doctor.

If there is time see that the bed is properly fixed; every doctor ought to know how to do this, if any do not, let him learn; do not rush to examine the patient, but, if from watching the

woman you are sure that labor is not far advanced, engage the patient in an encouraging conversation, calming any nervousness which your appearance may have produced. Explain to her what it is necessary for you to do in a gentle but firm way, look around and see that things are as you need them, get acquainted with others in the room, then disinfect and quietly but thoroughly examine; meanwhile encouraging the patient to bear with the procedure and give you plenty of time to make a thorough first examination, and bear in mind that this first examination should be very thorough. Not only should the condition of the neck of the womb, and if possible, the position of the fœtus be found, but the bladder and rectum should be palpated and the presence of any discharge, blood or other material, should be recognized, and then according to what you have discovered at this examination you will know how to proceed as regards attending to any condition which presents itself at this time; if necessary, empty bladder and rectum, using an antiseptic douche or tampon.

Having attended to these matters set yourself to watch the progress of the labor; do not leave the woman if you are sure that your services will be needed in a reasonable time and, above all, do not say too much or guess too much from the first examination, for in nine cases out of ten you do not know half of what will probably be asked you by the anxious or inquisitive attendants; encourage your patient, do not examine often, have your chloroform handy, and if nothing abnormal intervenes during the progress of labor have patience, see that the feet are kept warm, teach the woman how to help herself, have the pillows rearranged as they get too low or too high. These little things are a wonderful help to your patient.

Uterine inertia, hæmorrhage, or adherent placenta may at any time appear to complicate the case, and it is for these conditions that watchfulness is needed and a quick recognition and skill and celerity to overcome them are demanded of the attendant.

Many times you will be asked by the patient or others present to give an idea as to when labor will terminate, but never hazard a guess, as, with the foregoing conditions possible in every case you cannot do so and a simple statement to that effect with a little explanation of why you do not know will quiet the anxious questioners better than evasive answers which will call for more queries and finally leave the impression that such answers proceed from an ignorance on the part of the physician, which is unpardonable instead of unavoidable.

The same watchfulness, sympathy, and skill are needed in the after treatment of all classes of cases as during the time of parturition, until the patient has regained the normal condition of health, and in this after treatment do not forget that there are two instead of only one individuals to attend—mother and baby.

In conclusion, let me say that the obstetrician, unlike the poet, is made, not born, and the best plan for the making of one is country practice.

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